www.forgottenbooks.com

Copyright © 2016 FB &c Ltd.
All rights reserved. No part of this publication may be reproduced, distributed, or transmitted in any form or by any means, including photocopying, recording, or other electronic or mechanical methods, without the prior written permission of the publisher, except in the case of brief quotations embodied in critical reviews and certain other noncommercial uses permitted by copyright law.

GENITOURINARY

DIAGNOSIS AND THERAPY

GENITOURINARY DIAGNOSIS AND THERAPY

FOR UROLOGISTS AND GENERAL PRACTITIONERS

BY

DOCTOR ERNST PORTNER

SPECIALIST FOR UROLOGY, BERLIN, GERMANY

TRANSLATED AND EDITED BY

BRANSFORD LEWIS, M.D. B.Sc.

Professor of Genitourinary Surgery, Medical Department of St. Louis University, St. Louis; Genitourinary Surgeon to St. John's Hospital and Frisco Hospital; Member of American Urological Association; American Association of Genitourinary Surgeons; American Medical Association, etc.

FORTY-THREE ILLUSTRATIONS

ST. LOUIS

C. V. MOSBY COMPANY

1913

BOSTON MEDICAL
SEP 19 1917
LIBRARY

1363 Mi 2.25

COPYRIGHT, 1913, BY C. V. MOSBY COMPANY

Press of
C. V. Mosby Company
St. Louis

PREFACE

The object of this book is to present in a concise form the practical therapeutic methods to the practitioner who intends to engage in the treatment of urinary diseases. This task is made easier for the reason that a general understanding—at least of the principal points—has been reached in the study of urology. I have not dwelt on matters of minor importance, but have considered the more important features, and have endeavored to treat these features in such an explicit manner that the instructions may be easily followed. The general practitioner will find in the field of urinary diseases frequent occasion for administering treatment, as many simple cases will be met with that can, without the application of much time and the requirement of extensive apparatus, be treated in general practice.

In a book confined to the consideration of therapy it is assumed that the symptoms and diagnosis of the subject are understood. The brief reference of a clinical and diagnostic character that I have made in several chapters do not, therefore, indicate any degree of detail, but serve only to emphasize certain important points.

I have treated in separate chapters those urinary diseases of women and children that present any special peculiarities.

ERNST PORTNER.

Berlin, Germany.

TRANSLATOR'S PREFACE

The author's object in writing this little book has been eminently well attained. Though small, concise—at times even terse—it embraces a wealth of practical, valuable information hardly credible. It shows his powers of observation to be both discriminating and accurate; his deductions logical, and his therapy modern and to the point. It is well fitted to give a helping hand to the practitioner desirous of fulfilling his duty to his patient up to the sphere of specialism; and the specialist himself may find in its pages many useful hints and enlightening ideas.

BRANSFORD LEWIS.

St. Louis, June 1, 1913.

CONTENTS.

CHAPTER I.

PAGE

DISINFECTION OF UROLOGIC INSTRUMENTS 1–2

CHAPTER II.

ANESTHESIA IN UROLOGY 3–7

CHAPTER III.

LUBRICANTS 8–9

CHAPTER IV.

CATHETERIZATION OF THE MALE 10–11

CHAPTER V.

DISEASES OF THE URETHRA AND PENIS 12–66

Acute Gonorrhea—Chronic Gonorrhea—Complications of Gonorrhea—Peracute Anterior Urethritis—Lymphangitis of the Penus—Acute Posterior Urethritis—Paraurethral Follicles—Inflammation of the Gland Follicles in the Urethra—Periurethral Infiltrations (Cavernitis)—Inflammation of Cowper's Glands—Gonorrheal Arthritis—Gonorrheal Tendovaginitis—Simple Urethritis—Polypi of the Urethra—Fibromata of the Urethra—Cysts of the Urethra—Tuberculosis of the Urethra—Carcinoma of the Urethra—Chancroid of the Urethra—Chancre of the Urethra—Gummata of the Urethra—Condylomata Acuminata—Herpes Progenitalis—Balanitis—Chancroid—Inguinal Bubo—Phimosis—Paraphimosis—Stricture of the Meatus—Hypospadias—Epispadias—Urethral Fistulæ—Calculi in the Urethra—Foreign Bodies in the Urethra—Contusions of the Urethra—Urethral Hemorrhages Following Instrumental Injuries—Open Wounds of the Urethra—Strictures of the Urethra—Contusions of the Penis—Open Wounds of the Penis—Carcinoma of the Penis—Urinary Abscess—Urinary Infiltration.

CHAPTER VI.

DISEASES OF THE TESTIS AND EPIDIDYMIS 67–75

Epididymitis—Orchitis—Tuberculosis of the Testis and Epididymis—Syphilis of the Testis and Epididymis—Open Wounds of the Scrotum and Testis—Contusions of the Scrotum and Testis—Luxation of the Testis—Retention of the Testis—Tumors of the Testis and Epididymis—Carcinoma of the Scrotum—Phlegmon of the Scrotum—Elephantiasis of the Scrotum—Acute

CONTENTS.

PAGE

Hydrocele—Chronic Hydrocele—Hematocele—Spermatocele—Varicocele—Hydrocele of the Cord—Inflammation of the Vas Deferens—Tuberculosis of the Vas Deferens—Torsion of the Cord.

CHAPTER VII.

DISEASES OF THE PROSTATE GLAND 76–94

Acute Prostatitis—Hypertrophy of the Prostate Gland—Atrophy of the Prostate Gland—Tuberculosis of the Prostate Gland—Carcinoma of the Prostate Gland—Prostatic Calculi—Injury of the Prostate Gland—Neurosis of the Prostate Gland.

CHAPTER VIII.

DISEASES OF THE SEMINAL VESICLES 95–96

CHAPTER IX.

DISEASES OF THE URINARY BLADDER 97–117

Acute Cystitis—Chronic Cystitis—Paracystitis—Vesical Tuberculosis—Vesical Calculi—Benign Tumors of the Bladder—Carcinoma of the Urinary Bladder—Foreign Bodies in the Bladder—Parasites in the Bladder—Rupture of the Bladder—Open Injuries of the Bladder—Vesical Ectopia—Fistula and Cyst of the Urachus—Hernia of the Bladder—Diverticulum of the Bladder—Varices of the Bladder—Cystic Prolongation of the Vesical End of the Ureter—Irritable Bladder—Vesical Paralysis—Bacteriuria.

CHAPTER X.

DISEASES OF THE KIDNEYS 118–146

Acute Pyelitis—Chronic Pyelitis—Pyelonephritis—Pyonephrosis—Epinephritis—Paranephritis—Renal Tuberculosis—Renal Calculi—Anuria—Nephralgia—Oxaluria—Phosphaturia—Benign Renal Tumors—Malignant Renal Tumors—Tumors of the Renal Pelvis—Polycystic Degeneration of the Kidney—Echinococcus of the Kidney—Movable Kidney—Hydronephrosis—Contusions of the Kidney—Open Wounds of the Kidney—Acute Nephritis—Chronic Parenchymatous Nephritis—Chronic Interstitial Nephritis—Congestion of the Kidney—Syphilis of the Kidney—Amyloid Kidney—Hemoglobinuria—Renal Hydrops—Uremia.

CHAPTER XI.

DISEASES OF THE URETERS 147–149

Ureteral Calculus—Tuberculosis of the Ureter—Ureteritis—Tumors of the Ureter—Injuries of the Ureter.

CHAPTER XII.

DISTURBANCES OF THE GENITAL FUNCTION IN THE MALE 150–159

Nervous Impotence—Paralytic Impotence—Psychic Impotence—Impotence Due to Anatomical Causes—Neurasthenia Sexualis—Sterility in the Male.

CONTENTS.

PAGE

CHAPTER XIII.

DISEASES OF THE URINARY ORGANS IN THE FEMALE 160–175

Acute Gonorrhea of the Urethra—Chronic Gonorrhea of the Urethra—Gonorrhea of Skene's Glands—Gonorrhea of the Vulvar Glands—Gonorrhea of Bartholin's Glands—Gonorrhea of the Vagina—Gonorrhea of the Cervix Uteri—Urethritis—Stenosis of the Urethral Orifice—Strictures of the Urethra—Prolapse of the Urethral Mucous Membrane—Urethrocele—Cystocele—Epispadias—Hypospadias—Benign Tumors of the Urethra—Malignant Tumors of the Urethra—Calculus in the Urethra—Acute Cystitis—Chronic Cystitis—Cystitis Trigoni—Paracystitis—Foreign Bodies in the Bladder—Vesical Calculus—Incontinence of Urine—Ischuria Paradoxa—Vesical Fistula—Kidney of Pregnancy—Pyelonephritis of Pregnancy—Urethral Fistula.

CHAPTER XIV.

DISEASES OF THE URINARY ORGANS IN CHILDHOOD 176–181

Gonorrhea in Boys—Gonorrhea in Girls—Hypospadias and Epispadias—Enuresis Infantum—Acute Cystitis, Pyelitis, Pyelonephritis—Chronic Cystitis and Pyelitis—Vesical Calculi—Pyonephrosis—Orthostatic Albuminuria—Nephritis—Hematuria.

APPENDIX.

THE SEROLOGICAL DIAGNOSIS AND SPECIFIC TREATMENT OF GONOCOCCIC INFECTION 183–207

Agglutination Studies—Opsonic Studies—Precipitin Studies—Bactericidal Immune Bodies—Complement Fixation Studies—Skin Reaction—Vaccine Therapy—Gonococcus Immune Bodies—Autosero Therapy.

ILLUSTRATIONS.

FIG.		PAGE
1	Stockmann penis clamp	4
2	Bransford Lewis' Urethral Tablet Depositors	5
3	Glass container	8
4	Bulbous silk catheter (Charriere 14)	11
5	Soft rubber catheter	11
6	Catheter with Mercier curve	11
7	Nélaton catheter	11
8	Irrigator elevated on wooden frame	23
9	Blunt glass tip attachment for irrigator	23
10	Guyon drop syringe	26
11	Guyon sound	28
12	Irrigating dilator	29
13	Teufel suspensory	38
14	Bransford Lewis' modification of the Teufel suspensory	38
15	(Bransford Lewis' Method of Circumcision). Application of alypin injection with blunt-pointed needle	48
16	(Bransford Lewis' Method of Circumcision). Clamp and tractor in place; one suture inserted	48
17	(Bransford Lewis' Method of Circumcision). Suturing finished, ready for incision	49
18	(Bransford Lewis' Method of Circumcision). Excision completed	50
19	(Bransford Lewis' Method of Circumcision). The immediate result	50
20	Gauze-cotton dressing	50
21	Collin foreign-body forceps	53
22	Ernest G. Mark Operating Urethroscope	54
23	Bransford Lewis' Operating Cystoscope	55
23A	Accessories to Bransford Lewis' Operating Cystoscope	56
23B	Accessories to Bransford Lewis' Operating Cystoscope	56
24	Bulb sound of medium size	59
25	Dittel sound	60
26	Filiform bougie	61
27	Filiform bougie with screw-joint	63
28	Casper suspensory	67

ILLUSTRATIONS.

FIG.		PAGE
29	Arzberger apparatus	77
30	Bransford Lewis' Automatic Rectal Syphon	78
31	Landau trocar for puncturing abscess in Douglas' pouch	79
32	Winternitz sound	81
33	Tiemann rubber catheter	85
34	Horizontally flattened Bastos or Wishard catheter	85
35	Laterally flattened Bartrina catheter	85
36	Malécot catheter	91
37	De Pezzer catheter	91
38	Pousson catheter	91
40	Collin instrument for removal of hard catheters from bladder	112
41	Küster drop-cannula	145
42	Skene glass catheter	169
43	Blunt hook instrument for removal of hairpins from female bladder	171

CHAPTER I.

DISINFECTION OF UROLOGIC INSTRUMENTS.

Metal Instruments.—Catheters, Sounds, Dilators.—Boil for five minutes in a 1 per cent soda solution (about 1 tablespoonful of powdered soda in 1 quart of water).

Rubber Instruments.—Nélaton, Tiemann, and Malécot Catheters.—Boil for five minutes in plain water.

Silk Instruments.—Catheters, Urethral Catheters, Bougies.—Boiling, as the simplest and best method of disinfection, would be most desirable, but woven instruments do not bear boiling very well. The firm of **Porgès**, of **Paris**, has lately succeeded in producing a catheter of white rubber and silk that combines the consistency of ordinary silk with the quality of rubber catheter to bear boiling. These catheters may be boiled at least thirty times, three minutes each time, in plain water without injury. They should be placed in cold water, boiled, and allowed to cool. After use they should be washed with soap and water for three minutes, dried, and kept in a dry place.

If these white catheters are not used, one of the following methods may be adopted:

(1) Disinfection with corrosive sublimate.

(2) Sterlization with steam.

(1) DISINFECTION WITH CORROSIVE SUBLIMATE.—Before using the instruments they should be washed for three minutes with soap and cold water, rinsed in clear water, and immersed for ten minutes in a cold 1:1000 solution of corrosive sublimate. After use they should be rinsed, especially the interior of hollow instruments, washed for three minutes with soap and water, again rinsed, and then immersed for ten minutes in a 1:1000

solution of corrosive sublimate. They are then dried, and should be kept in glass cylinders or enameled catheter cases. Catheters of good quality will stand this procedure about a hundred times. This method is not in strict accordance with bacteriological requirements, but will answer for the usual cases.

(2) STERILIZATION WITH STEAM.—Each instrument should be placed in a separate wrapper of linen cloth or filter paper to prevent the instruments from adhering to each other, the kind and size of each being indicated on the wrapper—as, Mercier 19, bougie 6. The various instruments, with their wrappings, are then placed in the steam sterilizer for twenty to forty minutes. They are allowed to cool before using, so that the varnish may again harden. The instruments will remain sterile in their wrappings, and are to be unwrapped only as they may be needed. They are subject to very little handling in this method, but as a steam sterilizer is necessary, it will be inconvenient for the usual office practice.

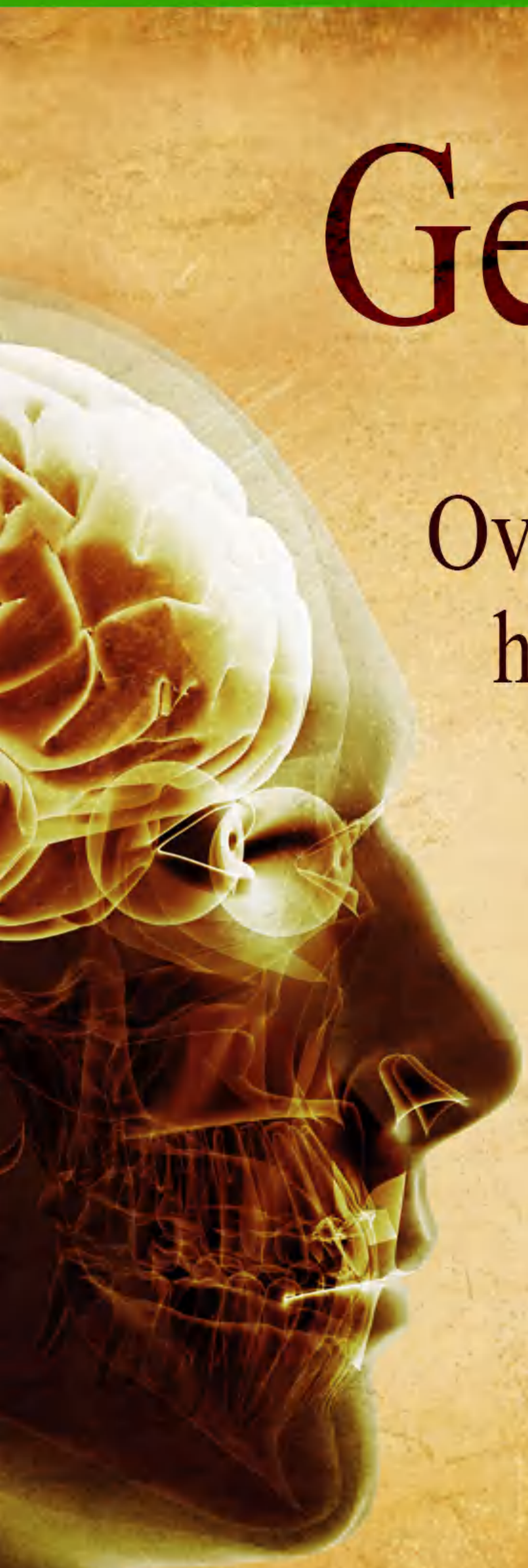
Disinfection with formalin is not recommended, as it cannot be depended upon for the desired result.

Cystoscope.—Boiling is not practicable on account of the optical mechanism. It should be washed for three minutes in green soap and water, rinsed, and suspended for ten minutes in a flask containing a 1:5000 solution mercuric oxycyanid. This process is to be repeated after use. After examinations in virulent cases the disinfection process should be extended to three hours.

Syringes.—These can be considered practically sterile, as they are usually used only in connection with antiseptic solutions. In other cases they can be specially sterilized by exposure for an hour to a 1:1000 solution of silver nitrate [or 1-50 per cent bichlorid].

Irrigators.—The disinfection method for syringes will apply to irrigators. Air infection is not to be feared.

THIS PAGE IS LOCKED TO FREE MEMBERS
Purchase full membership to immediately unlock this page



Get Smart

Over 2,000 years of human knowledge in 797,885 volumes

Instant access
$8.99/month

Continue

*Fair usage policy applies

If a minute quantity of a suprarenal preparation is added to novocain or cocain, the toxicity is lessened by reducing the rate of absorption, and the activity is at the same time increased (Braun). In addition to this, the suprarenin contracts the mucous membrane, which is of benefit in strictures and prostatic hypertrophy, and for that reason a stronger addition of suprarenin (10 drops) is used.

Novocain-suprarenin mixtures should be freshly prepared each time, as they decompose very quickly. The reddish color that appears in freshly prepared mixtures is of no significance.

MUCOUS-MEMBRANE ANESTHESIA.—Ten cubic centimeters of a 2 per cent novocain solution and 5 to 10 drops of a 1:100 suprarenin solution are required for each patient. Immediately before using, these solutions are mixed in a graduate, and are injected into the anterior urethra with a penile syringe, being retained with a Stockmann penis clamp (Fig. 1). The mixture is allowed to remain in the urethra from five to ten minutes. The longer the medication is allowed to remain, the better will be the anesthesia, but generally five minutes will be sufficient.

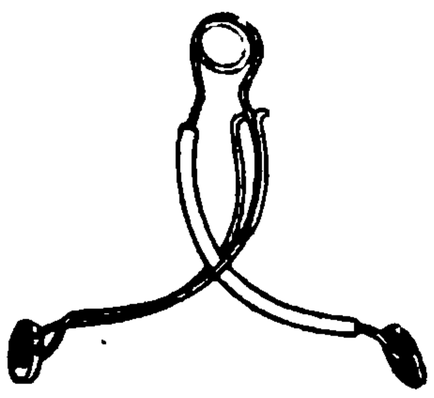


Fig. 1.—Stockmann penis clamp.

INJECTION OF THE SOLUTION.—The prepuce is drawn back, and a 4-centimeter gauge is placed under the sulcus coronarius. With the third and fourth fingers of the semisupinated hand the physician takes hold of the penis, and with the thumb and index finger the urethral orifice is opened. The penis is held upward, and the tip of the syringe inserted into the urethra. After the injection the penis is compressed with the third and fourth fingers, and held thus until the fluid is secured by the clamp in the sulcus coronarius. This method causes complete anesthesia of the anterior urethra. Prolonged application will benumb the external sphincter to such an extent that instruments may be passed into the bladder with practically no pain.

The application of cocain, of which it was formerly necessary to use 3 cubic centimeters of a 1 per cent solution with 10 drops of suprarenin solution, has been discontinued. It probably acts more quickly and more effectively than novocain, but its use in the urethra, even with the addition of suprarenin, is questionable. The same may be said of eucain, which is only second to

novocain in effectiveness, and, moreover, does not amalgamate with suprarenin.

TABLET METHOD FOR LOCAL URETHRAL ANESTHESIA.—For effective local anesthesia of any part of the urethra, anterior or posterior, the editor has found the following method to be the most satisfactory: By means of the urethral tablet depositor shown in Fig. 2, soluble tablets of alypin (each containing 1⅛ grains) are placed in the urethra where desired, from one to four of the tablets being used successively for the purpose. The posterior

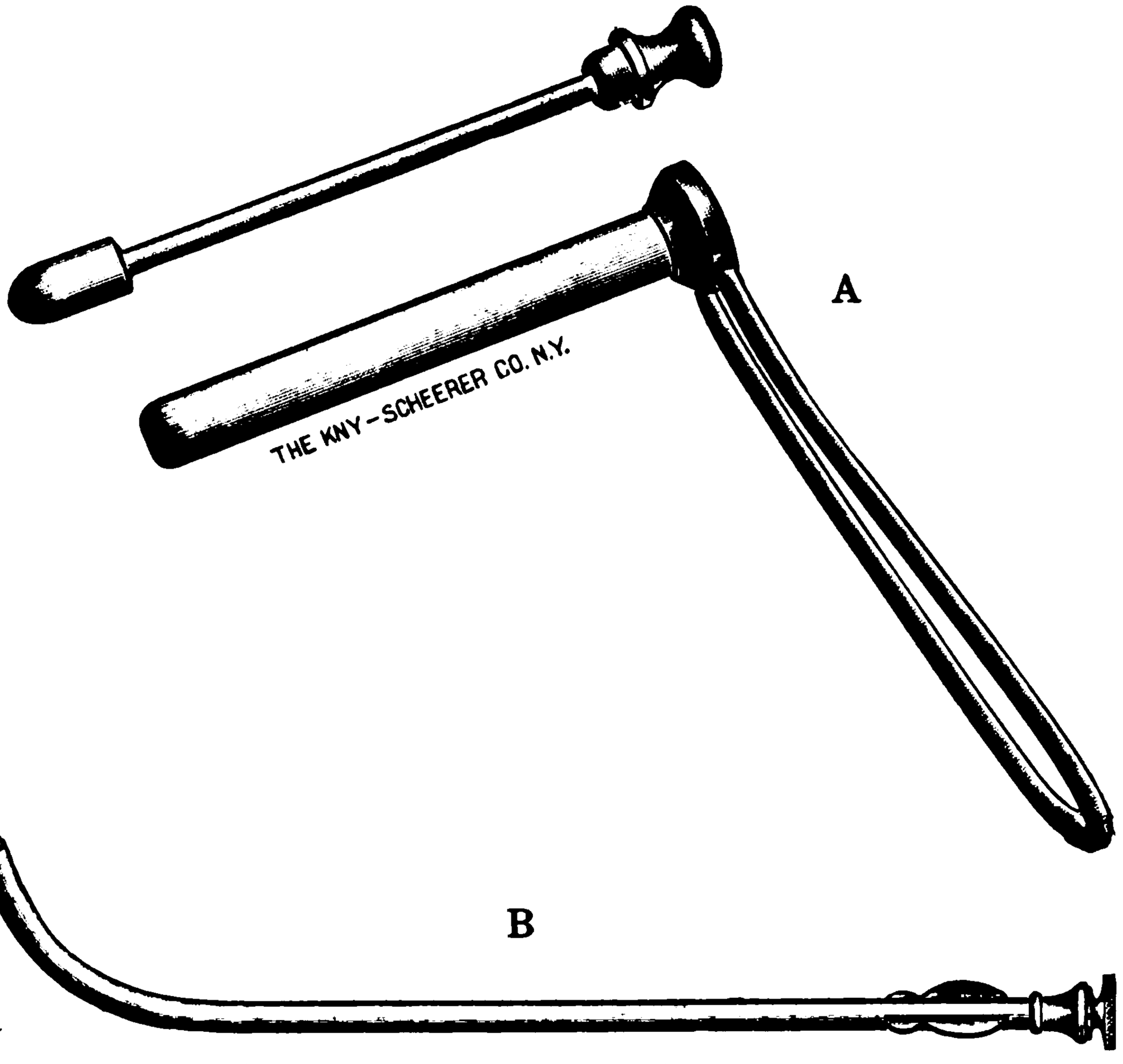


Fig. 2.—Bransford Lewis' Urethral Tablet Depositors. A, for female (natural size). B, for male (reduced).

urethra being the most sensitive part of the canal, it is customary to place the tablets there only for posturethral or intravesical manipulations. With the obturator in place, the depositor is introduced to the locality at which it is desired to produce the anesthetic effect; the obturator is withdrawn, a tablet is inserted into the tube and pushed through it by reinsertion of the obturator. After one or two minutes' maceration in the secretions of the urethra the tablet softens into a semiliquid mass, and is then spread over the adjacent membrane by to-and-fro motions of the depositor.—EDITOR.

Local anesthesia of the posterior urethra is necessary only in lithotripsy and cystoscopy in ulcerated bladder. In such cases the bladder is filled, according to its capacity, with from 100 to 200 cubic centimeters of the following solution (Braun):

℞ Novocainæ nitratis ..... gr. vijss
Physiologic salt solution .....q. s. ad ℥ viij

Misce.

Sig.: Add 10 drops of suprarenin solution 1:10,000 when ready to use.

But as complete anesthesia of the bladder is not accomplished by this method, the procedure is preceded by anesthesia per rectum.

℞ Antipyrinæ ..... gr. xxxvj
Morphinæ hydrochloridi ..... gr. ½
Aquæ destillatæ .....q. s. ad ℥ ij

Misce.

Sig.: As a clysma one quarter of an hour before the operation (Zuckerkandl).

Nerve injection anesthesia combined with injection around the field of operation (Hackenbruch) is very efficacious, and operations on the scrotum with this method can be painlessly conducted.

Infiltration anesthesia in minor urologic affections—splitting the external urethral orifice, punctio vesicæ, etc.—will be considered in a succeeding chapter.

For urologic purposes three of the four Braun novocain solutions are used:

No. I.

℞ Novocainæ nitratis .....gr. xx
Physiologic salt solution .....q. s. ad ℥ iv

No. II

℞ Novocainæ nitratis ..... gr. xl
Physiologic salt solution .....q. s. ad ℥ iv

No. III.

℞ Novocainæ nitratis .....gr. v
Physiologic salt solution .....q. s. ad ℥ j

To each of the above before using should be added the required quantity of suprarenin—to each cubic centimeter of Nos.

1 and 2, 10 drops; to each cubic centimeter of No. 3, 20 drops. The desired quantity is boiled after the addition of the proper proportion of suprarenin.

Spinal Anesthesia.—Spinal anesthesia and general narcosis should be applied only in cases of lithotripsy and cystoscopy, and for operations on the prostate gland, kidneys, and bladder.

CHAPTER III.

LUBRICANTS.

All instruments that are to be introduced into the urethra must be lubricated, and the lubricant must be susceptible to sterilization and be soluble in water. Insoluble materials—as olive oil and the usual ointments—afford sufficient lubrication, but are not adapted for this purpose, as they are difficult to remove when cleaning the instruments. These materials cannot be used in cystoscopy, as they smear the prism. Pure glycerin does not furnish sufficient lubrication. The most dependable lubricant is a mixture of mucilage, glycerin, and water. The original prescription (Krauss) of this mixture is:

℞ Tragacanthæ .....gr. l
Glycerini .....℥ iij
Aquæ phenolis (3 per cent) ..... q. s. ad ℥ iv
Misce et fiat pastamollis. Sterilize. Dispense in tin tube.
Sig.: Lubricant.

The author uses the preparation only at the home of the patient, and for office treatment prefers a lubricant that can be poured on the instruments as being more serviceable. He has for years used a mixture suggested by Strauss (Barmen), slightly modified, which has the consistency of flowing honey:

℞ Tragacanthæ .....℥ iss
Aquæ frigidæ .....℥ vj
Glycerini .....q. s. ad ℥ xij
Misce.
Sig.: Lubricant.

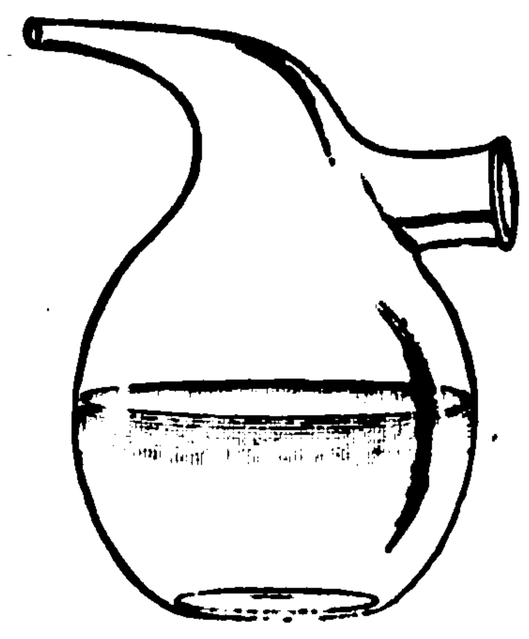


Fig. 3.—Glass container.

This mixture should be boiled for five minutes in a water bath, and then poured into a glass container (Fig. 3), which has been previously boiled. In this container, which is closed with a cotton stopper, the lubricant remains sterile and will be preserved indefinitely. The addition of an antiseptic is not necessary; if, however, desired, 1 gram of

mercuric oxycyanid may be added. In cases requiring immediate attention, resort may be had to American vaselin or fluid paraffin, which is free from disease germs.

CHAPTER IV.

CATHETERIZATION OF THE MALE.

Metal Catheters—Metal Sounds—Cystoscope.—INTRODUCTION.—The patient is placed on his back, and the physician takes a position to his left. The prepuce is drawn back, and held with a small gauze band. On the lower end of the catheter is attached a rubber tube about 8 centimeters long, and the upper end is thoroughly lubricated. The physician takes hold of the penis with the third and fourth fingers of the semisupinated left hand, and with the first and second fingers opens the urethral orifice. The catheter is then caught at the extreme end with the thumb and index fingers of the right hand, the thumb above while the other fingers give support below. The instrument is held parallel to and immediately above the left inguinal fold.

FIRST STEP.—The instrument remains in the inguinal region, and is inserted in the pendulous urethra, while with the left hand the penis is drawn over the instrument. The catheter glides into the fossa bulbi, where the resistance is plainly felt.

SECOND STEP.—With the right hand the penis and instrument are carried from the inguinal region to the median line, and at the same time the end of the catheter is slightly raised, the left hand continuing to hold the penis in an extended position. The tip of the catheter glides out of the fossa bulbi and lies directly in front of the membranous part.

THIRD STEP.—With the right hand the catheter is raised to the median line, the penis being held extended and the instrument then lowered between the thighs of the patient. During the lowering of the catheter the left hand releases the penis. The tip of the catheter is pressed against the membranous part, glides under the symphysis into the membranous part, and through the prostatic part into the bladder. The urine flows out, and the rubber tubes should be guided into a proper receptacle or the urine will soil the clothing.

The following mistakes in manipulation are frequently made:

THIS PAGE IS LOCKED TO FREE MEMBERS
Purchase full membership to immediately unlock this page

Know Your Bible

Forgotten Books' Full Membership provides unlimited access to more than 28,000 volumes of Christian literature for $8.99/month

Continue

*Fair use policy applies

CHAPTER V.

DISEASES OF THE URETHRA AND PENIS.

Acute Gonorrhea.

Diagnosis of Gonorrhea in the Male.—For microscopic identification of the gonococcus the following stains are recommended:

1. Löffler's alkaline solution of methylene blue.

Absolute alcohol	100 grams
Distilled water	400 grams
Solution of potassium hydroxid	2 drops
Methylene blue	5 grams

Mix and filter.

The solution should be dropped on the dried and fixed preparation, rinsed immediately in water, and dried over a flame. The gonococcus will be of a deep-blue color.

2. The Gram stain (avoiding water) is necessary for differential diagnosis, and the gonococcus decolorizes according to Gram.

(a) Immerse for three minutes in

Concentrated solution of gentian-violet	10 grams
Solution of aniline, aqueous	90 grams

Fill a test-tube with equal parts of aniline oil and water. Shake the tube for five minutes, allow it to stand for a few moments, and filter through moist filter paper (producing aniline water), after which dry with filter paper.

(b) Immerse for three minutes in solution of iodin with iodid of potash, and dry.

(c) Decolorize in 95 per cent alcohol until all stain is removed, and dry.

(d) Counterstain for twenty seconds in dilute carbol-fuchsin—1 part of 1 per cent solution of carbol-fuchsin to 20 parts of water. The gonococcus will be a red color, and everything else will be dark-blue.

3. The Pappenheim-Unna stain with methylene-green pyronin for the beautiful colored pictures it presents.

Methylene green	.15 gram
Pyronin	.25 gram
Alcohol	2.5 grams
Glycerin	20. grams
Phenol solution, aqueous, 2:100, q. s. add	100. grams

Drop this solution on the smear, rinse with water after half a minute, and dry. The gonococcus will be a bright-red color, and the leucocytes will be light-green.

The extent of the infection is determined, not considering a urethroscopy, by the two-glass test (Thompson), or more definitely by the irrigation test of Jadassohn.

Two-Glass Test.—The patient is directed to retain his urine from four to five hours, and then to urinate into one glass until it is half filled (about 50 cubic centimeters), passing the remainder into another glass. The first glass will contain the secretions from the anterior urethra, and the second glass will contain the secretions from the posterior urethra and bladder.

Jadassohn's Irrigation Test.—A Nélaton catheter No. 19 is introduced to the external sphincter, and the anterior urethra is irrigated with a syringe and a 1:5,000 solution of mercuric oxycyanid until the fluid passes out clear. The passed fluid will contain the contents of the anterior urethra, and the urine will contain the contents of the posterior urethra and bladder.

Abortive Treatment.—Speaking generally, rules for abortive treatment have not been formulated, and the author concurs in this conclusion reached by such experienced authorities as Casper, von Zeissl, Wossidlo, and others. The abortive treatment is admittedly applicable only in recently acquired and mild cases, for which Blaschko prescribes the following limitations:

1. The suspected coitus must have occurred not more than five or six days previous.
2. The clinical manifestations must not be more than twenty-four hours old.
3. There must be neither considerable swelling of the orifice nor profuse secretion from the urethra.
4. The secretion must still contain abundant epithelial elements.
5. The first portion of the passed urine must be only slightly cloudy, and the second portion must be entirely clear.

Even under the above limitations the abortive treatment frequently fails. Should, however, a favorable case be presented, it would be advisable to adopt Blaschko's method, and a 2 per cent solution of albargin will serve as the medicament.

℞ Tabellæ albargini .....gr. iij
Fiat tabella No. I. Dentur tales tabellæ No. L.
Sig.: Dissolve 3 tablets in 1 ounce of distilled water.

After careful cleansing of the external orifice, 15 cubic centimeters of the solution is injected into the urethra with a piston syringe, and allowed to remain from three to four minutes, the

orifice being held closed with the fingers. There should be no anesthesia of the urethra, as the external sphincter will yield and the solution will flow into the posterior urethra. The injection should be repeated on the second and third day, whether gonococci are or not present in the secretion. If the urethra has become sensitive, the second and third injections are reduced in strength to 1:1000, and instead of the syringe, the irrigator is used, with which under low pressure only the anterior urethra is irrigated. The technic to be followed is according to Janet's method. Should severe inflammatory symptoms arise, the albargin injections must be discontinued, and the abortive treatment must be abandoned. If the three injections prescribed above are tolerated, the urine is then examined for the following six days for traces of gonococci. Should the gonococci be absent and no traces of their presence develop, a successful abortive treatment may be anticipated. In all other conditions the usual systematic gonorrheal treatment is to be followed.

[In a large percentage of cases argyrol and silver nuclein are more effective as gonococcicides than any other drug. While argyrol, as with all drugs used for this purpose, is occasionally attended with indifferent success, or even failure, the experience of the editor leads him to believe that this is the most uniformly successful of all gonococcicides. It is used in solutions varying in strength from 1 to 10, or even 20, per cent, and rarely produces the irritating effects that follow the application of strong solutions of the other efficient gonococcicides.—EDITOR.]

Systematic Treatment.—METHOD OF TREATMENT.—The principal treatment is injections, combined with which are hygienic and dietetic instructions. Internal remedies, such as balsams and diuretics, are to be used only when specially indicated. Instrumental interference should be undertaken only in exceptional cases, and then only toward the end of the acute stage—i. e., not before the fourth or fifth week.

THERAPY.—The irritating and infectious discharge must be allayed with injections. Local treatment is omitted only when severe inflammation—as peracute urethritis or lymphangitis of the penis—is present, and when such inflammation does not exist, the treatment is begun with injections, using mild antiseptics—as, thallin sulphate (Casper), or, if this be too expensive, potassium permanganate.

℞ Thallini sulphatis .....gr. xxxvj
Aquæ destillatæ .....q. s. ad ℥ viij
Misce.

℞ Potassii permanganatis .....gr. ¾
Aquæ destillatæ .....q. s. ad ℥ viij
Misce.
One 5-ounce gonorrheal syringe with conical hard-rubber tip.

The solution is injected by the patient with the syringe from four to six times daily.

Technic of the Injection.—The patient passes his water before using the injection, so that the pus may be washed out of the urethra, after which the penis is to be cleansed. The patient then takes hold of the penis with the left hand, and with the right hand slowly injects the medicament [taking care to prevent its escape from the meatus]. It is not necessary to heat the solution. The patient should inject only as much as the anterior urethra will comfortably hold, and forcible injection must be avoided, as the external sphincter will yield in such cases and gonococci will be carried into the healthy posterior urethra. The quantity of the injection will vary in the case of any one patient according to the inflammatory symptoms. The injected fluid is retained in the urethra for five minutes and no longer, as otherwise the external sphincter will yield.

Equally as important as the directions for the injection is the proper observance of the hygienic and dietetic instructions.

Drinks.—Alcoholics are to be avoided, except small quantities of red wine and light beer. Weisbeer, Graetzer beer, "Bilzbrause," and champagne are positively forbidden. Alkaline spring water, as Fachinger and Wildunger, as well as lemonade and other acid drinks, are to be avoided, as they make the urine alkaline and thereby tend to induce mixed infection. Unfermented seltzer water is allowable, but the best drinks for the gonorrhea patient are water, milk, and tea. Spiced food is to be avoided.

Regular movements of the bowels must be promoted—if necessary, by the use of mild laxatives, as Carlsbad salts or rhubarb, or preferably by drinking buttermilk in the morning before breakfast.

Erections and emissions must receive attention, as they may be suppressed.

The patient may follow his usual occupation, but must avoid all strenuous exertion. Walking is less injurious than riding over rough roads, and horseback riding is prohibited.

A suspensory should be worn only by patients who have been afflicted with epididymitis, and then it should be a Casper suspensory (Fig. 28). A Teufel suspensory may be worn in case of a copious discharge. [The placing of cotton within the prepuce is to be avoided, as it tends to hold the discharge within the urethra.—EDITOR.]

The hands should be thoroughly washed in soap and water after each contact with the genitals in order to guard against the possibility of carrying the infection to the eyes.

The attention of the patient should be repeatedly called to the necessity of following the foregoing directions.

With proper observation of directions on the part of the patient the discharge should decrease in four to five days, when the treatment with silver nitrate is begun, which medicament has proved superior to countless substitutes (Casper, Wossidlo, and others). As this treatment, however, slightly increases the discharge, the use of sulphate of thallin or permanganate of potassium is continued, and the patient alternately injects three times the permanganate or thallin and nitrate of silver 1:5,000. The latter should be retained in the urethra only one minute.

℞ Argenti nitratis ..... gr. ¾
Aquæ destillatæ ..... q. s. ad ℥ viij
Misce.

The syringe should be cleansed before each injection, but not with water, which would cause decomposition of the nitrate of silver solution, and it will be more thoroughly cleansed by the introduction of several cubic centimeters of the solution itself.

If the patient cannot conveniently administer the six alternate injections as described, or if the nitrate of silver causes severe burning, one of the milder organic silver preparations [argyrol or protargol] may be substituted, which the patient must inject four or five times daily. The author ascribes just as little virtue as do Casper and Wossidlo to the organic silver preparations of having any special effect on the deep structures, and does not consider that they have any other advantage over silver nitrate. but uses them only as an auxiliary medicament and soon resumes

the administration of nitrate of silver preparation. The author prefers albargin in combination with nitrate of silver and gelatose (Joseph).

℞ Albargini .....gr. j
Aquæ destillatæ .....q. s. ad ℥ viij
Misce.

Or ichthargan, a compound of ichthyol and silver (Lohnstein).

℞ Ichthargani .....gr. ¾
Aquæ destillatæ .....q. s. ad ℥ viij
Misce.

Or argonin, a compound of silver with casein (Jadassohn).

℞ Argonini ..... gr. xxxvj
Aquæ destillatæ .....q. s. ad ℥ viij
Misce.

Or largin, a compound of albumin with silver (Finger).

℞ Lairgini .....gr. ix
Aquæ destillatæ .....q. s. ad ℥ viij
Misce.

Protargol, a compound of silver and a protein matter (Neisser), prescribed by many, may be added—¼ per cent is suggested, as a stronger solution will cause too severe irritation.

℞ Protargoli .....gr. ix
Aquæ destillatæ .....q. s. ad ℥ viij
Misce.

Injections of this character should be continued for a week.

During the third week the secretion becomes, microscopically, more epithelial in character, while the number of gonococci diminishes. Following the complete disappearance of the gonococci, astringent injections are indicated. At first silver nitrate or one of the organic silver preparations is used, to be followed by an exclusive astringent treatment, as it is not advisable to continue the use of the silver salts very long for the reason that they greatly irritate the mucous membrane. The selection of the medicament and the time for making the change must be left to the judgment of the physician, as no absolute method can be followed; neither do the microscopic findings furnish a positive guide, as the absence of gonococci at the time does not

indicate that they have permanently disappeared. The surest criterion in the matter is the observation of the urine. If the discharge and shreds diminish, the medicament is having the desired effect; but if a burning sensation and copious secretion set in, the medicament must be changed, or at least the astringency reduced. Of the astringents we prefer zinc sulphate.

℞ Zinci sulphatis .....gr. viiss
Aquæ destillatæ .....q. s. ad ℥ viij
Misce.

Or:

℞ Zinci sulphatis .....q. s. ad ℥ viij
Aquæ destillatæ .....gr. ix
Misce.

Or:

℞ Zinci phenolsulphatis .....gr. viiss
Aquæ destillatæ .....q. s. ad ℥ viij
Misce.

Or:

℞ Zinci phenolsulphatis .....gr. ix
Aquæ destillatæ .....q. s. ad ℥ viij
Misce.

Or:

℞ Zinci acetatis .....gr. viiss
Aquæ destillatæ .....q. s. ad ℥ viij
Misce.

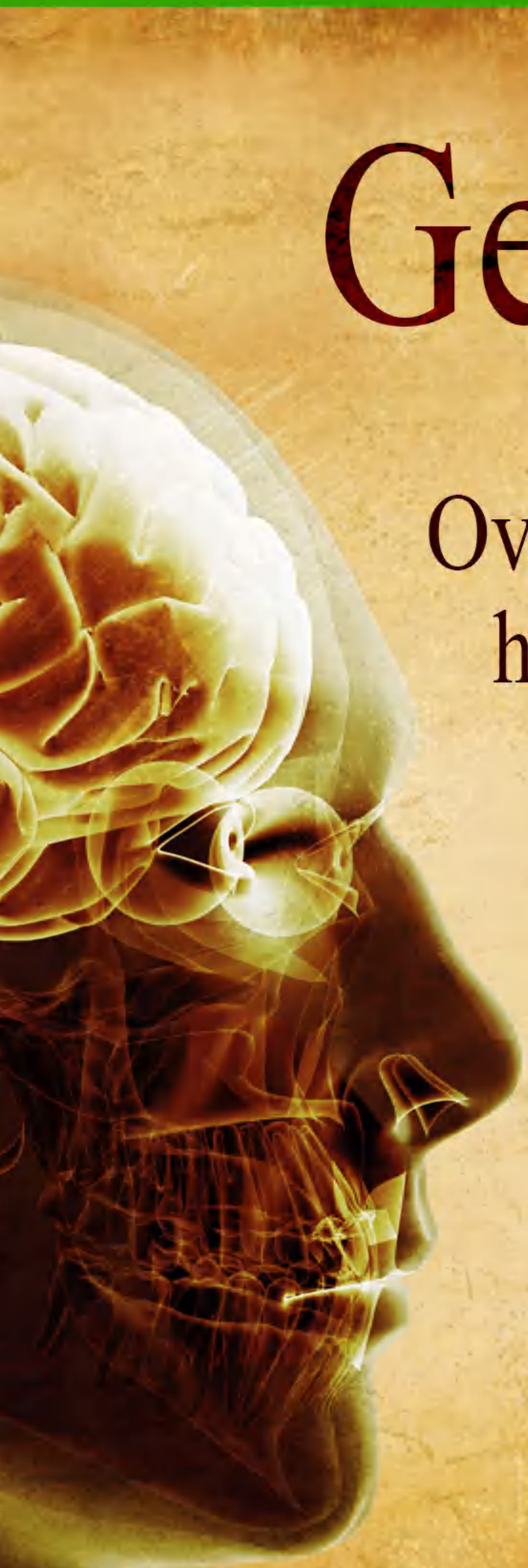
Or:

℞ Zinci permanganatis .....gr. ¾
Aquæ destillatæ .....q. s. ad ℥ viij
Misce.

During the third week is also the time for complications to set in, especially the spreading of the gonorrhea to the posterior urethra—posterior urethritis.

[The posterior urethra is involved in such a large proportion (85 to 90 per cent) of gonorrheal infections that it would hardly seem justifiable to term it a "complication"; and moreover, while it frequently makes its appearance during the third week, as stated, it also frequently begins much earlier, in the second or even the first week. It is undoubtedly the most freqent factor in prolonging gonorrheal urethritis, and must always be given serious and appropriate consideration.—EDITOR.]

THIS PAGE IS LOCKED TO FREE MEMBERS
Purchase full membership to immediately unlock this page



Get Smart

Over 2,000 years of human knowledge in 797,885 volumes

Instant access
$8.99/month

Continue

*Fair usage policy applies

Instrumental treatment of the urethra is permissible at this stage of mild local symptoms, and healing may be accelerated by appropriate irrigation. During this stage of gonorrhea all local treatment must, however, be skillfully applied if the disease is not to be aggravated instead of ameliorated. The most effective irrigation is that of Diday (page 21), but the irrigation of Janet (page 23) and instillation according to Guyon (page 23) are also recommended.

When the urine has become clear and the discharge has ceased, injections should be suspended for three or four days. If the discharge does not again appear, injections should be discontinued, and the treatment is completed. To determine whether danger of infection still exists would, however, require a special test.

CHRONIC GONORRHEA.

Speaking generally, gonorrhea may be considered chronic from six to eight weeks after the first symptoms have appeared, and only in exceptional cases does the acute condition continue for a longer time.

TREATMENT.—The treatment, in contrast with that in the acute stage, must be mainly instrumental. Injection with the gonorrheal syringe is not as effective as the infiltration process, which is very effective in chronic gonorrhea.

For the instrumental treatment many methods are available from which to make selection. Positive indications for this application cannot, however, be formulated—not even with the urethroscope (Casper)—but the examination of the urine will furnish some evidence of the treatment to be adopted.

At the beginning of the chronic stage the following should form the basis of the treatment:

1. Irrigations of Diday.
2. Irrigations of Janet.
3. Pressure irrigations of Kutner.
4. Instillations of Guyon.

Each of these methods is very effective in its particular field of service, and the practitioner, in making a selection from these methods, may be guided by the following rules:

(1) If the first and second portions of the urine show diffused cloudiness of a marked degree, select irrigation of Diday.

(2) If the first and second portions show diffused cloudiness, but in a mild degree, select irrigation of Janet or pressure irrigation of Kutner.

(3) If the first and second portions are clear, with occasional shreds, especially if accompanied by nervous manifestations whose cause may be traced to the colliculus seminalis, then select instillation of Guyon.

If the method selected is well borne, it should be persistently continued for some time; but if it should cause inflammatory symptoms, it must be changed.

These irrigations and instillations are recommended with the presumption that diseases of the prostate will not be overlooked. Should the gonorrhea be accompanied by chronic prostatitis, as is usually the case, then massage of the prostate must be combined with the treatment, as otherwise the superficial catarrh will cease and the urine become clear, but in a short time there will be a recurrence from an overlooked prostatic focus.

For this reason it should be the rule to examine microscopically the prostatic secretion at the beginning of the treatment, and if prostatitis is an accompanying factor, massage should be first administered, to be followed by irrigation.

Injections with the gonorrheal syringe, two or three times daily, should be given only when the discharge increases, and the treatment selected should be according to that specified for the acute stage.

Balsams and diluents are of service only in cases of exacerbation of the process in the posterior urethra or bladder, and for all other cases they may be omitted.

The patient should be warned against coitus, and only small quantities of spirituous liquors are to be allowed. Physical exertion is to be prohibited only in case of sudden increase in the severity of the disease, but the patient should, however, avoid being subject to introspection in order that he may not become neurasthenic.

Irrigation of Diday.—Anesthetization of the mucous membrane and the introduction of a bulbous silk catheter (Charriere 14, Fig. 4). The physician takes hold of the penis with the third and fourth fingers of the semisupinated left hand, with the first and second fingers opens the urethral orifice, and carefully inserts the catheter into the urethra, the penis being held in an

extended position. Should the external sphincter offer any resistance, endeavor to divert the attention of the patient, or direct him to bear down or to take a deep-breath. When the catheter reaches just beyond the sphincter, the medicament is allowed to trickle into the posterior urethra and the neck of the bladder. If the catheter is inserted too far into the bladder, as is frequently the case with the inexperienced, the posterior urethra will not receive any of the medicament. Should the catheter inadvertently enter the bladder, which will be indicated by the passage of urine, it should be immediately withdrawn slightly, and the catheter will then be in proper position. One hundred cubic centimeters of the solution, thoroughly warmed, should be allowed to flow into the posterior urethra, after which the syringe is again filled, placed against the catheter, which is now slowly withdrawn from the urethra, allowing the contents of the syringe to pass into the anterior urethra, which ends the irrigation.

In nervous patients it is difficult to overcome the resistance offered by the external sphincter, and force must not be applied. The catheter is allowed to remain with its tip just in front of the external sphincter, and under slightly increased pressure the first syringeful of fluid is injected into the anterior urethra, the urethral orifice being held closed by the fingers of the left hand. Then the sphincter yields, as in pressure irrigation, so that, although the catheter is in front of the external sphincter, the posterior urethra is irrigated properly. If this expedient fails, irrigation is suspended for this attempt; at the second or third trial it will certainly succeed. This procedure is preferred to the application of the metal drop catheter of Ultzmann.

IRRIGATING FLUID.—Silver nitrate is in almost exclusive use, and remains superior to all other preparations. It is employed in 1:1000 solution.

℞ Argenti nitratis .....gr. ½
Aquæ destillatæ .....q. s. ad ℥ viij
Misce.

Albargin in 1:1000 solution is used only exceptionally.

The pain accompanying a Diday irrigation subsides in a few minutes. However in many patients the application is followed, fortunately at the first sittings only, by really uncomfortable

sensations, as burning in the urethra, straining at urination and defecation, and frequent urination. In spite of these inconveniences it is an excellent, rapidly efficient method.

For the after-pains aspirin, antipyrin, belladonna, etc., may be given.

Irrigation of Janet.—Principle of the Treatment.—The irrigation of the urethra and bladder is accompanied without the use of a catheter. The resistance offered by the external sphincter is overcome by the pressure of the irrigating fluid.

For this irrigation the author uses an irrigator that can be elevated on a wooden frame. This frame can be made by any carpenter and serves the same purpose as the complicated and expensive apparatus (Fig. 8). The frame is about six feet long, about five inches wide, and the side walls are about two inches deep. The lower end of the frame is about three feet above the floor, so that the irrigator can be raised to a height of about nine feet. In this frame the irrigator hangs suspended by a strong cord running through a pulley at the top. Loops are arranged in the cord so that the irrigator can be fastened at eighteen-inch elevations. The irrigator is filled with hot irrigating fluid. To the irrigator is attached a tube with clamp and blunt glass tip (Fig. 9).

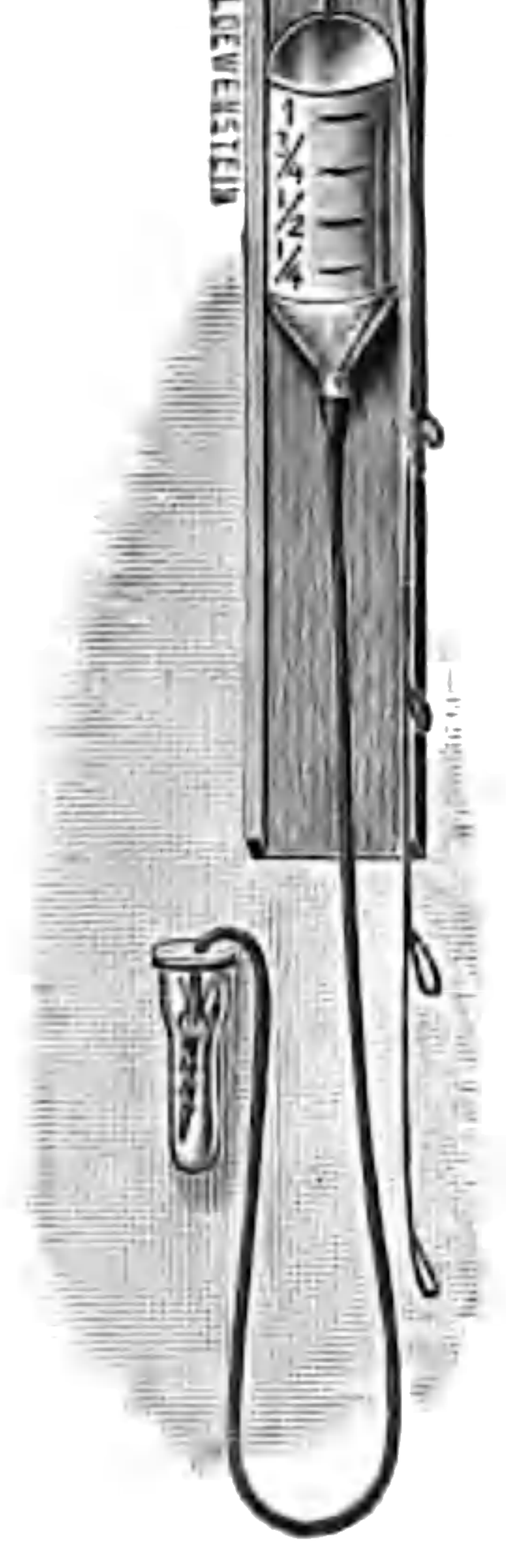


Fig. 8.—Irrigator elevated on wooden frame.

First Part of the Irrigation: Irrigation of the Anterior Urethra.—The irrigator is suspended about five feet above the floor. The patient sits on a chair, leaning far back, and holding before him a glass receptacle. The operator, standing at the right of the patient, holds the tube in his right hand, releases the clamp, and carefully allows some of the solution to flow out. Then he compresses the tube with the fingers of his right hand and seizes the penis with the third and fourth fingers of the left hand, inserts the glass tip into the urethral orifice and holds it firmly

Fig. 9.—Blunt glass tip attachment for irrigator.

in place with the first and second fingers of the left hand. The right hand releases the tube. The solution flows into the urethra gradually, strikes against the sphincter, expands the anterior urethra, and is allowed to flow out by slight withdrawal of the glass tip. By alternate introduction and withdrawal of the glass tip the anterior urethra is irrigated. After the anterior urethra is thoroughly cleansed of discharge—for which purpose eight ounces of solution are required in cases of slight discharge and sixteen ounces in cases of profuse discharge—there follows the second step of the irrigation.

SECOND PART OF THE IRRIGATION: IRRIGATION OF THE POSTERIOR URETHRA AND BLADDER.—In the second step of the procedure the glass tip is not introduced and withdrawn alternately, but is held introduced. With slight practice this part of the treatment is managed by the left hand alone. With the right hand the operator gradually elevates the irrigator—if necessary, to a height of nine or ten feet. At the first irrigation the sphincter yields after slight delay; at the later irrigations it yields quite readily, and as soon as it yields the solution flows into posterior urethra and bladder. The sphincter yields the more readily if the patient is instructed to breathe deeply or to bear down. If the pressure of the solution under flow is found uncomfortable by the patient, it is readily diminished by compression of the tube in the physician's right hand. As soon as the patient complains of distention in the bladder, the irrigation is ended. At the most, eight ounces of medicament will have been introduced into the bladder. The patient promptly urinates and thereby medicates the urethra once more. If forceful distention of the bladder is avoided, complications such as epididymitis and cystitis are not to be feared.

IRRIGATING SOLUTION.—Of the irrigating solutions the author prefers potassium permanganate in solution of 1:3000 to 1:1000. Less frequently he uses solution of ichthyol 1 per cent of silver nitrate 1:3000, of albargin 1:1000, of ichthargan 1:2000. [Argyrol 1:500, protargol 1:1000.—ED.] In mixed infections he employs mercuric oxycyanid in solution of 1:5000. The medicament should be used as hot as possible, in order that the mucous membrane may be better affected.

℞ Potassii permanganatis .....ʒ iiss
Aquæ destillatæ .....q. s. ad ʒ viij
Misce.
Sig.: From 7 to 20 cc. to be mixed with a quart of water.

℞ Ichthyoli .....ʒ v
Aquæ destillatæ .....q. s. ad ʒ viij
Misce.
Sig.: 100 cc. to be mixed with a quart of water.

℞ Tabellæ albargini .....gr. iij
Fiat tabella No. I. Dentur tales tabellæ No. L.
Sig.: Dissolve 5 tablets in a quart of distilled water.

Stock solutions of these tablets must not be made, as they rapidly deteriorate.

℞ Argenti nitratis .....ʒ v
Aquæ destillatæ .....q. s. ad ʒ viij
Misce.
Sig.: 3 cc. to be mixed with a quart of distilled water.

℞ Ichthargani .....ʒ iiss
Aquæ destillatæ .....q. s. ad ʒ viij
Misce.
Sig.: 5 cc. to be mixed with a quart of water.

℞ Hydrargyri oxycyanidi .....ʒ ij
Aquæ destillatæ .....q. s. ad ʒ viij
Misce.
Sig.: 5 cc. to be mixed with a quart of water.

Pressure Irrigations.—Pressure irrigations have been reported with slight modifications by v. Kutner, v. Notthafft, v. Zeissl, and others, and are highly praised by many authors. They differ essentially from the irrigations of Janet only in that the resistance offered by the external sphincter is overcome, not by the elevation of an irrigator, but by the pressure of the piston of a syringe. The selection of the one or the other procedure is a matter of personal taste. The author gives preference to the irrigations of Janet. A soft-rubber tip is attached to a bladder syringe of one hundred cubic centimeters' capacity. Then, intermittently, small quantities (twenty to thirty cubic centimeters) of the medicament are injected, the external urethral orifice being meanwhile compressd lightly. Under the sudden pressure the external sphincter contracts spasmodically, so that the solution rebounds and thereby expands the anterior urethra.

When one hundred cubic centimeters of solution have been used, the syringe is filled a second time, the tip is firmly introduced into the external urethral orifice, the patient is told to take a deep breath, the resistance offered by the external sphincter is overcome by pressure of the piston, and the medicament is injected into the posterior urethra and bladder. [This is less favored than the Janet mode of irrigating.—EDITOR.]

IRRIGATION SOLUTIONS.—The solutions employed in pressure irrigations are the same solutions as those employed in the irrigations of Janet. They are likewise used as hot as can be borne.

Instillations of Guyon.—Instillations of Guyon are practiced under anesthesia of the mucous membrane. The Guyon drop syringe (Fig. 10) is filled, its proper tip and a drop catheter are attached to it, and the piston is screwed down until the medicament is expelled from the tip of the catheter. Then the catheter is lubricated. The physician bends the catheter in such manner that he may manage it, together with the syringe, with one hand; he holds the penis with the other hand (in later sittings the patient himself may manage this detail), and slowly introduces the catheter until the resistance offered by the external sphincter is encountered. Under gentle pressure the olive glides through, to be held just posterior to the external sphincter. The olive lies in the neighborhood of the colliculus seminalis, a site of election for the inflammatory process. Three or four turns of the piston are made, whereby from eight to ten drops of the medicament are deposited in the posterior urethra. Simultaneously the catheter is pushed deeper, to the internal sphincter. This detail medicates the posterior urethra. The catheter is slowly withdrawn; the piston is given three or four turns in the meantime, and thereby the anterior urethra is medicated.

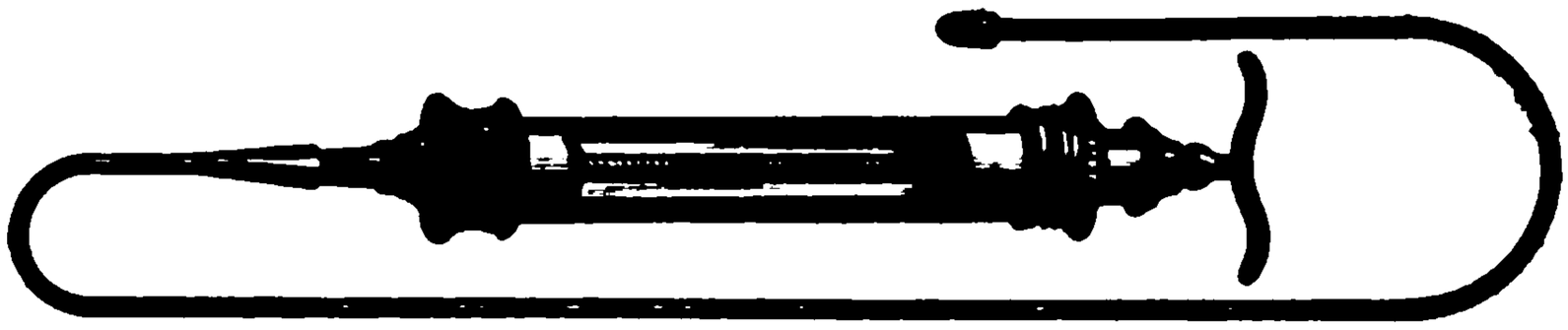


Fig. 10.—Guyon drop syringe.

In case of spasmodic contraction of the external sphincter the introduction of the catheter must not be done forcibly, as the procedure will be accomplished without difficulty at the next sitting.

THIS PAGE IS LOCKED TO FREE MEMBERS
Purchase full membership to immediately unlock this page

Know Your Bible

Forgotten Books' Full Membership provides unlimited access to more than 28,000 volumes of Christian literature for $8.99/month

Continue

*Fair use policy applies

introduction of a metal catheter. The dilatation is begun with sound No. 20 in order to accustom the patient to the procedure, and in the succeeding sittings the caliber of the sounds is increased, quickly or slowly according to the sensitiveness of the patient, up to No. 25 or No. 26 Charriere. If increased discharge presents after dilatation, the next sitting occurs only when this reaction has disappeared. If the reaction persists for some time, several irrigations of Diday or of Janét are carried out. In a general way the dilatations occur once or twice a week. In the intervals the patient himself, with a penile syringe, makes astringent or disinfectant injections (potassium permanganate, zinc salts, or silver salts). With the introduction of sound No. 26 Charriere the treatment with sounds is generally discontinued, as the application of instruments of larger caliber is found too uncomfortable, in spite of anesthesia of the mucous membrane. In cases of narrow external urethral orifice the dilatation must

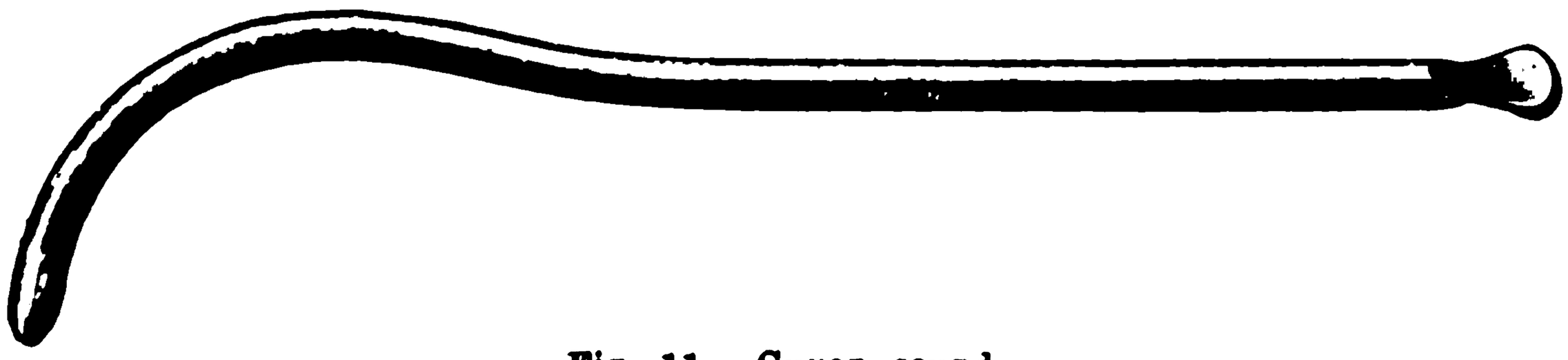


Fig. 11.—Guyon sound.

be begun with sounds of smaller caliber than No. 20, when the patient is unwilling to permit splitting the meatus.

However, it is necessary to carry the dilatation of the urethral mucous membrane up to 32-40 Charriere; therefore the application of dilators is undertaken, although sounds, by reason of the even pressure they exert secured by their cylindrical form, are superior to all complicated dilating apparatus.

Dilatation of the Anterior Urethra with Dilators.—Of the many types of dilators of good construction (Oberländer, Lohnstein, Arthur Lewin, and others), the practitioner is advised to buy the Kollmann four-bladed dilator, Charriere 21, for the anterior urethra. It is best bought as an irrigating dilator (Fig. 12) to escape the acquisition of special instruments for irrigating dilatation.

Anesthesia of the mucous membrane is induced only in especially sensitive patients. In these cases the sensitiveness of the mucous membrane should really not be obtunded at all, because

it indicates how far the dilatation may be carried at one sitting. All forceful dilatation must be avoided, since hemorrhage and urinary fever can be induced thereby and the cure of the patient retarded for weeks. With the patient sitting, the operator holds the penis as in the other instrumental procedures and cautiously introduces the thoroughly lubricated dilator until he feels the resistance offered by the external sphincter. At this stage the instrument is held by the patient, while the screw is slowly given several turns by the physician until the patient complains of tension. After a short pause, the dilatation can generally be increased slightly. On the average a dilatation of 25 Charriere is reached at the first sitting. At the first application the instrument remains in the urethra for five minutes, and before it is removed, it must be contracted. If the dilator is closed completely, a severe pain will be caused by pinching the mucous membrane, even with carefully wrought instruments handled with careful attention. For this reason the author turns the

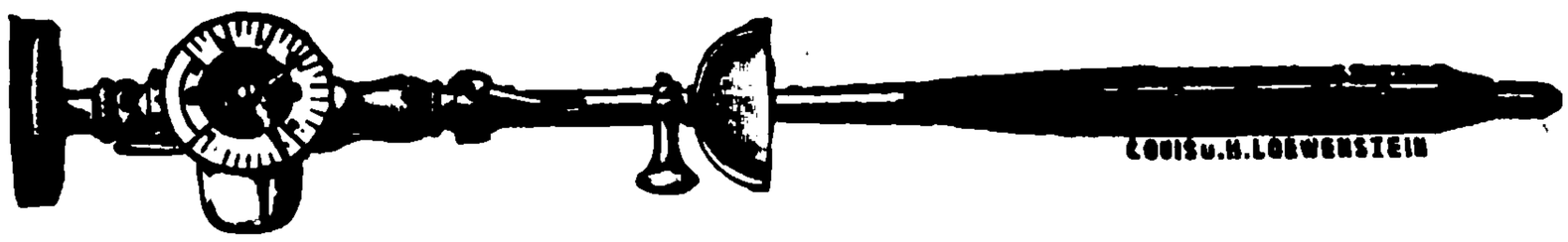


Fig. 12.—Irrigating dilator.

thumb screw back to No. 24 Charriere only, and with the dilator still open, withdraws the instrument.

In the ensuing sittings the degree of dilatation and the duration of the sitting are gradually increased until a caliber of 32-40 Charriere and a duration of twenty minutes are reached. At each sitting the dilatation is increased by one-half to one number Charriere. Each dilatation is undertaken only when the stage of reaction (increased discharge, burning pain in the urethra) following the preceding dilatation has passed, that is, every eight to twelve days. In the intervals irrigations, instillations, and massage of the prostate gland are given about twice a week.

Irrigating Dilatations.—In those cases in which the urine presents a diffuse cloudiness—that is, cases in which a superficial catarrh exists besides the infiltration—dilatation is often combined immediately with irrigation—an irrigating dilator is used.

The dilator is introduced as directed above. A short rubber tube is attached to the dilator, and with a bladder syringe from two hundred to five hundred cubic centimeters of silver nitrate

solution, 1:1000, as hot as possible, are injected. The solution irrigates the anterior urethra and flows out at the meatus. The heat promotes resorption of the infiltrate (Lohnstein).

The dilatations and irrigating dilatations are continued as long as the conditions continue to improve. Should a halt occur in the improvement, a urethroscopic examination is demanded. Such examination occasionally shows that the infiltrations have really healed, but that suppurating urethral glands and papillomatous processes persist and that they maintain a formation of shreds and discharge. These latter are cauterized through the urethroscopic tube with a 10 per cent solution of silver nitrate or with a galvano-cautery. The method is applicable only when the case really presents isolated foci; but it then yields satisfactory service.

In cases that have not been influenced by the foregoing therapy, the author advises a somewhat different procedure, which has long given him successful service in the management of particularly obstinate cases of chronic gonorrhea. It is characterized by the difference that daily irrigations according to Janet take the place of injections with a penile syringe, the irrigations being carried out by the patient himself. A necessary proviso is that irrigations of like character were well borne in the preceding treatment. The patient is instructed in the application of the method and is directed to practice the irrigation morning and evening, each time with a quart of potassium permanganate solution, 1:5000, as hot as can be borne. This method of treatment has two advantages: it makes the patient independent of the physician and, unobserved by the patient, secures a very intensive treatment. Healing of the superficial catarrh is thereby achieved in much shorter time than otherwise, and a number of cases are brought to cure by these irrigations alone. However, there are often demanded, in addition, bi-weekly instillations according to Guyon, irrigations according to Diday, and above all, massage of the prostate gland; and toward the end of the treatment, systematic dilatation may be necessary. But the advantage in these cases remains, that an essential shortening of the duration of treatment is achieved.

How long shall the treatment of chronic gonorrhea be continued?—The answer to this question is easy: when the urine becomes clear and the discharge and shreds permanently disappear. If

gonococci are then absent after provocations, the patient is cured.

The question is much more difficult of solution when, in spite of all curative effect, a urethritis persists. It is in that case correctly advised that all local interference be suspended for a time. The remaining evidences of inflammation are often excited and maintained by the irritation induced by skilled manipulation, and disappear spontaneously after its cessation. However, if a discharge persists, another short course of local treatment may be undertaken. But there will always remain some cases in which it is not possible to overcome the urethritis completely, cases in which it is not even possible to change a purulent discharge into an epithelial discharge. Then the physician must be content with making the urethritis free of gonococci. If that is achieved, if gonococci do not reappear after provocation, the patient is cured. The urethritis may be allowed to persist, since it is of no importance. Although this is only a cure with qualifications, still, it is a cure.

Test for Infectivity.—A distinction must be made between patients in whom the urine has become quite clear and in whom no other evidences of gonorrhea obtain, and patients in whom a urethritis still exists.

In the first group of patients, the danger of infection, at first glance, does not appear to be present at all. However, experience teaches that these patients, after skilled irritation of the urethra (provocations), immediately react with profuse discharge, rich in gonococci, evidently because the gonococci, buried in the deeper layers of the mucous membrane, reach the surface and are there inseminated by this skilled irritation. In such cases as these gonorrhea can remain latent a long time, and a patient of this type can well enter matrimony in good faith, only to infect the wife immediately. Therefore the author, before he discharges patients with clear urine, advises them to submit to a series of provocations, in which stronger and stronger irritations are induced, in order to disturb concealed gonorrheal foci.

The order of the provocations follows:

1. Cessations of injections.
2. Drinking of alcoholic beverages.
3. Instillation of 2 per cent solution of silver nitrate, ten drops each in the anterior and posterior urethra. The instillations are repeated two or three times at intervals of two days.

4. Introduction of a metal sound No. 25; repetition of this procedure twice at intervals of three days.

5. Dilatation of the anterior urethra with the Kollmann dilator up to 35 Charriere.

All sittings are to be preceded by massage of the prostate gland and seminal vesicles, and the secretion is to be examined microscopically.

Through these irritations an artificial urethritis arises, the discharges of which are subjected to examination for gonococci. If gonococci are absent in repeated examinations, the patient is regarded as cured (Neisser). Still, the author advises the patient to enter coitus with condom, and to dispense with the condom only after several weeks of conjugal relations have passed without recurrence of the disease.

It is much more difficult to define the cure when a urethritis persists after gonorrhea. In that event the discharge is to be examined as often as possible for gonococci. If they are absent the provocations as directed above are instituted. If gonococci are still absent after these irritations, if no infectious foci can be recognized by urethroscopy (Wossidlo, Aschu, and others), matrimony may be permitted the patient. A degree of risk remains, but it is so slight that it is not justifiable to forbid the patient wedlock.

Prophylaxis of Gonorrhea.—The general prophylaxis (*"Assanierung"* of prostitution) must not enter into consideration here.

Personal prophylaxis is most important. Although none of the measures recommended afford complete security against venereal disease, there is no doubt that the number of venereal infections can be materially reduced by the general practice of prophylactic measures. This is demonstrated by observations on a large scale (naval and military). It is therefore the duty of the physician to urge the application of prophylactic means.

There are to be recommended:

THE CONDOM.—The condom should be of sufficient length; of good quality; made by reliable firms, so that a good product may be obtained. The protection it affords is not complete ("A cuirass against pleasure, a cobweb against danger," Ricord), but in spite of this it is the best means obtainable.

In case the condom is not used protective measures of much less security may claim attention:

PROPHYLACTIC INSTILLATIONS.—Immediately after coitus two or three drops of a solution of albargin, 8 per cent to 20 per cent, or of a solution of protargol-glycerin are instilled into the fossa navicularis and allowed to remain one minute.

[Of the many commercial preparations obtainable, a 5 per cent solution of argyrol is the most efficient of all.—EDITOR.]

Now and then a urethritis (Casper, Finger) follows the use of these instillations, particularly the excessive use of them. This urethritis is not negligible, but must be accepted in view of the usefulness of the instillations. It is more serious that, in spite of correct technic, an infection occasionally occurs. The instillations cannot supplant a good condom.

As a prophylactic protection against syphilis the inunction of the penis with 25 per cent calomel salve or with 1 per cent formalin paste is advised.

COMPLICATIONS OF GONORRHEA.

Erections and Pollutions.—Erections and pollutions in acute gonorrhea occur with painful severity. They must necessarily be allayed, as congestions of the genital organs retard progress.

THERAPY.—Bromids in liberal doses constitute the best therapy:

℞ Sodii bromidi .....ʒ v
Aquæ destillatæ .....q. s. ad ʒ viij
Misce.
Sig.: Tablespoonful in half-tumbler of seltzer in the evening.

℞ Potassii bromidi .....ʒ ij
Sodii bromidi,
Ammonii bromidi .....āā ʒ j
Aquæ destillatæ .....q. s. ad ʒ viij
Misce.
Sig.: 2 tablespoonfuls in the evening.

For prolonged usage the bromid preparations described later serve to better purpose.

The monobromid of camphor and lupulin are of milder effect:

℞ Camphoræ monobromatæ .....ʒ iiss
Misce et fiant pilulæ No. C.
Sig.: 3 pills three times a day.

℞ Lupulini .....3 j
Aquæ destillatæ .....
Misce et fiant capsulæ amylaceæ No. X.
Sig.: 1 capsule four times a day.

In the occurrence of intense erections (priapism) heroin is prescribed (Strauss, Casper).

Retention of Urine.—Retention of urine can also be purely reflex, without the coexistence of acute gonorrhea as a causative factor.

THERAPY.—As a first resort a sitz-bath at 42° C. for fifteen minutes is given. At the end of the bath the patient tries to pass his urine while sitting in the water. Very often this expedient succeeds; if it fails, resort must be had to catheterization. Catheterization presents no technical difficulties, but sometimes induces a posterior urethritis or a cystitis. The procedure is conducted under local anesthesia with a Nélaton catheter. After the bladder has been emptied a prophylactic irrigation with a 1:1000 solution of silver nitrate is practiced.

PERACUTE ANTERIOR URETHRITIS.

Peracute anterior urethritis is characterized by profuse, often bloody, discharge; redness and swelling of the penis; and severe pains.

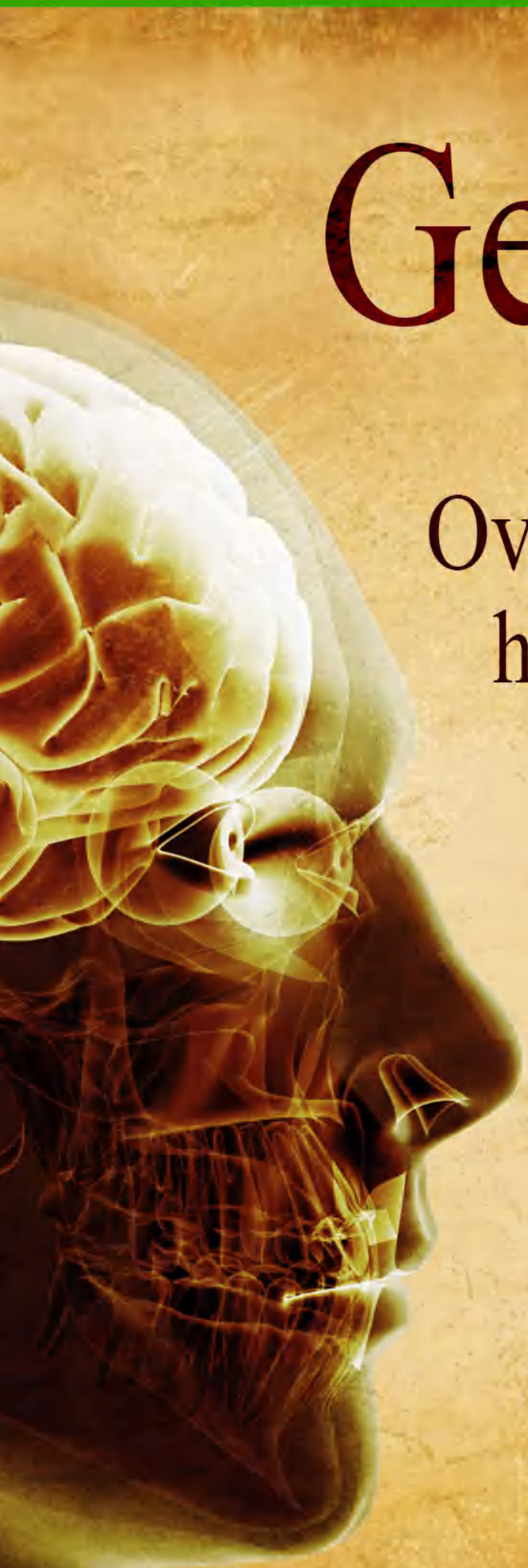
THERAPY.—Injections are contraindicated. The penis should be elevated in a Teufel suspensory. A cold sitz-bath, 20° C. for ten minutes, is given once or twice daily. Aluminum acetate compresses are applied in the intervals. Internally, balsams are administered, and if necessary, narcotics (dionin, heroin). Erections must be prevented. [Suspend the penis in hot water two or three times daily for fifteen minutes.—ED.]

When the inflammatory symptoms have subsided, injections are given as in the usual acute gonorrhea.

LYMPHANGITIS OF THE PENIS.

TREATMENT.—The treatment of lymphangitis of the penis is the same as that of peracute anterior urethritis with, in addition, rest in bed. Frequent bathing of the penis in hot water is very soothing.

THIS PAGE IS LOCKED TO FREE MEMBERS
Purchase full membership to immediately unlock this page



Get Smart

Over 2,000 years of human knowledge in 797,885 volumes

Instant access
$8.99/month

Continue

*Fair usage policy applies

If the inflammation shows itself in terminal hematuria only, the Diday irrigations are replaced with Guyon instillations with a 2 per cent solution of silver nitrate.

Administration of Balsams.—The efficiency of balsams is often overestimated. Their effect consists only in diminution of strangury, subsidence of uncomfortable sensations in the urethra, and diminution of discharge. They cannot of themselves bring about a cure of acute gonorrhea, neither can they in any manner influence the infiltration processes of chronic gonorrhea.

The production of balsams is a favorite pursuit in the drug industry, which has put a practically endless list of such preparations on the market, without, however, dislodging the thoroughly tested oil of sandalwood from its position of first choice.

℞ Capsulæ gelatinosæ cum oleo santali.gr. v
Fiat capsula No. I. Dentur tales
capsulæ No. XXX.
Sig.: 1 capsule four to six times daily.

℞ Capsulæ gelatinosæ cum oleo santali
et resinæ kavæ .....gr. v
Fiat capsula No. I. Dentur tales
capsulæ No. XXX.
Sig.: 2 capsules four times daily.

In order to protect the stomach against the action of these drugs they are best given in a capsule of harder gelatine, which is not dissolved until it reaches the small intestine.

℞ Capsulæ geloduratæ (oleum santali et
resina kavæ) .....1 bottle
Sig.: 2 capsules four times daily.

Santyl, more pleasant of taste, may be prescribed instead of oil of sandalwood.

℞ Santyl (Knoll) .....1 bottle
Sig.: 25 drops on powdered sugar three times daily.

In a general way these measures prove quite satisfactory, but several others are to be mentioned in order to provide for selection. Oil of turpentine, which stands first in order, must be given in hard gelatin capsules, as it otherwise completely spoils the appetite.

℞ Capsulæ geloduratæ cum oleo terebinthinæ rectificati .....gr. viiss
Fiat capsula No. I. Dentur tales
capsulæ No. XX.
Sig : 1 capsule four times daily.

℞ Capsulæ geloduratæ cum copaiba ...gr. viiss
Fiat capsula No. I. Dentur tales
capsulæ No. L.
Sig.: 1 capsule four times daily.

℞ Fluidextracti pichi .....ʒ j
Sig.: 1 teaspoonful on sugar three times daily.

Exceptionally, all balsams are capable of inducing renal irritation (pain in the region of the kidneys). In that event the drugs must be discontinued.

PARAURETHRAL FOLLICLES.

Paraurethral follicles (glands), in the male as in the female, afford hiding places for gonococci and must be eliminated.

THERAPY.—The paraurethral follicles must be cauterized with the Unna apparatus or with the galvano-cautery.

INFLAMMATION OF THE GLAND FOLLICLES IN THE URETHRA.

The inflamed follicles can be palpated externally as small knots the size of a hemp-seed.

Special treatment of the inflamed urethral gland follicles is unfortunately impossible, so that the disease often runs a very tedious course. It is necessary to rest content with treatment of the coexisting gonorrheal urethritis (antiseptic injections).

PERIURETHRAL INFILTRATIONS (CAVERNITIS).

Periurethral infiltrations occur most frequently in the bulb of the urethra. They arise by extension of the gonorrheal inflammation from the mucosa through the submucosa to the corpus cavernosum. In erection they cause very painful curving of the penis on itself (chordee).

THERAPY.—The penis must be elevated in a Teufel suspensory (Fig. 13). Narcotics must be administered for chordee. If the infiltrations break down (abscess formation), free incisions under infiltration anesthesia or ethyl chlorid must be made to forestall fistula formation.

INFLAMMATION OF COWPER'S GLANDS.

Inflammation of Cowper's glands corresponds to inflammation of Bartholin's glands. Palpation discloses nodules the size of a

hazel-nut lying halfway between the posterior attachment of the scrotum and the anus, close to the median line. The disease is usually unilateral.

THERAPY.—Immediate application of ice bags to the perineum, one hour at a time, must be practiced. As soon as fluctuation in the swelling is determined, early and free incision must be made through the perineum, as urinary fistulæ easily ensue otherwise.

Gonorrheal diseases of the testis, epididymis, prostate gland, seminal vesicle, urinary bladder, and renal pelvis are discussed together with other diseases of those organs respectively (epididymitis, prostatitis, spermatocystitis, cystitis, pyelitis).

Fig. 13.—Teufel suspensory.

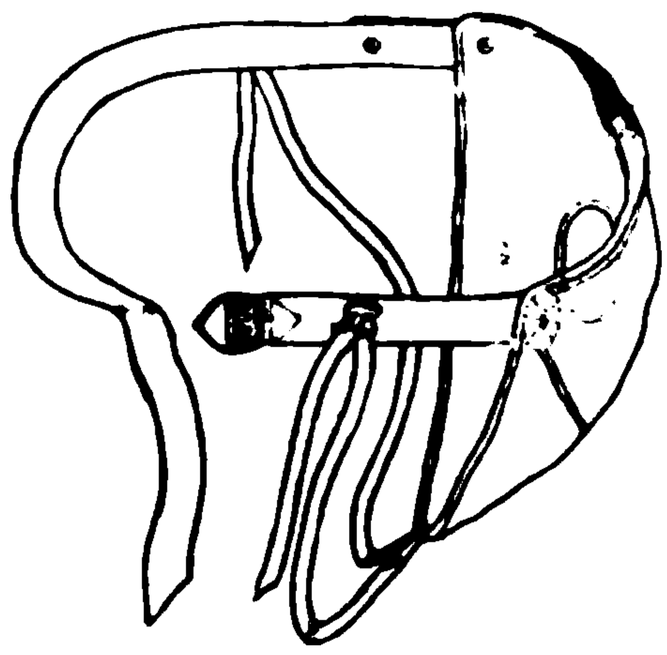


Fig. 14.—Bransford Lewis' modification of the Teufel suspensory.

GONORRHEAL ARTHRITIS.

THERAPY.—Treatment by hyperemia (Bier) is begun immediately, whereupon the pain rapidly diminishes. As soon as possible passive movements are cautiously begun. In chronic cases treatment by hot air (technic of Bier) is instituted.

Simultaneous florid gonorrhea must be treated; chronic gonorrhea may be treated—even locally—in so far as the condition of the patient permits this. The author has not yet seen a harmful influence exerted on the arthritis by the local treatment.

GONORRHEAL TENDOVAGINITIS.

THERAPY.—Tendovaginitis should be treated by hyperemia (Bier), which serves its purpose exceptionally well.

SIMPLE URETHRITIS.

In exceptional cases simple urethritis is induced by unskilful injections that the patient himself makes as a prophylactic meas-

ure after coitus. In rare instances it is caused by streptococci or by staphylococci.

THERAPY.—Hexamethylenamin should be given in appropriate doses. Drinking fluids should be ordered in liberal quantities (diuretic infusions). In obstinate cases injections should be directed: solutions of zinc salts, of silver salts.

These injections must be made in accordance with the essential rules for the treatment of gonorrhea.

POLYPI OF THE URETHRA.

Polpyi of the urethra give rise to symptoms resembling those of chronic gonorrhea.

DIAGNOSIS.—The diagnosis of polypi is made possible only by use of the endoscope.

THERAPY.—Occasionally the introduction of a metal catheter of large caliber, as No. 26 Charriere, suffices for the removal of polypi, the growths being torn loose thereby; in other instances the polypi are made to enter the aperture in the urethroscope and are then removed with the Grünfeld cold snare. The base of the tumor is cauterized with silver nitrate in solid form. Tumors of broad base are cauterized with the galvano-cautery.

FIBROMATA OF THE URETHRA.

Urethral fibromata are capable of inducing retention of urine.

DIAGNOSIS.—The diagnosis of fibromata can be established only by the use of the endoscope.

THERAPY.—The treatment of urethral fibromata is the same as that of urethral polypi.

CYSTS OF THE URETHRA.

The diagnosis of urethral cysts is made possible only by use of the endoscope.

THERAPY.—Urethral cysts are destroyed with the galvano-cautery introduced into the endoscope.

TUBERCULOSIS OF THE URETHRA.

Urethral tuberculosis always begins in the posterior portion and is secondary to tuberculosis of the bladder or of the prostate gland.

THERAPY.—The treatment of urethral tuberculosis is the treatment of the causative disease.

CARCINOMA OF THE URETHRA.

THERAPY.—The necessary treatment is amputation of the penis, together with removal of the lymphatic glands of both sides. When the tumor is situated in the posterior urethra, it is necessary to do an extension operation through the perineum. In inoperable cases vesical fistula must be established according to the method of Witzel, as soon as the passage of urine is obstructed.

CHANCROID OF THE URETHRA.

DIAGNOSIS.—The diagnosis of urethral chancroid is based on the presence of a copious urethral discharge, which remains free of gonococci; together with careful investigation with an endoscope of small caliber.

℞ Iodoformi .....gr. viiss
Olei theobromatis .....ʒ j
Misce et fiant bacilli urethralis No. VIII, 1 1-4 inches long and 3-16 inch thick.

THERAPY.—The treatment consists of the introduction of an iodoform bougie after each micturition.

CHANCRE OF THE URETHRA.

DIAGNOSIS.—The diagnosis is based on the presence of edema of the penis and urethral discharge that remains free of gonococci. However, there may exist, simultaneously, acute gonorrhea, whereby it becomes impossible to make a positive diagnosis.

THERAPY.—The treatment consists of the introduction of bougies of iodoform or of calomel. This treatment is continued until the appearance of secondary symptoms of lues [or until a positive Wassermann is obtained.—EDITOR], when the treatment with mercury is instituted.

℞ Hydrargyri chloridi mitis .....gr. viiss
Olei theobromatis .....ʒ j
Misce et fiant bacilli urethralis No. VIII, about 1 1-8 inches long and 3-16 inch thick.
Sig.: To be inserted into the urethra after each urination.

GUMMATA OF THE URETHRA.

THERAPY.—The treatment of urethral gummata consists of large doses of potassium iodid, because negligence of the gummata readily permits the formation of urinary fistulæ.

℞ Potassii iodidi .....ʒ v
Aquæ .....q. s. ad ʒ viij

Misce.
Sig.: ½ to 1 tablespoonful in a cup of milk three times daily.

CONDYLOMATA ACUMINATA.

THERAPY.—When the condylomata occur in isolated patches the author prescribes:

℞ Resorcinolis .....ʒ j

Sig.: Apply externally.
1 camel's hair brush.
2 ounces surgical cotton.

The patient dusts the condylomatous areas with this powder morning and evening, and covers the areas with absorbent cotton. After three or four days the condylomata become necrotic and fall away. The resultant escharotic wounds must be kept dry with antiseptic powders (airol, bismuth subgallate, boric acid), since moisture favors recurrence of the condylomata.

The ethyl chlorid spray produces a more rapid destruction of the condylomata, but it is seldom applied because its application burns the penis very severely. If, however, the spray is used, the surrounding neighborhood must be protected with cotton while the excrescences are frozen.

Extensive condylomata must be removed under local anesthesia, with scissors or with sharp curette [or with fulguration.—EDITOR], and especially, the growths in the folds of the frenum must be thoroughly removed in this manner. The after-treatment is best conducted with iodoform, airol, dermatol, and such drugs.

The author does not advise the application of the galvanocautery, or the Paquelin cautery, because the resultant moist wounds favor recurrence of the condylomata.

HERPES PROGENITALIS.

DIAGNOSIS.—It is necessary to remember that the innocent-looking herpetic vesicles may in the farther course of their development show chancres.

THERAPY.—Herpes progenitalis heals in a few days under the application of dusting powders, such as bismuth subgallate, airol, and boric acid.

As a prophylactic measure, patients who suffer an attack of herpes after each coitus should anoint the penis with lanolin before each sexual contact.

BALANITIS.

DIAGNOSIS.—It is necessary to remember the possibility of syphilitic erosion, as also of diabetes mellitus.

TREATMENT.—It has long been the author's practice to begin the treatment of balanitis with the following medicament:

℞ Ichthyoli .....ʒ j
Glycerini .....q. s. ad ʒ j
Misce.
Sig.: Apply externally.

Of this mixture the patient himself puts six to eight drops, once every hour, on the glans penis, or in the presence of phimosis, under the prepuce. This practice must be carried out without cleansing, except the removal of masses of smegma, and without the interposition of cotton, since both details induce further maceration of the already inflamed mucous membrane.

Even in severe cases of balanitis the solution of ichthyol mentioned above allays the inflammation in an astonishingly short time, usually after three or four applications. However, the success of this treatment is not universal. Whether the medicament applies to the individual case cannot be foretold, since it is not an anatomical form of inflammation, but a mixed infection, that enters into consideration. In these instances, in addition to the above described treatment, hourly applications of the official 3 per cent solution of hydrogen peroxid are made:

℞ Aquæ hydrogenii dioxidi .....ʒ viij
Sig.: Apply externally.

Obstinate or recurrent cases of balanitis require circumcision, after which the mucous membrane takes on the characteristics of epidermis.

THIS PAGE IS LOCKED TO FREE MEMBERS
Purchase full membership to immediately unlock this page

Know Your Bible

Forgotten Books' Full Membership provides unlimited access to more than 28,000 volumes of Christian literature for $8.99/month

Continue

*Fair use policy applies

Or, much better concealed in this prescription:

℞ Iodoformi .....ʒ j
Cumarini .....gr. viiss
Misce.
Sig.: Apply externally.

'Morning and evening this powder is dusted over the ulcer in a thin layer and covered with a few fibers of cotton; the prepuce is drawn forward and retains the dressing in place. During the application the patient must be completely undressed, since any iodoform falling on his linen on getting into the laundry promptly gives off its characteristic odor.

Substitutes for iodoform do not equal it in efficiency. They are to be prescribed only when the patient cannot be prevailed upon to use iodoform. In such cases the author prefers europhen or the pleasant-smelling isoform.

℞ Europheni .....gr. viij
Acidi borici .....gr. xxv
Misce.
Sig.: Dusting powder.

℞ Isoformi .....gr. vj
Calcii phosphatis præcipitati .....ʒ j
Misce.
Sig.: Apply externally.

Or:

℞ Bismuthi subgallatis .....ʒ j
Sig.: Apply externally.

Or:

℞ Airolis .....ʒ j
Sig.: Apply externally.

Or, in lesions giving rise to suspicion of mixed ulcer:

℞ Hydrargyri chloridi mitis .....ʒ ij
Sig.: Apply externally.

Phimosis makes the application of dusting powders impossible; therefore disinfectant injections into the preputial sac are practiced. An operation for phimosis in the presence of chancre is to be avoided wherever possible, because the edges of the wound of operation usually become infected with chancre.

The author prefers to order:

℞ Aquæ hydrogenii dioxidi .....℥ viij
Sig.: To be injected beneath the prepuce hourly.

Contact of hydrogen dioxid with pus gives rise to marked formation of foam. The 3 per cent solution disinfects and deodorizes thoroughly.

Instead of hydrogen dioxid a 1:1000 solution of mercury bichlorid may be used as injection medicament.

℞ Tabellæ hydrargyri chloridi corrosivi.gr. j 41-50
Fiat tabella No. I. Dentur tales
tabellæ No. VIII.
Sig.: Dissolve 1 tablet in four ounces of water.

If the ulcer is situated just on and in the external urethral orifice, that is, if it lies so that a dusting powder cannot be used, the patient is given a 10 per cent ethereal solution of iodoform, with the direction to allow several drops of the solution to fall on the lesion twice a day. From this ethereal solution the iodoform is deposited in a thin, adherent layer.

℞ Iodoformi .....℥ j
Ætheris .....℥ j
Misce.
Sig.: Apply externally.

This solution causes a slight burning pain when applied to mucous membrane.

When the lesion is situated on the frenum the frenum must be severed with the thermocautery, or the ulcer must be cauterized with concentrated phenol.

If the sore has caused edema of the penis, the member must be elevated in a Teufel suspensory (Fig. 13). [Ruggles has reported much success from the use of superheated air applied locally.—EDITOR.]

As a prophylactic measure the use of long condoms is to be urged upon the patient, although this protection is anything but complete. It affords greater security than inunction of the penis with antiseptic salves practiced before coitus.

INGUINAL BUBO.

To prevent buboes it is advised as of first importance to extirpate the chancre or, in case of chancroid, to cauterize the ulcer with cencentrated phenol.

THERAPY.—In the author's opinion the physician's principal duty in the treatment is to cure the patient without serious disturbance of occupation—that is, without very severe pain and without a serious operation. The swollen gland is treated with inunctions of mercury (this is to be avoided in hard chancre and in mixed ulcer in order not to hinder the eruption of the exanthem). Instead of the gray ointment of mercury, the author uses the following (as being less uncleanly):

℞ Vasenol mercury, 1 tube .....ʒ j
Sig.: ½ dram daily to be rubbed into the skin.

℞ Resorbin mercury, 1 small tube ....ʒ j
Sig.: ½ dram daily to be rubbed into the skin.

If the pain increases in severity it indicates that pus has formed in the gland. In that event softening is promoted by the application of heat. The patient takes a sitz-bath daily as hot as can be borne (42° C. for fifteen minutes); better still, he applies a thermophore at night. The incision is postponed as long as possible, or until the bubo fluctuates in its entire extent, because in that case the cleaning of the wound takes place more quickly. The pus is evacuated through a two-centimeter incision made under ethyl chlorid. The wound is packed with iodoform gauze, and a pressure bandage applied, with which the patient can follow his occupation. The dressing is removed in two or three days. The patient resumes the hot sitz-baths because they promote resorption. Before each bath the region of the bubo is cleansed and disinfected by careful washing for five minutes with liniment of soft soap. After the bath a dressing of gauze under a cotton compress is applied, which is held in place, comfortably, with stockinet bath trousers.

℞ Linimenti saponis mollis .....ʒ viij
Sig.: Apply externally.
½ pound surgical cotton,
1 roller bandage, cotton flannel, 5 inches wide.

Under this plan of treatment confinement in bed is necessary only in exceptional cases, and then for three or four days at the most.

Extensive strumous bubos eventually come to resorption under the patient application of hot baths, if it does sometimes require months of treatment, and that without demanding more

than a small incision. According to Kromeyer and others the application of the Röntgen ray occasionally promotes resorption.

In the case of large phlegmonous ulcers it is readily understood that confinement in bed is necessary, with free incision and curettage when called for. Removal of the lymphatic glands is to be avoided, so that the patient may not be deprived of the protection afforded by the lymphatic system.

Hyperemia may be induced according to the method of Bier instead of the procedure described above. Its value lies less in shortening the course of the disease than in allaying the pain, which often subsides after the first application.

As soon as the bubo becomes more painful a half-centimeter incision is made under ethyl chlorid freezing, and the cupping apparatus of Bier-Klapp is applied. Sanguino-purulent discharge is evacuated. At the first application cupping is continued for fifteen minutes, on the succeeding days for thirty minutes. The application is interrupted by two or three-minute pauses at intervals of five minutes. The cupping may be entrusted to the patient.

A plan of treatment that is really abortive does not exist; however, in selected cases the procedure of Lang may be instituted. Under ethyl chlorid freezing an early incision one-half centimeter long is made in the summit of the swelling, through which pus is allowed to escape. A 1 per cent solution of silver nitrate is injected into the wound cavity, as much as it will hold, and a compression bandage is applied. For the first four or five days the injection is made every day, later every second day.

PHIMOSIS.

Patients who are the subjects of phimosis are particularly predisposed to venereal infection and to carcinoma of the penis; therefore the correction of phimosis is always to be recommended.

THERAPY.—The treatment consists of resection of the prepuce. A rubber band is placed tightly around the rest of the penis. Three cubic centimeters of novocain (solution III, page 6) are injected subcutaneously close to the distal side of the rubber bandage. However, this method does not always secure complete anesthesia of the inner layer of the prepuce; in that event, the line of incision must be infiltrated (solution I, page 6).

The infiltrated prepuce is seized with forceps, and a pair of

scissors pushed as far as possible under the inner layer. With ordinary care, injury of the glans is not to be feared. The prepuce is cleft with a single cut of the scissors; the outer layer

Fig. 15.—(Bransford Lewis' Method of Circumcision. (The application of the alypin injection with blunt-pointed needle. Rubber band in place.

Fig. 16.—(Bransford Lewis' Method of Circumcision). The clamp and tractor in place; one suture inserted; dotted line, the line of incision, performed with scissors.

slips back, while the inner layer, which does not slip back so far, becomes visible in the floor of the wound. The inner layer is cleft as far as the sulcus coronarius. For cosmetic reasons the corners on both sides are trimmed off. Stitches are applied care-

fully, hemorrhage being controlled thereby. Exceptionally it is necessary to ligate a small artery in the frenum.

If it is the intention to do a circumcision, the prepuce is removed by a circular incision carried around from the dorsal cut. In this technic the frenum and its artery must be avoided.

[*Editor's Method of Circumcision.*—A method of circumcision used by the Editor for the past ten years, and one securing uniformity of results by the mechanical precision of its technic, is the following: With a rubber band around the base of the penis for hemostasis, and local anesthesia having been effected by injecting 2 per cent alypin solution between the two layers of the foreskin (Fig. 15), the prepuce is drawn strongly forward and held there by an assistant by means of the serrated tractor (Fig.

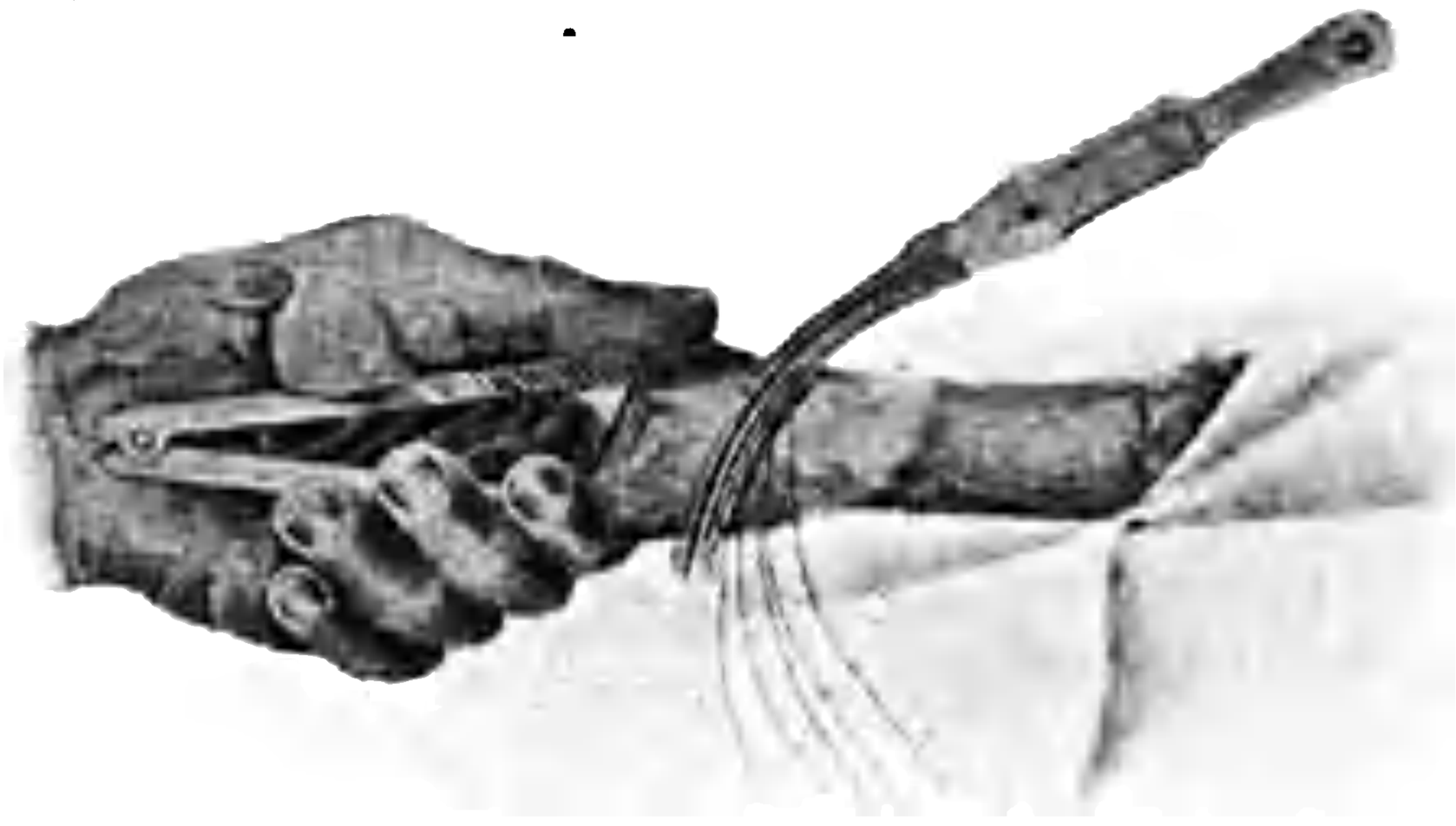


Fig. 17.—(Bransford Lewis' Method of Circumcision). Suturing finished, ready for incision.

16); the curved clamp (Fig. 17) is placed in front of the glans penis and behind the ends of the tractor. Six or seven catgut stitches are run through the fenestra of the clamp, piercing the four layers of prepuce: skin, mucosa, mucosa, skin; their ends are secured by forceps. The redundant part of the prepuce lying anterior to the clamp is cut off with scissors, releasing from further service both clamp and tractor. Two more stitches are placed, one at the dorsal and one at the frenal aspect of the wound (positions previously occupied by the tractor); the central parts of all stitches are gathered up and held with forceps, between which they are severed, each long double suture then making two shorter, single sutures. Any bleeding vessels are now exposed and secured either by forcipressure, or prefer-

ably, by fine strands of catgut; after which the skin sutures are tied.

When correctly performed, this operation invariably leaves a

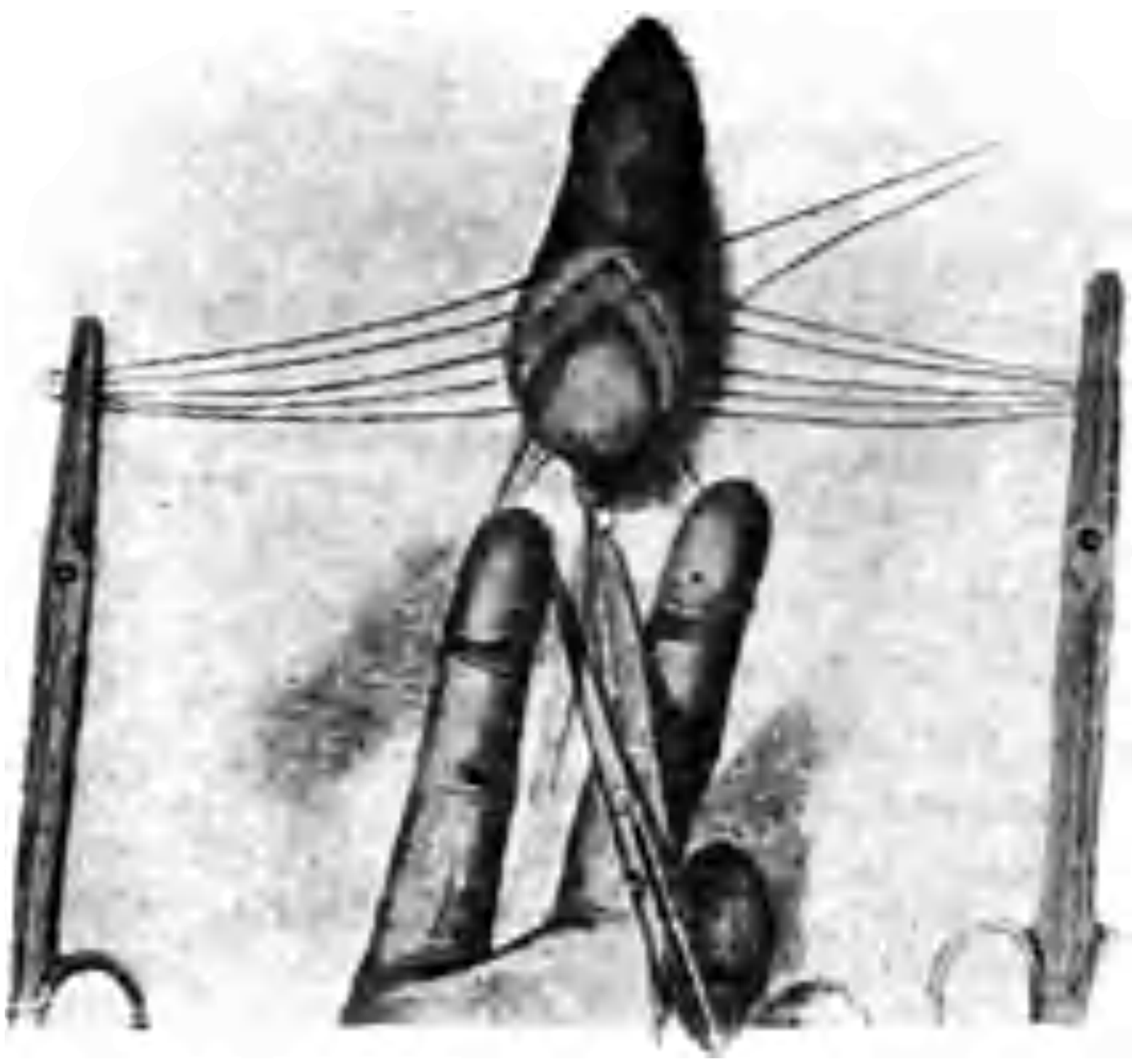


Fig. 18.—(Bransford Lewis' Method of Circumcision). Excision completed; middle of sutures drawn forward and ready for cutting; suture at dorsum and frenum added.

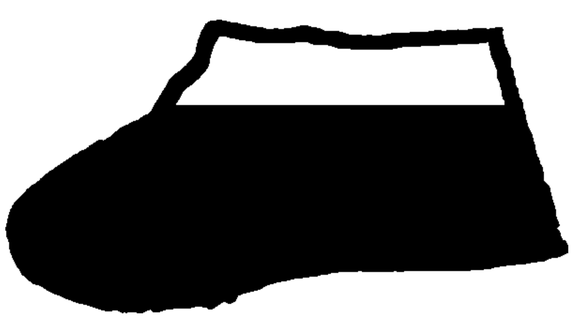


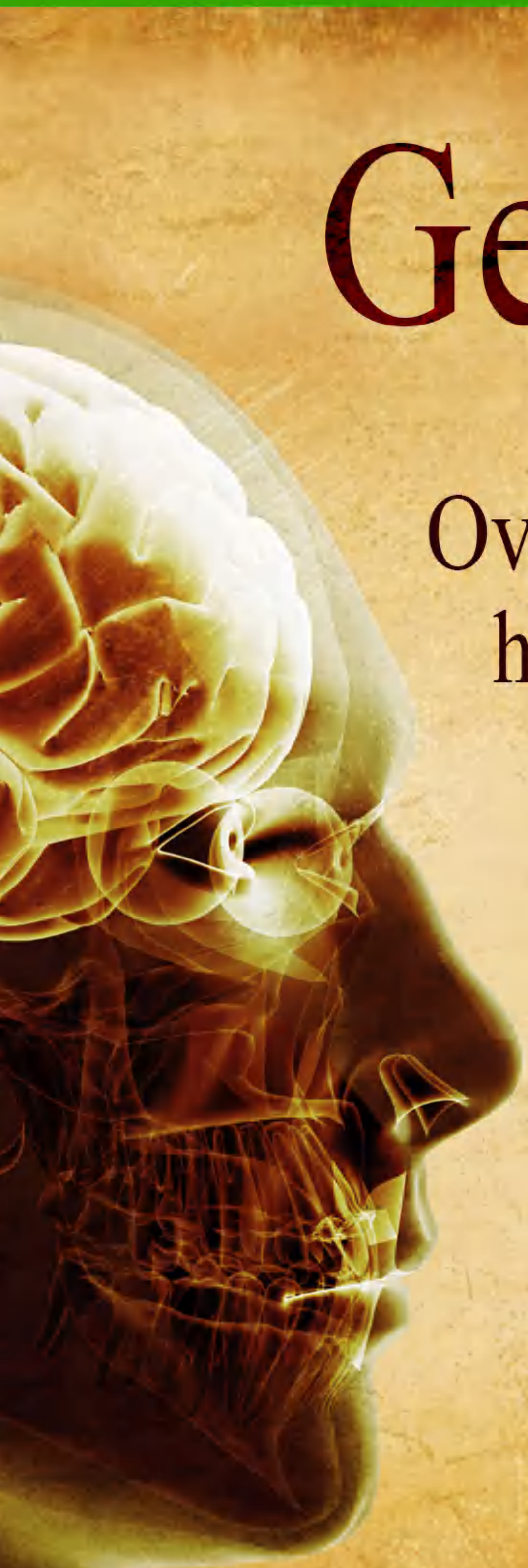
Fig. 19.—(Bransford Lewis' Method of Circumcision). The immediate result.

Fig. 20.—Gauze-cotton dressing.

uniform, symmetrical stump, not too short nor too long, and leading to prompt union by first intention.]

Dressings.—Iodoform gauze is applied to the wound and held in place by a snug gauze b is is covered with a layer of cotton, and the pe ufel suspensory. [The

THIS PAGE IS LOCKED TO FREE MEMBERS
Purchase full membership to immediately unlock this page



Get Smart

Over 2,000 years of human knowledge in 797,885 volumes

Instant access
$8.99/month

Continue

*Fair usage policy applies

If the constricting ring has been fully divided on both sides, the skin of the penis gradually retracts during healing of the wounds until the reduplication of the prepuce disappears, either entirely, or until there remains only a fold that covers a small part of the glans.

Under treatment on these principles the phimosis operation is superfluous. However, if it is desired to carry out such an operation, the normal position of the prepuce is restored by incision of the constricting ring, and the operation of circumcision is performed.

STRICTURE OF THE MEATUS.

Incision of a strictured meatus becomes necessary when for diagnostic or therapeutic purposes instruments must be introduced into the urethra and the orifice cannot be dilated without severe pain.

THERAPY.—The meatus must be split. A meatotome with full belly serves the purpose best. The incision is made in the median line in the direction of the frenum.

The procedure is carried out under infiltration anesthesia with novocain (solution II, see page 6). The injection is made with the finest practicable needle into the edge of the meatus, the point of entrance for the needle having first been made insensitive by touching with phenol. Hemorrhage, by reason of the addition of suprarenin, is insignificant. The wound edges are united, each side of the frenum for itself with a single stitch. An antiseptic dusting powder is applied, as airol, dermatol, or glutol:

℞ Glutolis ..... ʒ j
Sig.: Dusting powder.

HYPOSPADIAS.

The external urethral orifice is situated on the under surface of the penis. If the situation is far back (hypospadias scrotalis) *impotentia generandi* may exist, and moreover, the patient constantly wets himself with urine.

THERAPY.—Hypospadias of mild degree makes no disturbance and therefore requires no treatment. In cases of severe degree, plastic operation of some type is indicated, which often obtains the desired end, although frequently the successful result is obtained only after repeated attempts.

EPISPADIAS.

The external urethral orifice lies on the upper surface of the penis.

THERAPY.—Plastic operation is indicated.

URETHRAL FISTULÆ.

Urethral fistulæ following strictures or gonorrheal abscesses often heal after thorough dilatation of the urethra. In addition to this the fistulous tracts should be curetted, and above all, the granulations should be cleansed by sitz-baths (30° C. for thirty minutes once or twice daily, with the addition of sapo mollis, two hundred and fifty grams to each bath); and compresses of aluminum acetate should be applied. It is only when the healing of the fistulous tracts cannot be obtained in this manner—at the earliest after two or three months—that plastic operation is indicated. Success is frequently obtained by operation, although in many instances only after repeated attempts.

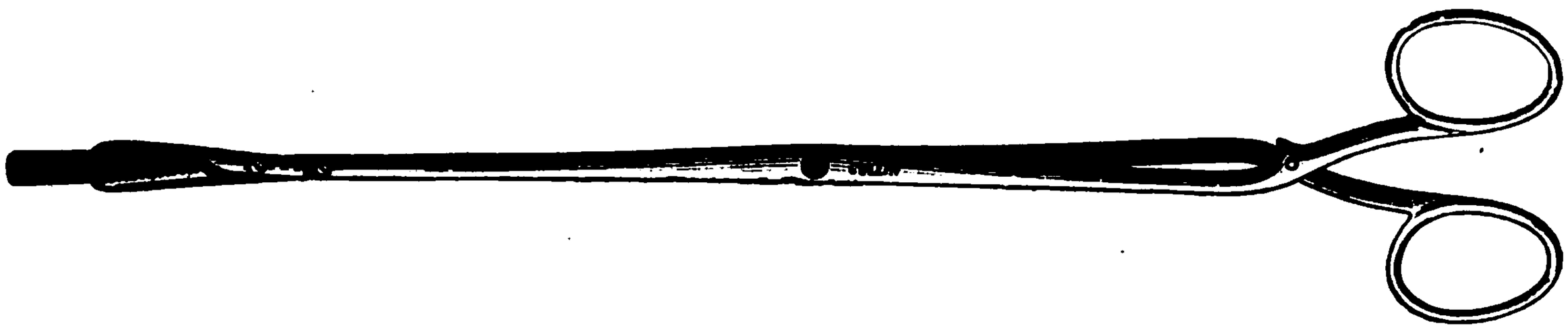


Fig. 21.—Collin foreign-body forceps.

CALCULI IN THE URETHRA.

THERAPY.—Calculi are best removed from the anterior urethra with the Collin foreign-body forceps (Fig. 21). If the removal is made difficult by strictures or by narrow meatus, the procedure of internal urethrotomy or splitting the meatus, respectively, makes it possible to introduce a guiding sound past the calculus. However, it is better under all circumstances, in the presence of fever, to perform external urethrotomy, in order to prevent urinary infiltration.

Calculi in the posterior urethra are pushed into the bladder and removed by litholapaxy. If the surgeon is unwilling to do this, or if he cannot do this, the stone is removed by external urethrotomy.

FOREIGN BODIES IN THE URETHRA.

Removal of Broken Catheters.—The meatus is held shut by the physician, and the patient is directed to pass his water. When the urethra is well distended the meatus is released suddenly.

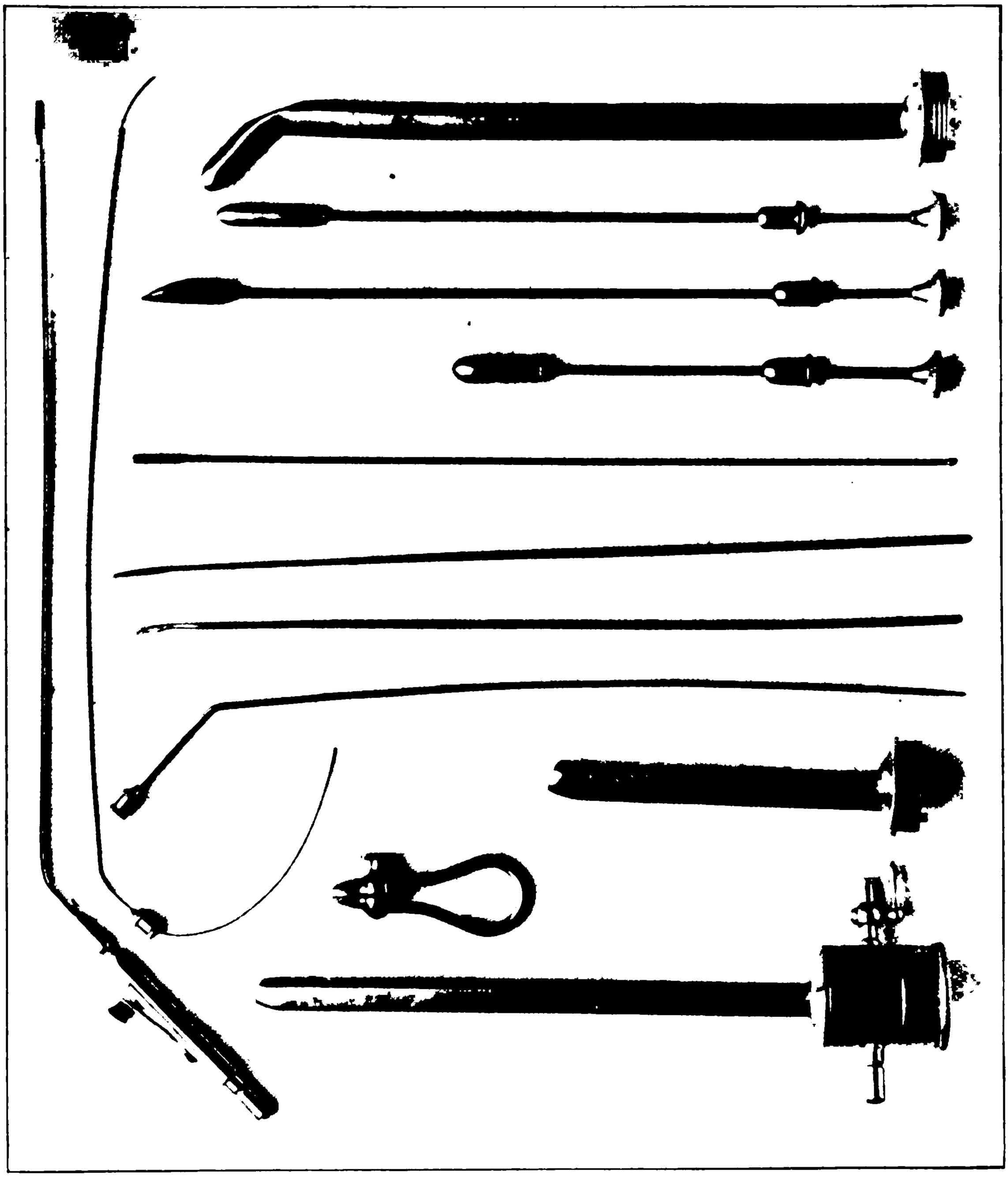


Fig. 22.—The Ernest G. Mark Operating Urethroscope.

In exceptional cases the stream of urine carries with it the foreign body.

If the procedure is ineffective, as is usually the case, an attempt is made to push the broken catheter forward by external manipu-

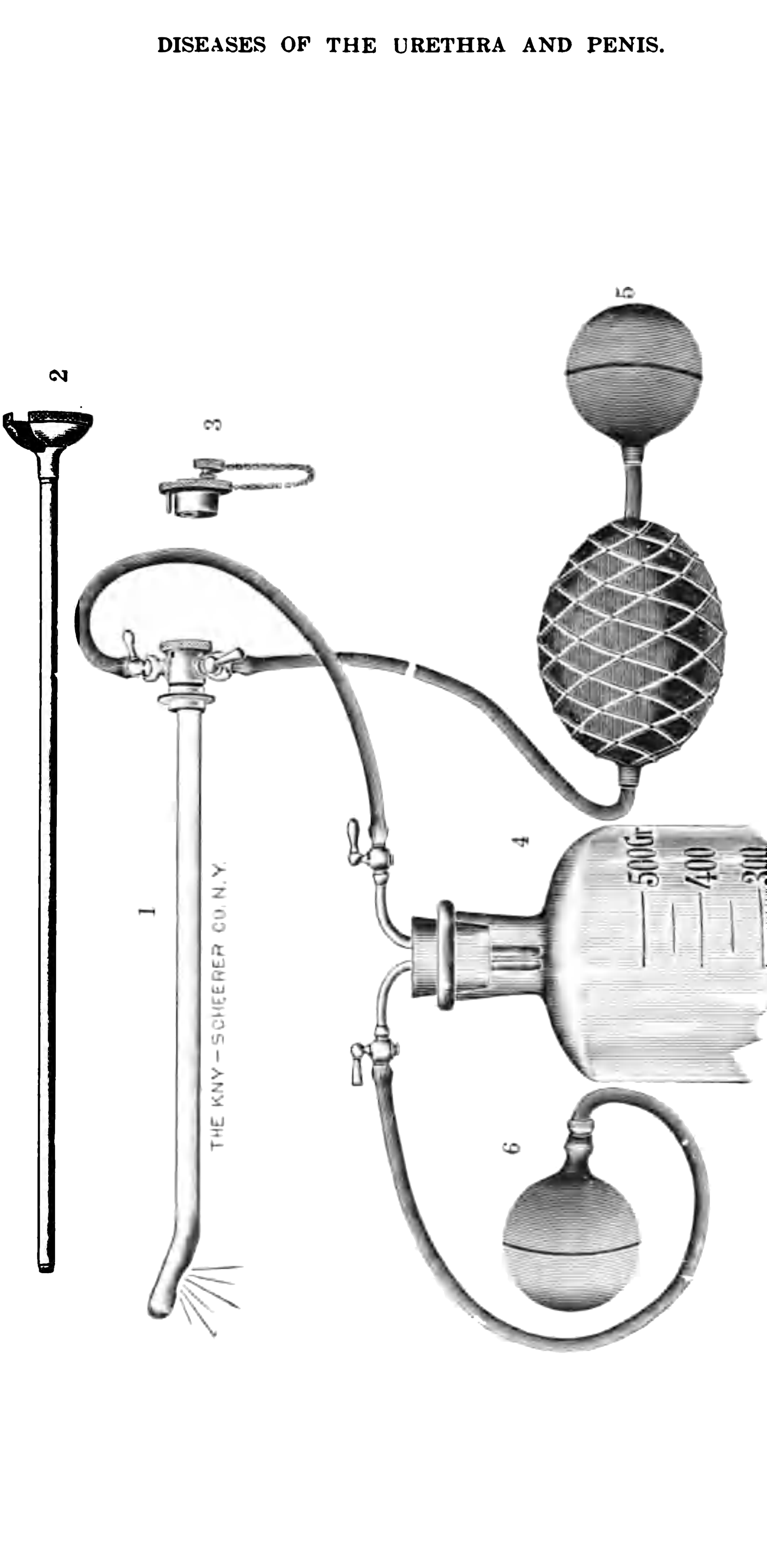


Fig. 23.—Bransford Lewis' Operating Cystoscope (For bladder and ureters). (1) sheath. (2) direct observation telescope. (3) perforated window, for passage of instruments. (4) vacuum bottle. (5) inflation bulb. (6) aspirating bulb.

lation. The operator uses one hand to exert pressure on the urethra through the perineum or rectum in order to keep the catheter from slipping into the bladder. If success attends the effort to get the fragment into the anterior urethra, it can easily be removed with forceps.

[By means of Mark's operating urethroscope (Fig. 22) such bodies can easily be removed.—EDITOR.]

If the attempt to push the broken catheter forward is unsuccessful, a second catheter of larger caliber than that of the broken one, and having a smoothly cut end, is introduced. An effort is

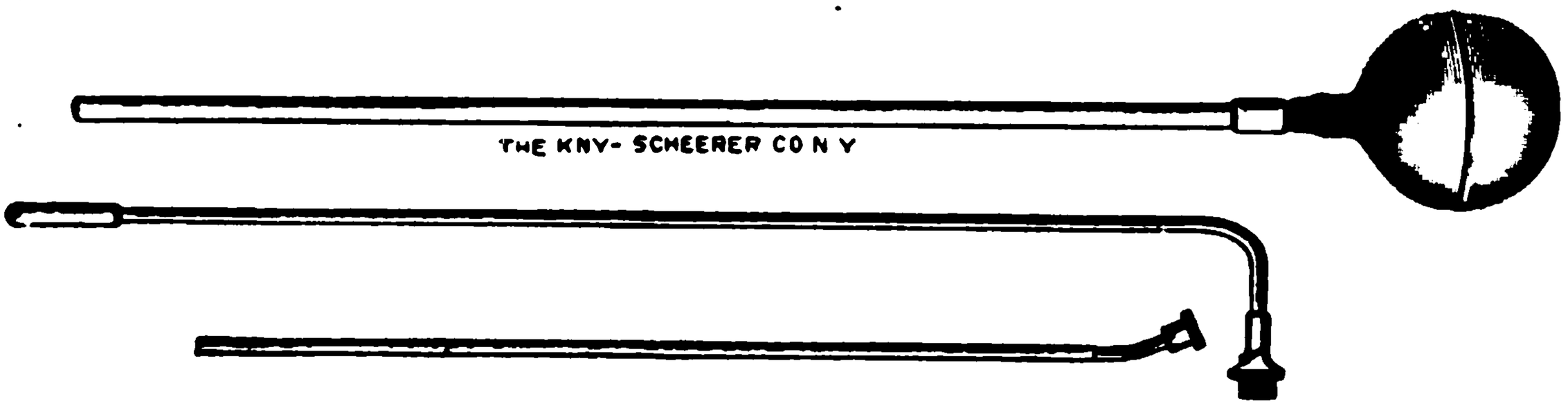


Fig. 23-A.—Accessories to the Bransford Lewis Operating Cystoscope. Aspirator, galvanocautery, and catheter carrier.

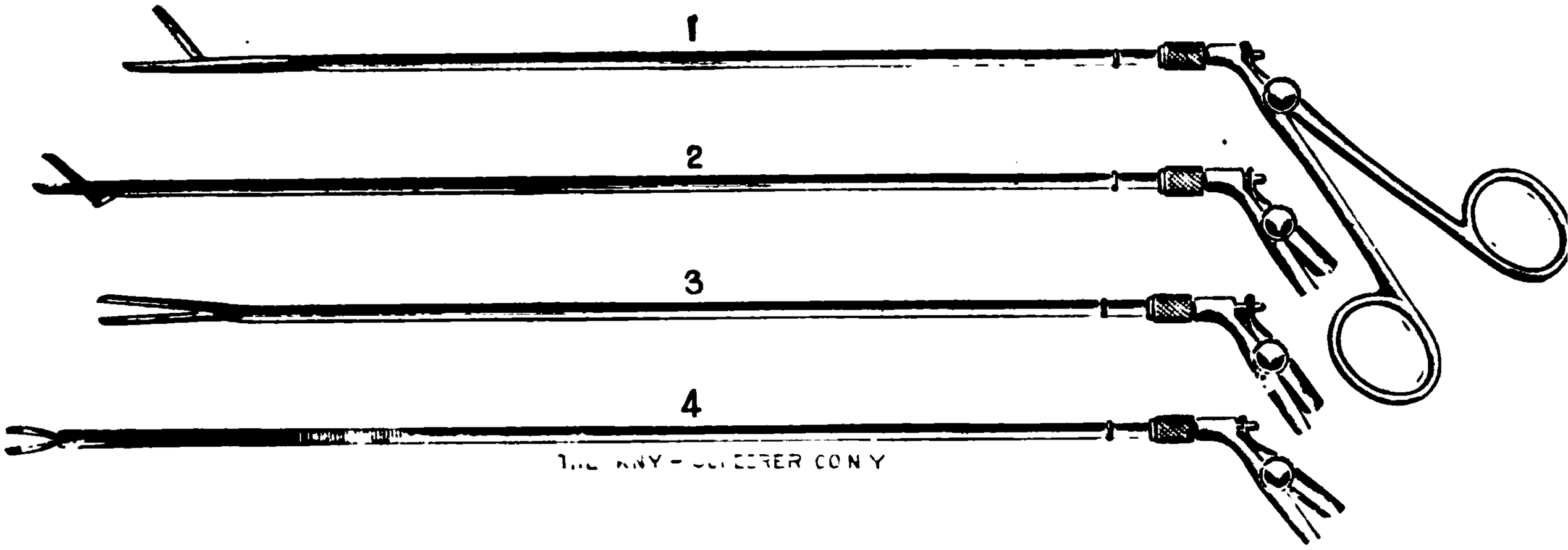


Fig. 23-B.—Accessories to the Bransford Lewis Operating Cystoscope. (1) Alligator forceps. (2) Ureter scissors. (3) Ureter dilator. (4) Flexible ureter forceps.

made to push this second catheter over the fragment so that the latter may be worked into this tunnel.

If this attempt at removal is also unsuccessful, resort must be had to instrumental extraction through the endoscope. The Collin urethral forceps (Fig. 21) serves the purpose best. The instrument is introduced locked, and on contact with the catheter is opened; the catheter is seized and extracted. However, if the fragment cannot be extracted, it is pushed into the bladder, and is thence removed with a small lithotrite, or with an instrument specially designed for extraction, or by *sectio alta.*

[If the catheter has been pushed back into the bladder, it is readily extracted by means of the editor's operative cystoscope (Fig. 23).—EDITOR.]

If the catheter fragment cannot be moved either forward or backward, further attempts at extraction must not be made; instead external urethrotomy must be performed.

It must be remembered at all times that the utmost precaution is necessary, and that, as far as concerns the patient, rough attempts at extraction are infinitely more dangerous than *sectio alta* or external urethrotomy.

Extraction of Foreign Bodies (Introduced).—After attempts at extraction have been carefully made in the manner described above, but without successful result, extraction must be done by external urethrotomy. This procedure is the more usually required, because the foreign bodies, owing to their irregular shape, become wedged in the urethral canal, or in cases of prolonged retention, become incrusted.

CONTUSIONS OF THE URETHRA.

THERAPY.—In mild cases, such as present moderate swelling, slight hemorrhage, normal urination, normal temperature, no treatment is called for except rest in bed. Instrumental examination of the urethra must not be attempted. If retention of urine is induced, cautious catheterization is instituted, in which event suprarenin reduces the swelling. In many cases normal urination returns after a single passage of the catheter; if it does not, a permanent catheter is inserted for five or six days. Generally, patients can pass urine normally by that time; if not, a permanent catheter is again inserted for several days. If the attempt at catherization does not succeed—frequent attempts are not advisable—external urethrotomy must be performed; until such time as this can be done, capillary puncture of the bladder must be resorted to.

In severe cases, those presenting serious hemorrhage and swelling, impending urinary infiltration, fever, and simultaneous fracture of the pelvis, external urethrotomy must be performed immediately. If the urethra has been severed, the search for the posterior segment may be very difficult, and opening of the bladder with retrograde catheterization may be demanded.

It is to be remembered that serious strictures (traumatic stric-

tures) may arise from apparently trivial injuries of the perineum, traumata that do not even show injury of the skin.

It is therefore to be recommended as a prophylactic measure in cases of apparently trifling injury, even if they have demanded no instrumental interference, to introduce a metal sound (Charriere 25 or 26) on the eighth day, in order to determine whether or not the urethra has sustained any loss of elasticity. Even if such loss of elasticity has not been suffered, it is a wise precaution to continue the occasional introduction of bougies for one year. At first the sound is passed every eight to fourteen days, later at increasing intervals of time.

URETHRAL HEMORRHAGES FOLLOWING INSTRUMENTAL INJURIES (FALSE PASSAGES).

The injuries can occur after dilatation during treatment of gonorrhea, in passing sounds for strictures, in catheterization, especially in patients with disease of the prostate gland.

THERAPY.—Mild hemorrhage ceases spontaneously. However, when it does not so cease, twenty drops of a 1:10,000 solution of suprarenin are injected into the urethra with a penile syringe and retained for fifteen minutes. At the same time the operator endeavors to exert pressure through the perineum on that part of the urethra suspected of hemorrhage.

Medicaments.—Urotropin (page 99) and quinin (page 60) are given internally [or stypticin, gr. iij every three hours.—EDITOR]. Instrumental interference is suspended for four or five days; alternating hot and cold applications may be made to the perineum, or the rectal siphon may be used twice daily.

In cases presenting severe hemorrhage a catheter is inserted to be retained for two or three days. The introduction of this instrument affords serious difficulty when it catches in false passages. Success is usually attained by patient effort. Otherwise it becomes necessary to perform external urethrotomy.

In cases presenting retention of urine the permanent catheter is to be introduced.

The treatment of false passages in patients with disease of the prostate gland is considered on page 89; in patients afflicted with stricture, page 59.

THIS PAGE IS LOCKED TO FREE MEMBERS
Purchase full membership to immediately unlock this page

Know Your Bible

Forgotten Books' Full Membership provides unlimited access to more than 28,000 volumes of Christian literature for $8.99/month

Continue

*Fair use policy applies

after each passage of a bougie, the case is not a suitable one for treatment with bougies, but demands external urethrotomy.

When the stricture has been dilated to No. 20 Charriere, treatment is continued with metal sounds. However, as rigid instruments are more difficult of introduction than are pliable ones, a return is made from bougie No. 20 to metal sound No. 19, and the ascent then carried, number by number, up to No. 26 Charriere. Therewith the treatment with sounds is completed.

The author prefers sounds with marked Dittel curve (Fig. 25). Sounds with slight curve fail, and those with the Guyon curve (Fig. 11) are not adapted to these cases.

Urotropin should be given when the urine contains pus and the stricture does not permit irrigation of the bladder. After severe introduction of the sound quinin sulphate should be given to prevent "catheter fever."

℞ Capsulæ quininæ sulphatis .....gr. viiss
Fiat capsula No. I. Dentur tales
capsulæ No. X.
Sig.: As needed.

Fig. 25.—Dittel sound.

Softening of a stricture by administration of thiosinamin (fibrolysin) is not possible.

AFTER-TREATMENT.—Sound No. 26 [or the Kollmann dilator—EDITOR] is introduced every two weeks during the first two months, every four weeks during the following two months, and every three months after that; otherwise contraction of the stricture readily recurs.

Internal Urethrotomy.—Internal urethrotomy consists of cutting the stricture through with a small knife introduced into the urethra by a guiding sound. The operation is practically never indicated because it is accompanied by a number of dangers that attend the normal procedure of gradual dilatation in a much slighter degree. In those few cases in which a rapid dilatation is demanded, it is best obtained by the procedure of Le Fort, provided external urethrotomy is not otherwise indicated.

External Urethrotomy.—External urethrotomy can usually be

avoided by gradual dilatation. However, the procedure is applicable to a small number of cases of stricture of unusual type:

1. Traumatic strictures.
2. Multiple and very extensive strictures.
3. Complications—abscess, fistula, urosepsis.
4. Injuries of the urethra.
5. Impermeable strictures.

In external urethrotomy the callus of the stricture must be excised whenever possible, and the defect in the urethra must be closed by suture (König). If this is not done, the after-treatment is just as necessary as in gradual dilatation.

The plan of treatment described above has a number of exceptions.

Resilient Strictures.—The stricture permits dilatation up to a certain degree—for instance No. 12—but does not yield any farther. This is particularly common when the condition is one of cicatrices following injuries of the urethra (traumatic strictures).

Fig. 26.—Filiform bougie.

THERAPY.—The bougie that was last introduced is permitted to remain in place for twenty-four hours as a retained bougie. If bougies of small caliber—below No. 10—were introduced, a silk catheter, instead of a bougie, is selected and used as a retained catheter. Ordinarily, the stricture becomes soft after twenty-four hours and permits the passage of bougies of larger caliber. Otherwise the retained catheter must be employed for twenty-four hours longer. If the stricture remains unyielding, as traumatic strictures usually do, particularly in the posterior urethra, external urethrotomy is indicated.

Extremely Narrow Strictures.—The strictures can be so narrow that the smallest bulb sound (No. 6) cannot be introduced. In that case an attempt must be made to introduce a filiform bougie (Fig. 26). From four to six filiform bougies are introduced as far as the stricture, until all pockets in the mucous membrane that could catch a bougie are closed. Then tentatively, one bougie after another is manipulated in an effort to enter the narrow, often eccentrically placed, opening. If a bougie

finally enters the bladder, it is allowed to remain, in order that the success of the procedure may not be jeopardized, and is fastened to the penis with stout twine and adhesive plaster. It is not to be feared that the bougie will slip into the bladder, although it is often expelled by vesical contraction. The patient must be confined in bed. Morphin, gr. 1-6, should be administered subcutaneously. After twenty-four hours a beginning can generally be made with bougies of larger caliber, and the usual treatment with bougies continued.

Retention of Urine in Cases of Stricture.—Morphin, gr. 1-6 subcutaneously, must be given to allay vesical contraction. Then an attempt is made to introduce a bougie into the bladder. If the patient is lying in bed, a hard pillow is put under his pelvis. If only a filiform bougie can be passed the success of the treatment is assured. Urine escapes drop by drop, although painfully, and the bladder is gradually emptied. The bougie is allowed to remain in the urethra for twenty-four hours, after which the usual treatment with bougies is pursued.

Instead of the simple bougie, it is permissible to attempt the introduction of a guiding bougie and the procedure of Maisonneuve or of Le Fort.

In these procedures with bougies it is never allowable to force the passage of the urethra. Retention of urine can always be relieved in a safe manner by aseptic, capillary puncture of the bladder, and the life of the patient should never be endangered by forceful catheterization.

If the introduction of a bougie is impossible, resort must be had to capillary puncture of the bladder. Simultaneously there is relief of congestion, which in most cases furnishes the immediate cause of retention, and on the next day, or in case another puncture is necessary, on the day following that, passage of a bougie again becomes practicable. If not, external urethrotomy is demanded.

The intense thirst present in urinary retention—a symptom of urosepsis—must not be gratified with drinking fluids, lest the bladder, already distended, be overtaxed. The intake of fluids must be diminished as much as possible, and thirst should be alleviated by fruits, as apple sauce, oranges, lemon juice, and so on. Disappearance of this symptom is most prompt on relief of the retention.

Urosepsis in Strictures.—Procedure of Le Fort.—In a clearly defined condition of urosepsis—coated tongue, intense thirst, and fever—prompt drainage of the bladder is demanded. A filiform bougie with screw-joint (Fig. 27) is introduced; to this is attached a corresponding metal sound No. 14. Guided by the filiform bougie the sound engages in the orifice of the narrowing. Provided no force is used, an attempt may be made to pass the sound through the stricture. If the sound passes, a rapid dilatation is attained thereby (procedure of Maisonneuve). To apply force would be to endanger the life of the patient; divulsing the stricture has been rightly abandoned. The author prefers the procedure of Le Fort, which differs from the above-described procedure in that the guiding bougie is allowed to remain in the urethra for twenty-four hours, before an attempt is made to introduce the metal sound. If the stricture still offers resistance, external urethrotomy is demanded.

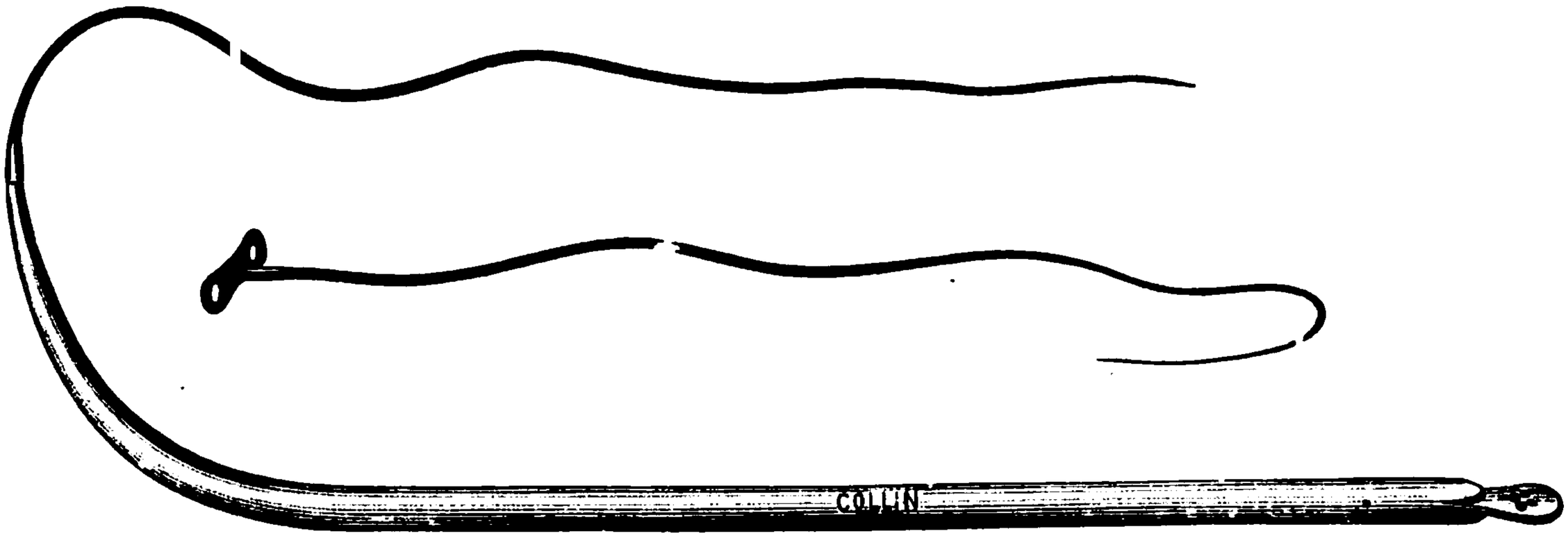


Fig. 27.—Filiform bougie with screw-joint.

False Passages in Stricture.—The difficulty of introducing a bougie in the presence of false passages is particularly great because the instrument is constantly becoming engaged in a false passage. Occasionally success is obtained by blocking the false passage with one bougie and passing a second bougie by the side of the first and beyond it into the bladder. Or, this same principle may be followed with multiple bougies. Every move must be made with the utmost caution. Forceful manipulations only produce new injuries. If the attempt at introduction of a bougie fails, the further treatment is determined by the ability or the inability of the patient to pass urine.

1. If urine is voided freely, the introduction of bougies is suspended for three or four days. In that time the false passages

heal so that the bladder can be entered. If it cannot be entered, another wait of one or two days occurs, and a third attempt is made. If this attempt fails also, external urethrotomy is demanded.

2. If retention of urine exists, capillary puncture of the bladder must be done, and must be repeated if necessary, until the false passages heal. If failure attends the attempt to pass a bougie after this method of puncture, external urethrotomy is demanded.

This procedure is inapplicable when the injury to the urethra has been followed by hemorrhage or urosepsis.

Hemorrhage of moderate severity ceases spontaneously (see injection of solution of suprarenin). Severe hemorrhage demands the introduction of a retained catheter. If the introduction of a retained catheter does not meet with success, external urethrotomy is demanded.

Urosepsis demands immediate drainage of the bladder. If successful drainage is established by the introduction of a retained catheter, it is permissible to await developments; if it is not so established, external urethrotomy must be performed.

Capillary Puncture of the Bladder.—The tensely distended bladder, lying below the navel, becomes arched so as to give the impression of a gravid uterus.

The skin of the abdominal wall over the region of the bladder is shaved and disinfected. The site of puncture is exactly in the median line, two fingers' breadth above the symphysis. At this point the peritoneum is remote. The path of the trocar is made insensitive. For this purpose the Record syringe of two cubic centimeters' capacity, with a needle at least four centimeters long, is employed; and novocain solution I is selected (page 6). Under ethyl chlorid freezing the needle is inserted perpendicularly to the abdominal parietes, and being held firmly in that position, is pushed through the belly wall, while the anesthetizing solution is injected in advance of the needle. A sudden yielding of the resistance indicates that the bladder has been entered. To prevent the escape of urine, aspiration directly into the emptied syringe is practiced. If urine enters the syringe, that fact clinches the diagnosis. The needle is withdrawn, and a capillary trocar is pushed through in its place. Entrance into the bladder along the path of infiltration is practically painless. Upon with-

drawal of the obturator urine escapes drop by drop. As soon as the bladder is empty, the trocar is withdrawn, and the wound of entrance is closed with cotton and collodion.

Vesical puncture carried out in this manner is quite safe, and during the following three or four days may be repeated, if necessary, two or three times daily.

CONTUSIONS OF THE PENIS.

Contusions occur most frequently by putting constricting bands, rings, and such things around the penis.

THERAPY.—The foreign body must be removed, but removal is, at times, very difficult because of the resultant edema. Prompt removal is followed by recovery. Occasionally pressure necrosis and, later, fistula develop from such contusions.

OPEN WOUNDS OF THE PENIS.

Copious hemorrhage occurs in open wounds of the penis, and this must be controlled by suture of the wounds in the erectile tissue. Likewise, accompanying wounds of the urethra must be closed by suture, and a retained catheter introduced.

In wounds of the glans penis hemorrhage is controlled by firm pressure exerted with the hand for fifteen or thirty minutes.

CARCINOMA OF THE PENIS.

DIAGNOSIS.—Carcinoma of the penis must be distinguished from gumma by section and microscopic examination. In doubtful cases resort must be had to serodiagnosis and mercury-potassium iodid treatment.

THERAPY.—Amputation of the penis must be done, the operation being carried out in healthy tissue, if necessary at the root of the penis. The lymphatic glands must be removed at the same time.

PROPHYLAXIS.—Phimosis should always be corrected, because its subjects are predisposed to carcinoma of the penis. Chimney sweeps and men who work with tar and paraffin should be urged to cleanliness and care of chronic eczema of the genitals, because, among such men, carcinoma of the penis and scrotum is an occupation disease.

URINARY ABSCESS.

A urinary abscess is an encapsulated abscess lying against the urethra.

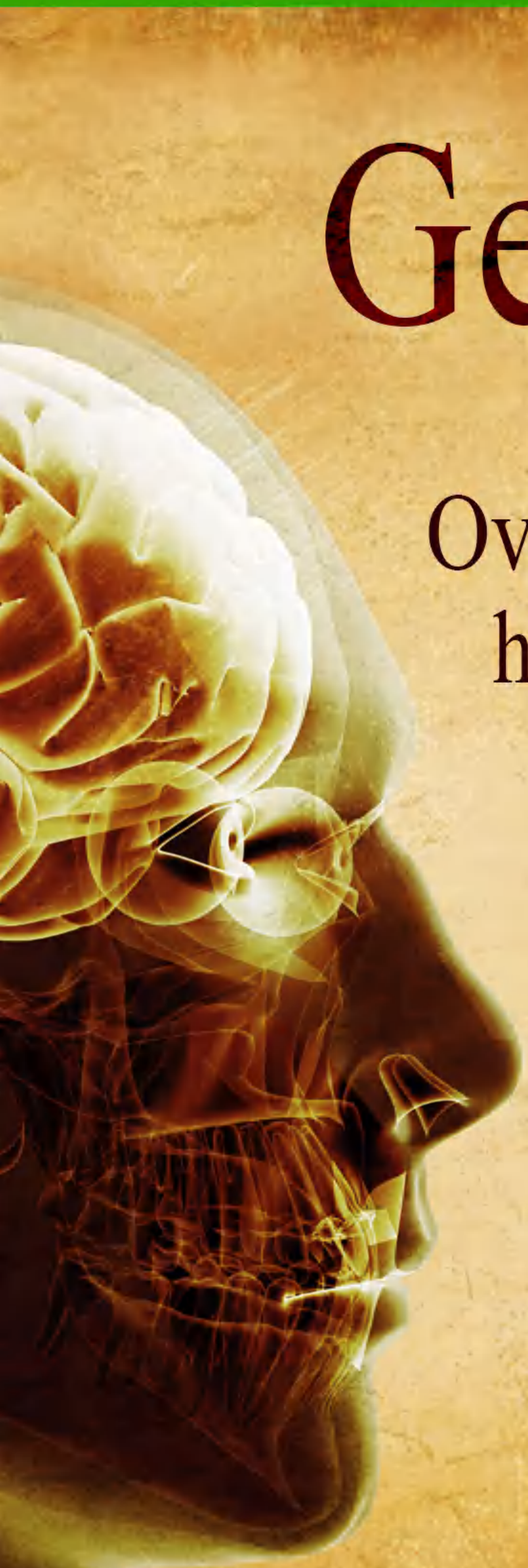
THERAPY.—An incision must be made in the median line and carried down to the abscess. Efficient drainage must be provided, upward and laterally, too. Due attention must be given the ischiorectal fossæ (both sides), as they may be involved in the suppuration. Inefficient drainage can lead to fatal peritonitis.

URINARY INFILTRATION.

Urinary infiltration is a diffuse phlegmonous condition in the neighborhood of the urethra, having its origin in urethral injuries that allow urine to escape into the tissues. If the extravasation proceeds from the posterior urethra (posterior to the trigonum urogenitale) the pelvic tissues are involved, a much more dangerous, but luckily a less frequent condition.

THERAPY.—As urinary infiltration proceeds with dangerous rapidity, immediate operation is demanded. The point of attack is the point of escape of urine: the perineum. A free incision is made with the thermocautery or with a knife, exactly in the median line, from the scrotum to a point two fingers' breadth from the anus. The incision is carried deeper and deeper until escaping pus and urine indicate that the phlegmonous focus has been opened. Free incisions to relieve tension are likewise made with the thermocautery up to the borders of the infiltrated parts on abdomen, perineum, and scrotum. The edema of the penis must be relieved by stab punctures. Moist dressings are applied; later a retained catheter is inserted.

THIS PAGE IS LOCKED TO FREE MEMBERS
Purchase full membership to immediately unlock this page



Get Smart

Over 2,000 years of human knowledge in 797,885 volumes

Instant access
$8.99/month

Continue

*Fair usage policy applies

℞ Ichthyoli .....ʒ iiss
Petrolati .....q. s. ad ʒ j
Misce. et fiat unguentum.
Sig.: Apply externally.

In the use of these ointments the scrotum must be covered with impervious dressing to prevent aborption of the medicament by the cotton of the suspensory.

In the presence of fever rest in bed must be enforced for a day or two.

Regularity of defecation must be promoted by such means as buttermilk, drunk in the morning before breakfast; raw fruit; cider; honey; Carlsbad salt; phenolphthalein.

Severe pain demands narcotics (page 97).

Hot, moist compresses are found agreeable in very severe pain.

℞ Liquoris alumini acetatis .....ʒ viij
Sig.: Teaspoonful in a glass of water. Apply externally.

Gauze soaked in this solution is packed around the scrotum and covered with impervious material, and the lightly padded suspensory is applied.

In the presence of very severe pain, tension of the epididymis, marked redness and edema of the skin, puncture of the epididymis is to be practiced, which, by relief of tension, often secures alleviation of the symptoms. Under the ethyl chlorid spray a strong, sharp Pravaz cannula (No. 1) is inserted into the cauda epididymidis. Serous fluid, sometimes containing gonococci, escapes. According to the degree of swelling the needle is inserted from one to three centimeters. The puncture is not dangerous, is not very painful, and if necessary, is repeated on the next day. A moist dressing is applied, and rest in bed is enforced for one day.

In some instances an ice bag is applied over the suspensory three times daily—the ice bag being applied for ten minutes, removed for ten minutes, reapplied for ten minutes, and so on for one hour.

All local treatment of coexisting gonorrhea must be suspended. In the presence of copious discharge diuresis must be promoted in order to carry off the discharge promptly (diuretics: milk, buttermilk). However, in the presence of strangury (cystitis colli), balsams and narcotics are preferably administered (page 36).

Under the above-described treatment the patient is carried through the acute stage of epididymitis without detention from his occupation for more than one or two days.

In the subacute and chronic stages the testis must likewise be fixed. The suspensory is padded more lightly and is worn for two or three months. Two or three times a week the patient removes the dressing and thoroughly cleanses the scrotum with sapo mollis.

Above all, however, the infiltrate must be brought to resorption to prevent the obliteration of the seminal ducts. Of first importance is the application of hot sitz-baths, begun about the second week. They are continued for fifteen minutes at a temperature of 42° C. At first the baths are taken once or twice daily, later two or three kilograms of Stassfurt salt to each bath.

The application of the hot-air apparatus (Ullmann) or of the suction cup (Frank) serves a good purpose, but is inconvenient in general practice.

Inunctions for the promotion of resorption are practiced only when sitz-baths cannot be taken.

℞ Iodi .....gr. x
Potassii iodidi .....gr. xl
Aquæ destillatæ .....♏ xxx
Adipis .....q. s. ad ℥ j
Misce et fiat unguentum.
Sig.: Apply the size of a pea in the morning and evening.

The following medicament is better, because it contains free iodin:

℞ Iodneolis (Böer) .....℥ j
Sig.: Apply externally.

If, during a period of fourteen days, there is no spontaneous pain in the testis and the sensitiveness to pressure is slight, the treatment of coexisting gonorrhea is resumed. At first injections with a penile syringe are practiced. If these are well borne, irrigations are instituted (chronic gonorrhea). The beginning is made with irrigations of Diday because they appear to incur least danger of recurrence of epididymitis. Later on, and according to indications, the other methods of procedure are followed.

ORCHITIS.

THERAPY.—It is necessary to enforce rest in bed and to restrict the diet. Regularity of bowel movement must be promoted.

The testis must be fixed by use of the Casper suspensory. The ice bag is applied, over the suspensory, for one hour three times daily; at each application the ice bag is allowed to remain for ten minutes and is removed for ten minutes, alternately. In many instances the application of heat serves the purpose better, especially after the very acute symptoms have subsided. The simplest form of heat is the hot sitz-bath (page 98).

If the pain persists, or if the general appearances are threatening, there must be no hesitation in splitting the testis [or in making multiple punctures.—EDITOR], in order to prevent gangrene or abscess formation. After the splitting of the testis, the tunica albuginea must be closed by suture immediately to prevent prolapse and necrosis of the parenchyma of the testis (Payr).

In those cases in which gangrene develops in spite of splitting of the testis, castration must be resorted to.

In the subacute stage of orchitis compresses of aluminum acetate should be applied. The suspensory must be worn over the compress. Even after subsidence of the swelling the suspensory must be worn for some time.

Chronic orchitis is either tuberculous or syphilitic.

TUBERCULOSIS OF THE TESTIS AND EPIDIDYMIS.

Tuberculosis usually begins in the epididymis.

THERAPY.—Fistulæ must be curetted, and injections made with 10 per cent iodoform glycerin (from five to eight cubic centimeters), once a week. A suspensory must be worn.

℞ Iodoformi ..... ʒ iiss
Glycerini ..... ʒ iij
Misce. Sterilize.
Sig.: Injection.

Occasionally it is necessary to split the testis and epididymis in order to obtain better access to the caseous nodules; then curettage is done.

In conjunction with these general measures the induction of hyperemia (Bier) is often of distinct service.

A nourishing diet must be provided. Prolonged residence on the sea-coast or in the mountains is advisable.

Castration is indicated when the patient declines seriously and conservative treatment proves futile.

SYPHILIS OF THE TESTIS AND EPIDIDYMIS.

Syphilis is distinguished from tuberculosis in that it usually begins in the testis. It seldom attacks the epididymis.

DIAGNOSIS.—In doubtful cases the diagnosis of syphilis is established by the serum reaction (Wassermann) and by the success of antisyphilitic treatment.

THERAPY.—Potassium iodid must be given in large doses together with the efficient administration of mercury.

OPEN WOUNDS OF THE SCROTUM AND TESTIS.

THERAPY.—Wounds of the scrotum must be closed by suture, with provision for drainage when called for.

In a case presenting injury of the tunica albuginea, testicular substance exudes; it must be removed, and the tunica must be closed with suture. If, in a case of scrotal injury, the testis is simultaneously dislocated, it must be replaced first of all, and covered with the remnants of tunica vaginalis.

In cases presenting very serious injury of the testis, castration is demanded.

CONTUSIONS OF THE SCROTUM AND TESTIS.

THERAPY.—The testis must be carried in a suspensory (Casper). An ice bag should be applied. In case spontaneous resorption of the hemorrhagic exudate does not occur, incision is indicated, together with removal of the clots. Impending abscess formation and gangrene demand splitting of the testis. Gangrene is an indication for castration.

LUXATION OF THE TESTIS.

The testis can be forced out of its proper sac by a fall or a blow without the occurrence of external injury.

THERAPY.—An attempt at reposition should be made under narcosis. If this fails, reposition must be made after incision and free exposure of the testis.

RETENTION OF THE TESTIS.

When the testis is not present in the scrotum the condition is termed cryptorchidism (unilateral or bilateral). In such cases it lies behind the abdominal wall (abdominal testis) or in the inguinal canal (inguinal testis).

THERAPY.—Abdominal testis requires no operative interference.

Inguinal testis should be fixed in the testicular sac by operative procedure between the fourth and the fourteenth years (orchidopexy). In certain cases even an atrophic testis can undergo normal development during puberty. However, fixation of the testis in the scrotum is not always permanent.

An adult patient who presents himself with inguinal testis should be subjected to operation for removal of the testis. Even if the condition causes no trouble, the operation should be done because every inguinal testis tends to malignant degeneration. In the presence of suffering inguinal testis must necessarily be extirpated.

[By free cutting and complete release from all attachments (operation of Bevan), except the vas deferens and its vessel, the testis can usually be drawn down and anchored in the scrotum. —EDITOR.]

TUMORS OF THE TESTIS AND EPIDIDYMIS.

THERAPY.—Neoplasms of the testis and epididymis demand early castration under infiltration anesthesia of the field of operation. Benign tumors (non-syphilitic) should be removed as early as possible (with, in exceptional cases, preservation of the testis) because they tend to malignant degeneration. The therapeutic test for lues should be applied in nearly all cases.

CARCINOMA OF THE SCROTUM.

THERAPY.—Early and free extirpation of the scrotum, necessarily with bilateral castration. The technic must include removal of the lymphatic glands.

PHLEGMON OF THE SCROTUM.

This is a very serious condition.

THERAPY.—The correct treatment is to make early and free incisions through all the infiltrated tissues.

[The Editor recommends the application of moist salicylic acid packs, 3 per cent in equal parts of glycerin and water.]

ELEPHANTIASIS OF THE SCROTUM.

This is a disease of the tropics caused by the *Filaria sanguinis.*

THERAPY.—Early excision or removal of the entire tumor must be practiced. The testis should be covered by plastic operation.

ACUTE HYDROCELE.

Acute hydrocele is caused by trauma, or it is an accompaniment of acute epididymitis.

THERAPY.—Spontaneous resorption usually occurs as soon as the scrotum is carried in a Casper suspensory; if it does not, resort must be had to puncture and, in recurrence, to radical operation.

In those rare instances where the exudate is purulent, free incision and tamponade must be employed.

CHRONIC HYDROCELE.

THERAPY.—Radical operation affords the best treatment. Three methods of procedure are available:

1. Excision of the tunica vaginalis propria (v. Bergmann). Healing occurs in eight or ten days. This is an excellent procedure.

2. Turning back of the tunica vaginalis propria (Winkelmann). This is also a good method; with healing in about the same time.

3. Extensive opening of the tunica vaginalis communis; suture of its edges to the edges of the wounds of incision (v. Volkmann). Tamponade is required. This method is slower; healing takes about three weeks.

All of these methods can be carried out painlessly under injections of novocain-suprarenin solution around the field of operation. (Two cubic centimeters of solution III in the cord, ten cubic centimeters of solution I at each of four points in the scrotum.)

Puncture, as a Means of Treatment, is Only Palliative.—TECHNIC OF PUNCTURE.—The field of operation is cleansed and disinfected. The skin and deeper layers are infiltrated at the point of puncture with solution I. The scrotum is held in the op-

erator's hand in such manner that the testis lies posteriorly, the serous exudate anteriorly. A trocar is introduced at right angles to the long axis of the testis, the obturator is withdrawn, and the cannula lowered so that the fluid may escape more readily. Injury to the testis is easily avoided; it is, however, without serious significance.

HEMATOCELE.

Hematocele is a hemorrhagic effusion between the layers of the tunica propria.

THERAPY.—Early incision is demanded, with removal of the clots. The tunica vaginalis propria must be excised, provision being made for drainage.

In purulent secondary infection and in atrophy of the testis it is best to perform castration.

SPERMATOCELE.

A spermatocele is a retention cyst, the contents of which consist of spermatic fluid.

DIAGNOSIS.—Hydrocele of the cord does not involve the testis; spermatocele involves both testis and epididymis. Diagnostic puncture often yields spermatic fluid.

THERAPY.—The sac of the spermatocele must be extirpated.

VARICOCELE.

Varicocele consists of a dilatation of the veins of the spermatic cord, feeling like worms within the scrotum.

THERAPY.—Mild cases of varicocele require only the wearing of a properly adjusted suspensory. In case the condition causes suffering or the wearing of a suspensory is impossible for any reason, operation under local anesthesia is indicated. The operation consists of section of the veins and shortening of the scrotum (see page 73).

HYDROCELE OF THE CORD.

THERAPY.—Hydrocele of the cord demands operative interference only when it causes suffering. In that case, resection of the sac is indicated.

THIS PAGE IS LOCKED TO FREE MEMBERS
Purchase full membership to immediately unlock this page

Know Your Bible

Forgotten Books' Full Membership provides unlimited access to more than 28,000 volumes of Christian literature for $8.99/month

Continue

*Fair use policy applies

CHAPTER VII.

DISEASES OF THE PROSTATE GLAND.

ACUTE PROSTATITIS.

Of the three forms of acute prostatitis (Finger), catarrhal, follicular, and parenchymatous, the last named is by far the most important. In a general way, all three are treated according to the same essential principles.

THERAPY.—First in order is the alleviation of the patient's suffering. Narcotics can scarcely be withheld, but the main element in the treatment is the application of heat. Moreover, heat stimulates the process of resorption of inflammatory products, thereby attacking the disease itself.

The application of heat *per rectum*, which is preferred in the chronic stage of prostatitis, is not applicable in the acute condition, because of the existing reflex contraction of the anal sphincter; this makes all local rectal procedure painful.

Heat is applied in the form of sitz-baths, 42° C., for fifteen minutes twice daily. In the intervals between baths the thermophore is applied to the perineum, or a hot pack is applied in the form of a T-bandage: a bandage about forty centimeters wide is passed around the abdomen, a second bandage about twenty centimeters wide is passed between the thighs. Both bandages are wrung out of hot water, covered with woolen, and kept warm by a hot-water bottle.

The patient must be confined in bed and restricted to a light diet. Regularity of defecation must be promoted by fruit diet and mild laxatives.

Guyon and others advise beginning the treatment by the application of from ten to fifteen leeches to the perineum. The perineal skin must be cleansed and moistened with sweetened water. Each leech is carefully seized with gauze and applied. Removal is facilitated by wetting the leeches with sweetened water. When the leeches are satiated they release themselves voluntarily.

Narcotics are best given as enemata.

℞ Tincturæ opii .....ʒ iij
Extracti belladonnæ .....gr. xviij
Aquæ destillatæ .....q. s. ad ʒ viij

Misce.

Sig.: 5 cc. as a clysma three times daily with an Oidtmann syringe.

Pyramidon and antipyrin may be given in enemata; belladonna may be given in suppository or internally.

Morphin and its derivatives may be used.

Medicaments to promote resorption and massage of the prostate gland are useless in the acute stage. Massage of the recently infected gland is dangerous.

After several days the application of the Arzberger apparatus is resorted to (Fig. 29). Through this apparatus hot water (50° to 55° C.) is allowed to flow for one hour three times daily.

[The Editor's syphon, automatic, is used for the same purpose (Fig. 30).]

Or, hot rectal irrigations (50° to 55° C., Guyon) are used two or three times daily.

The patient application of heat is valuable because it usually prevents the formation of pus.

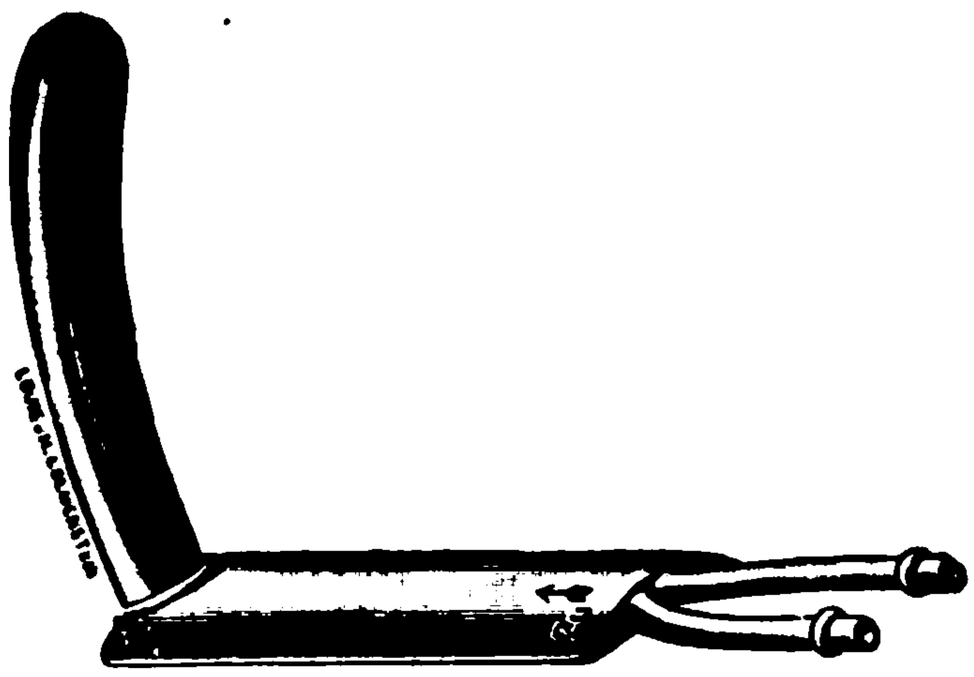


Fig. 29.—Arzberger apparatus.

If, in exceptional cases, heat is not well borne, cold should be applied. Instead of hot water, cold water or even ice water, is allowed to flow through the Arzberger apparatus [or through the Editor's syphon] for one hour three times daily.

As a complication of acute prostatitis reflex retention of urine often develops; this may require catheterization. The introduction of the catheter is very painful for the patient because of the swelling of the prostate gland. It is therefore necessary to induce thorough anesthesia of the urethra, supplemented by an anesthetizing enema. A Nélaton catheter is used. If this cannot be passed because of spasm of the external sphincter, which often persists in spite of local anesthesia, the author uses a metal catheter. If the metal catheter is objected to by the operator as a matter of personal choice, capillary puncture of the bladder must be resorted to and repeated as necessary. After such puncture it follows that spontaneous urination is established or cath-

eterization becomes possible through subsidence of the collateral edema of the prostate gland.

Retention of urine, in acute prostatitis, does not indicate operative interference, even if it persists for fourteen days. Operation is demanded only:

1. When fluctuation in the prostate can be demonstrated *per rectum.*

2. When no fluctuation can be demonstrated *per rectum,* but severe general symptoms are present indicating probable suppuration deep in the prostate gland.

In the first class of cases the author agrees with Casper in advising puncture of the abscess through the rectum, although Frisch, Zuckerkandl, and others advise exposure of the prostate through the perineum. The author grants that the prognosis for prostatotomy has become very good, but prefers to restrict this

Fig. 30.—Bransford Lewis' Automatic Rectal Syphon.

very serious operation to cases of suppuration in the deeper parts of the gland.

[The procedure of Alexander is to be preferred: namely, perineal urethrotomy, then opening into the abscess cavity from the prostatic urethra, and drainage through the perineal wound by tube.—EDITOR.]

However, it is undoubtedly necessary to make an early exposure of the prostate through the perineum in those dangerous, though luckily rare, cases in which the purulent infiltrate attacks the pelvic tissues as a parametritic exudate does (paraprostatitis).

If an abscess of the prostate gland ruptures into the urethra, either spontaneously or during catheterization, the painful symptoms of abscess subside promptly. The after-treatment consists of careful massage of the prostate and Diday irrigation of the urethra. If retention ensues upon insufficient drainage, the abscess cavity must be freely exposed through the perineum.

Puncture of Abscess of the Prostate Gland.—The skin of the perineum must be shaved and disinfected. The field of operation must be infiltrated according to the method of Braun: an anesthetized ring is established around the anus by injections at four points lying in a circle about the anal orifice. Ten cubic centimeters of novocain solution I are used for this purpose. Then, under control of the index finger introduced into the rectum, the entire sphincter is anesthetized by injections at the four points originally injected; sixty cubic centimeters of novocain solution I are required for this part of the work. Then the sphincter can be dilated quite painlessly by hooking both index fingers within the muscle. Cleansing of the rectum is secured by irrigating with two quarts of warm water. The posterior blade of a Simon speculum is introduced, and the posterior wall of the rectum is strongly retracted. The point of fluctuation is sought out, the tip of the left index finger set upon it, and a trocar in-

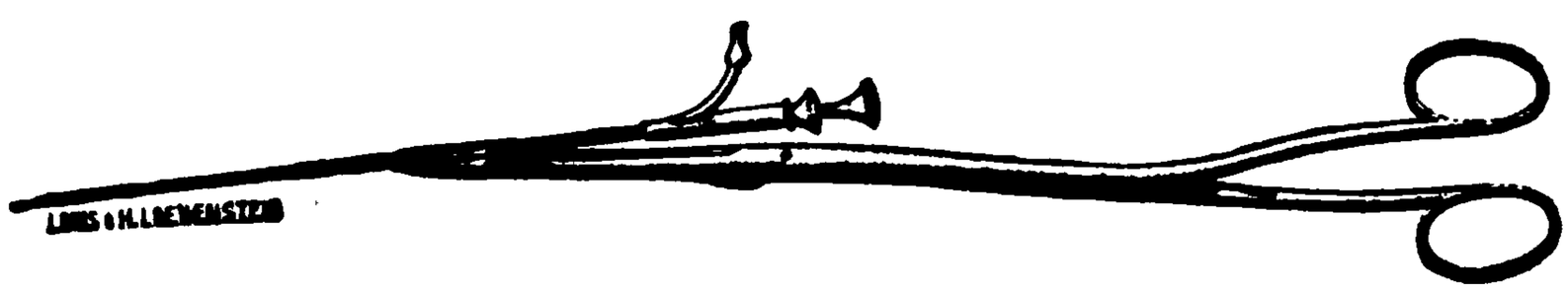


Fig. 31.—Landau trocar for puncturing abscess in Douglas' pouch.

serted to a depth of one to one and one-half centimeters. For this purpose the author uses the trocar designed by Landau for the puncture of abscess in the pouch of Douglas (Fig. 31). The obturator is removed. If pus escapes through the cannula, the forceps is pushed along the trocar into the abscess cavity, and the opening enlarged to two and one-half centimeters. The rectum is again irrigated with two quarts of warm water. A small strip of iodoform gauze is put in the wound. A bowel movement is secured on the third day.

The procedure may be carried out under spinal analgesia or under general anesthesia instead of the very satisfactory infiltration anesthesia; the ordinary trocar may be used instead of the Landau trocar.

CHRONIC PROSTATITIS.

Diagnosis.—To establish the diagnosis of chronic prostatitis it is necessary to demonstrate many pus cells in the discharge ex-

pressed from the prostate gland. Sensitiveness to pressure and altered configuration of the gland do not suffice for the diagnosis.

THERAPY.—The essential principle of the treatment is methodic massage of the prostate gland to expel the pus and to promote resorption of the infiltrate in the glandular tissue. [This is supplemented by regular daily use of the rectal syphon with hot or cold water twenty minutes each time.—EDITOR.]

Technic of Massage.—The patient assumes the knee-chest position. The operator's index finger is protected by a well-lubricated rubber cot and gently introduced through the sphincter to the prostate. Under gentle pressure circular movements are made on each lobe for two or three minutes, the edges of the gland receiving especial attention. At the close several strokes are made in the long axis. Instruments especially designed for massage cannot supplant the finger, which enables the operator to employ a more delicately graded manipulation. [Such instruments are useful in very corpulent individuals.—EDITOR.]

In the beginning the massage must be very gentle, because it is at first extremely painful for many patients. Not until the third sitting may full strength be applied. If the massage is well borne, there may be two or three sittings a week.

If chronic prostatitis coexists with chronic gonorrhea the prostatic massage is combined with the treatment indicated by the gonorrheal condition—that is, irrigation, instillation, or dilatation. (See also the discussion of chronic gonorrhea.)

Together with this combined treatment by massage and irrigation the application of hot water must be practiced in its various forms in order to promote resorption.

The best method for the application of heat involves the use of the Arzberger apparatus, which the author recommends in the modification by A. Lewin (Fig. 29). The apparatus is well lubricated, introduced into the rectum, and connected by a rubber tube with the irrigator. A second rubber tube conducts the return flow to a receptacle. Devices for suction are quite unnecessary. Water as hot as can be borne (up to 55° C.) is allowed to flow through the apparatus for thirty minutes each time. The quantity of water is of no importance. Two or three sittings occur weekly, alternating with the treatment of the urethra. The application of the apparatus may be entrusted to

the patient himself, who applies it once, if possible twice, daily, sixty minutes each time.

This procedure may be modified as follows: the inlet is connected with two irrigators, the one containing cold water (16° to 22° C.), the other containing hot water (35° to 45° C.). The water is allowed to flow alternately, about ten seconds at a time, from both irrigators (Scharff). Resorption is sometimes given a sharper stimulus in this manner.

Hydrotherapeutic measures may also be applied through the urethra: a Winternitz cold sound is introduced (Fig. 32), and through this water at a temperature of 15° C. is allowed to circulate. The application occurs two or three times weekly, thirty minutes each time. This is especially useful in the presence of seminal emissions.

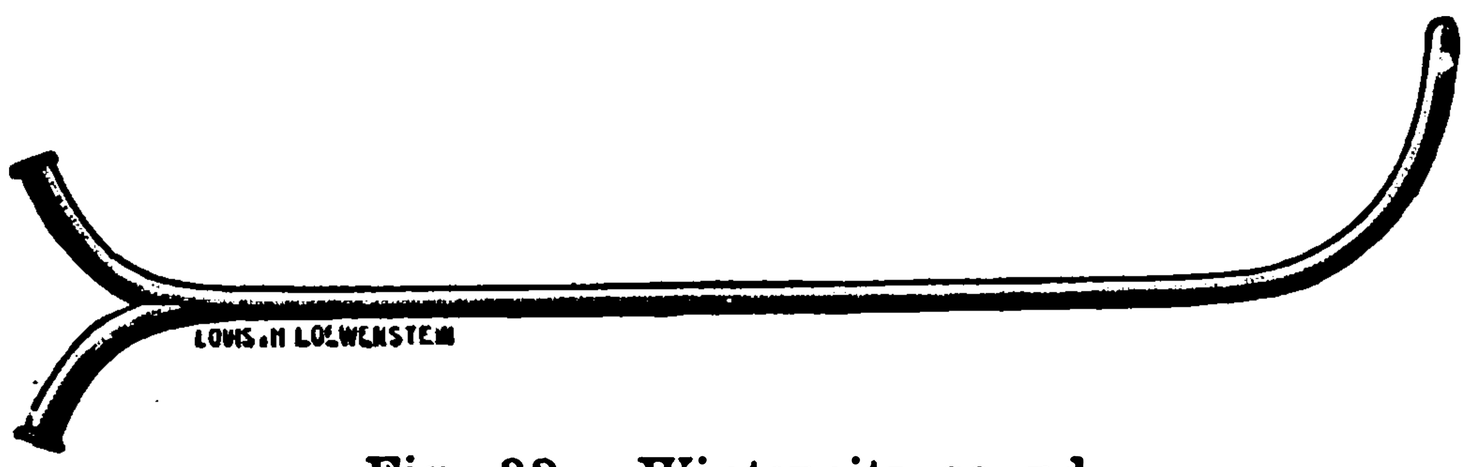


Fig. 32.—Winternitz sound.

The tedious course of chronic prostatitis makes it imperative to give due consideration to the nervous system of the patient. It is therefore advisable to restrict the number of professional interferences as much as possible. It is on these grounds that the author, in patients of unstable nervous organization, recommends hot sitz-baths and rectal irrigations.

The patient takes a hot sitz-bath daily, about 42° C., for fifteen minutes. Or he takes a rectal irrigation under low pressure (about eighteen inches), about one quart of water at 55° C.

Medicaments to promote resorption must be used, but no great confidence may be placed in their action. They are best given in the form of clysters after hot-water irrigation.

℞ Potassii iodidi,
Potassii bromidi .....āā ʒ iiss
Extracti belladonnæ .....gr. x
Aquæ destillatæ .....q. s. ad ʒ x
Misce.
Sig.: ½ ounce in 2½ ounces of water twice daily as a clysma (Kobner).

℞ Tincturæ belladonnæ .....ʒ ij
Tincturæ opii .....ʒ iss

Potassii iodidi .....ʒ iij
Iodi puri .....gr. vij
Aquæ destillatæ .....q. s. ad ʒ iv

Misce.

Sig.: 5 to 6 cc. as a clysma three times daily with an Oidtmann syringe (Scharff).

℞ Ichthyoli .....ʒ iij
Extracti opii .....gr. ix
Extracti belladonnæ .....gr. xviij
Aquæ destillatæ .....q. s. ad ʒ iv

Misce.

Sig.: 5 to 6 cc. as a clysma three times daily with an Oidtmann syringe (Scharff).

℞ Potassii iodidi .....ʒ iss
Iodi puri .....gr. iv
Extracti belladonnæ .....gr. x
Olei theobromatis .....ʒ vj

Misce et fiant suppositoria No. XII.

Sig.: 1 suppository three times daily (Finger).

℞ Ichthyoli .....ʒ jss
Olei theobromatis .....ʒ vj

Misce et fiant suppositoria No. X.

Sig.: 1 suppository three times daily.

HYPERTROPHY OF THE PROSTATE GLAND.

In the development of prostatic hypertrophy three stages are distinguished, according to the symptomatology.

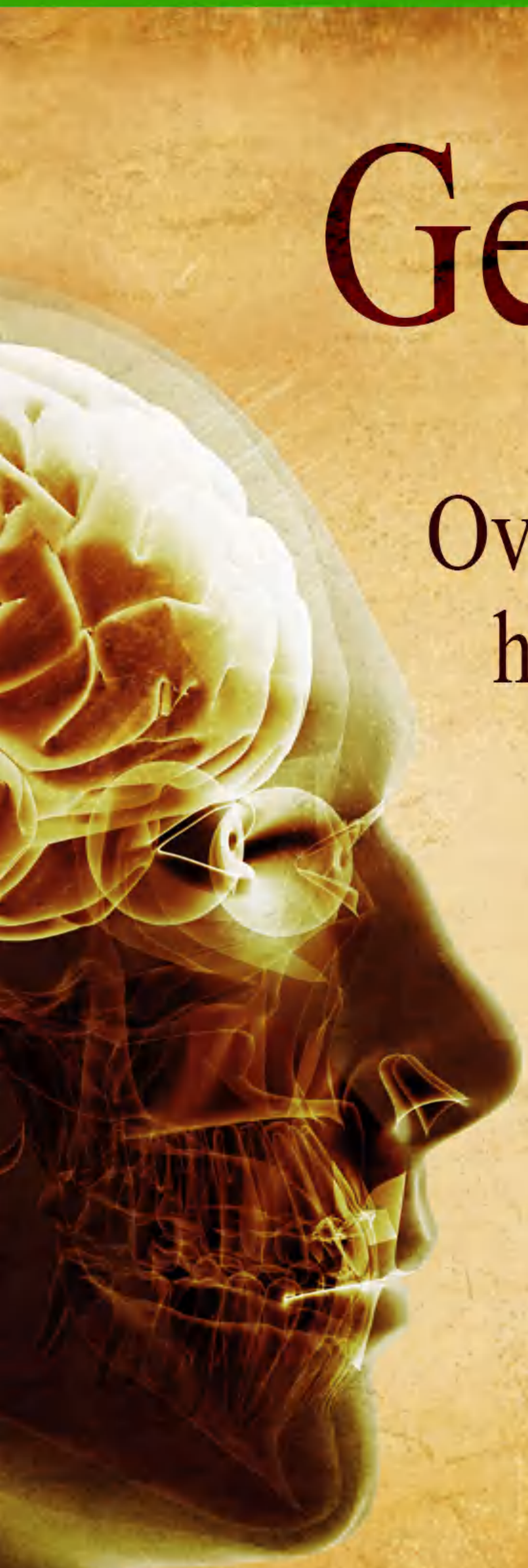
The therapy varies according to the symptomatology.

First Stage (*Prostatism*).—The first stage is characterized by increased frequency of urination, especially at night, and by uncomfortable sensations in the rectum. The bladder is almost completely emptied. The urine is clear.

There is, therefore, no indication for catheterization. It is superfluous and, on account of the danger of infection, is to be omitted as soon as it has been determined that the bladder can be completely emptied. Diuretic infusions and mineral waters are likewise superfluous. The essential principles of treatment are to lessen the urgency of urination and to prevent congestion of the prostate gland.

The increased frequency of urination must be combated by a hot sitz-bath every evening, 42° C. for fifteen minutes. If the sitz-bath disturbs the patient too much, a protracted full bath

THIS PAGE IS LOCKED TO FREE MEMBERS
Purchase full membership to immediately unlock this page



Get Smart

Over 2,000 years of human knowledge in 797,885 volumes

Instant access
$8.99/month

Continue

*Fair usage policy applies

19 can usually be introduced with ease. If this particular catheter cannot be passed, a selection may be made from those offered on page 85. Rigid asepsis may be observed in every detail. Prophylactic irrigation of the bladder should be practiced after the catheterization (1:1000 solution of silver nitrate).

A single catheterization will often suffice to restore spontaneous evacuation of the bladder for a long time.

Second Stage.—If the enlargement of the prostate gland continues, the bladder is no longer completely emptied. The further treatment is concerned with the residual urine, removal of which is accomplished by use of the catheter.

If the quantity of residual urine is under one hundred cubic centimeters, if the urine is clear, if the micturition is not very troublesome, the treatment is continued on the same principles observed in the first stage, that is, regulation of the plan of living, hot sitz-baths, regular defecation, and occasional administration of narcotics.

However, in the presence of increased quantity of residual urine, increased frequency of urination, or, as so often happens, cystitis, regular catheterization must be practiced. The purpose is: to prevent a further increase in the quantity of residual urine, to maintain the elasticity of the bladder, and to combat the cystitis. Under rigid asepsis the bladder is emptied once daily and irrigated with 1:1000 solution of silver nitrate.

Selection of a well-adapted catheter is worthy of serious consideration, because the normal configuration of the urethra has been disturbed by the overgrowth of the prostate.

With Casper, the author recommends:

1. The Tiemann rubber catheter No. 18 (Fig. 33). Because of its characteristic curve, the introduction of this catheter through the deformed urethra is easier than is that of the usual Nélaton catheter.

2. The Nélaton catheter No. 18 (Fig. 7).

3. A silk catheter, Mercier curve, No. 21 (Fig. 6), in case the passage of a soft catheter is impossible. Of the Mercier catheters the author prefers the flattened form, because in prostatic hypertrophy the urethra presents, not a cylindrical tube, but a narrow cleft. The author most frequently selects the horizontally flattened catheter of Bastos or Wishard (Fig. 34); less frequently, the laterally flattened form of Bartrina (Fig. 35). The particular

catheter best adapted to the individual case must be determined by trial.

4. Certain cases demand the metal catheter, introduction of which must be undertaken with extreme caution, because injury easily leads to serious hemmorhage and secondary infection.

The removal of residual urine from the bladder by catheter must always be followed by vesical irrigation with silver nitrate solution 1:1000 [or with argyrol]. Catheterization in cases of residual urine that is not followed by subsequent antiseptic treatment of the bladder inevitably leads to infection, or promotes the infection, if already present.

The bladder can generally be emptied with one or the other of the above-named catheters. If the attempt fails, exceptionally, retention of urine demands vesical puncture.

Fig. 33.—Tiemann rubber catheter.

Fig. 34.—Horizontally flattened Bastos or Wishard catheter.

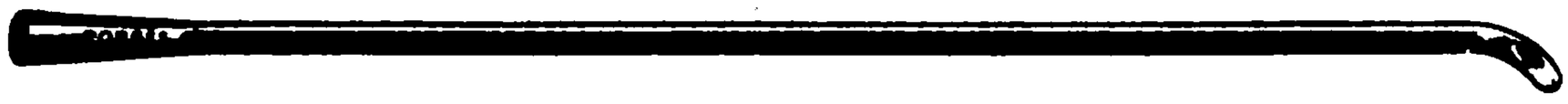


Fig. 35.—Laterally flattened Bartrina catheter.

If catheterization succeeds, but only under difficulty, the introduction of a retained catheter (from two to six days) is an excellent means of restoring the ability to urinate. The prostate shrinks, and catheterization again becomes easy. If success does not follow, prostatectomy is indicated.

The second stage may exist far into the third stage.

Third Stage.—In the third stage of prostatic hypertrophy the expulsive power of the bladder is almost completely lost. Practically, the patient is no longer able to void urine voluntarily, but merely expels a few cubic centimeters from the overdistended bladder, or loses it involuntarily. (Ischuria paradoxa, that is, the bladder flows drop by drop but remains full.) Permanent complete retention of urine exists. Without additional complications, which are frequent enough, this condition presents

serious danger for the patient. Moreover, it often happens that the patient consults his physician for the first time in this stage.

Chronic Complete Retention of Urine (Ischuria Paradoxa).—THERAPY.—The bladder often rises to the level of the navel and may contain two quarts and more of urine. The urine must be withdrawn, but not, under any circumstances, at one sitting. Such sudden release of pressure might induce hemorrhage *e vacuo* and might cause inundation of the organism with toxins leading to death in a few hours. The intravesical pressure must be reduced gradually. This is accomplished in the following manner:

First Sitting: withdrawal of three hundred cubic centimeters of urine, injection of two hundred cubic centimeters of silver nitrate solution 1:1000 [or of boric acid solution 3 per cent].

Second Sitting: withdrawal of three hundred cubic centimeters of urine, injection of one hundred cubic centimeters of silver nitrate solution 1:1000.

Third Sitting: withdrawal of three hundred cubic centimeters of urine, injection of fifty cubic centimeters of silver nitrate solution 1:1000.

These three sittings occur within the first twenty-four hours following the beginning of treatment. On the second and third days five hundred cubic centimeters of urine are withdrawn twice daily, each withdrawal being followed by the injection of one hundred cubic centimeters of silver nitrate solution. From then on, one hundred cubic centimeters more of urine are withdrawn at each catheterization than at the preceding sitting.

Usually the bladder is completely emptied for the first time on the sixth or seventh day of treatment. Until then the patient must be confined in his bed.

Very troublesome thirst (symptom of urosepsis) is often present. In spite of this, the quantity of drinking fluid must be restricted as long as the bladder is full. Therefore the patient is given neither mineral waters nor diuretic medicaments, which only increase the suffering caused by the retention of urine.

If the bladder has once been completely emptied, it is sufficient to proceed with regular catheterization, which must be done more frequently than in the second stage, as spontaneous evacuation of the bladder no longer occurs. The bladder is emptied twice, occasionally three times, daily with the catheter,

THIS PAGE IS LOCKED TO FREE MEMBERS
Purchase full membership to immediately unlock this page

Know Your Bible

Forgotten Books' Full Membership provides unlimited access to more than 28,000 volumes of Christian literature for $8.99/month

Continue

*Fair use policy applies

able course. A number of complications are to be feared constantly. Of these, the most frequent, next to cystitis, is urosepsis.

Urosepsis (Urinary Poisoning).—Urosepsis develops in stealthy manner (increasing lassitude, pale appearance, loss of appetite, nausea, intense thirst, dry coated tongue) and because of gastro-intestinal disturbances often brings the patient to the internist. Fever and chills develop. The urine is thick and purulent, but it must be remembered that, even in the most dangerous forms, polyuria may conceal the true condition.

THERAPY.—The treatment of urosepsis achieves better results than might be expected in such a serious disease. Intelligent management often saves a life that appears to be already lost. Gradual evacuation of the bladder must be undertaken immediately.

If the uroseptic symptoms do not subside after the bladder has been emptied, a retained catheter must be introduced. As long as the catheter remains in place the bladder must be irrigated three times daily.

The intense thirst must be allayed with cold water and ice cold milk in tablespoonful quantities. Milk of almonds, fruit juices, and albumin lemonade are permitted later. Loss of strength must be combated by nutritious diet—cream, yolk of egg, alcohol. (Consult Stauss, *Diätbehandlung innerer Krankheiten*, 2 Aufl. 1909).

In addition:

℞ Decocti cinchonæ rubræ .....ʒ iiss: ʒ vij
Acidi hydrochlorici .....♏ xx
Syrupi .....q. s. ad ʒ viij
Misce.
Sig.: Tablespoonful every two hours.

℞ Vini quininæ .....ʒ viij
Sig.: Tablespoonful every two hours.

Resort must be had to salt solution, most comfortably given as proctoclysis. Free elimination must be promoted: by the bowel with rhubarb and cascara sagrada; by the skin with hot packs.

Hemorrhages in Prostatic Hypertrophy.—1. Hemorrhage often occurs spontaneously from eroded veins in the prostatic urethra.

THERAPY.—Minute hemorrhage may remain untreated. In more serious hemorrhage the insertion of a retained catheter for five or six days affords the most efficient treatment. In addition

styptics must be given. In recurrent hemorrhage prostatectomy is demanded, as hemorrhage of this type is always suspicious of malignant degeneration of the gland.

2. Hemorrhage may occur as a result of catheterization that has been carried out correctly.

THERAPY.—If the hemorrhage occurs after the introduction of a Nélaton or a Tiemann catheter, catheterization is suspended, if possible, for several days. If this is impracticable, a retained catheter is inserted for five or six days. If hemorrhage recurs, prostatectomy is indicated.

3. Hemorrhage occurs as a direct result of injuries sustained during catheterization (false passages).

THERAPY.—A retained catheter must be introduced, preferably one with marked Mercier curve. Blood-clots in the bladder must be washed out. If success is not attained by this procedure, sectio alta is indicated, to be followed by prostatectomy.

The other complications of prostatic hypertrophy, cystitis, pyelonephritis, prostatic abscess, epididymitis, and so on, are discussed in their respective chapters.

Surgical Treatment of Prostatic Hypertrophy.—Prostatectomy is practically the only surgical procedure that enters into consideration. The prostate is approached by the abdominal or by the perineal route, and the gland is completely removed. The operation is astonishingly well borne, even by patients past eighty years of age. The mortality varies from 4 per cent to 7 per cent. The procedure by the suprapubic route less frequently impairs potency and does not carry the danger of rectal fistula. In spite of the exceptionally successful results of the operation, it should be undertaken only when conservative treatment has failed. According to Israel, prostatectomy is demanded:

1. When severe urgency to urination persists in spite of regular catheterization.

2. When recurrent hemorrhage persists, whether spontaneously or as a result of catheterization.

3. When catheterization presents continuous difficulty.

4. When pyelitic or pyelonephritic conditions arise.

5. When the quantity of residual urine persistently remains large in spite of regular catheterization, and when a condition of urosepsis impends.

In patients whose general condition is very bad, but in whom operative interference is indicated on the above-named principles, it is well to be content with alleviation of vesical irritability by the establishment of a vesical fistula according to Witzel. Prostatectomy is done at a later time.

The Bottini operation meets with occasional application only, as it is uncertain of success, and is not less dangerous than prostatectomy.

[An electro-incision made after the mode of Chetwood or Wishard, however, is quite a different affair; it is safe, and in appropriate cases is preferable, even, to prostatectomy. It consists in first opening the urethra through the perineum, inserting the forefinger through the prostatic urethra into the bladder, demonstrating the ring of fibrous tissue constituting the contracture at the neck; then replacing the finger with the cauterizing instrument, hooking it over the ring, and burning through the latter in one or more places, until a sufficiently wide caliber has been attained through the previously narrowed channel. This mode of enlarging the contracted outlet is not attended by hemorrhage nor followed by recurrence. It is not appropriate for the hypertrophic forms of prostatic obstruction, but only for the "contracture."

Ligation of the vas deferens should be resorted to only in those prostatics in whom epididymitis repeatedly recurs. It has no influence in removing prostatic obstruction.—EDITOR.]

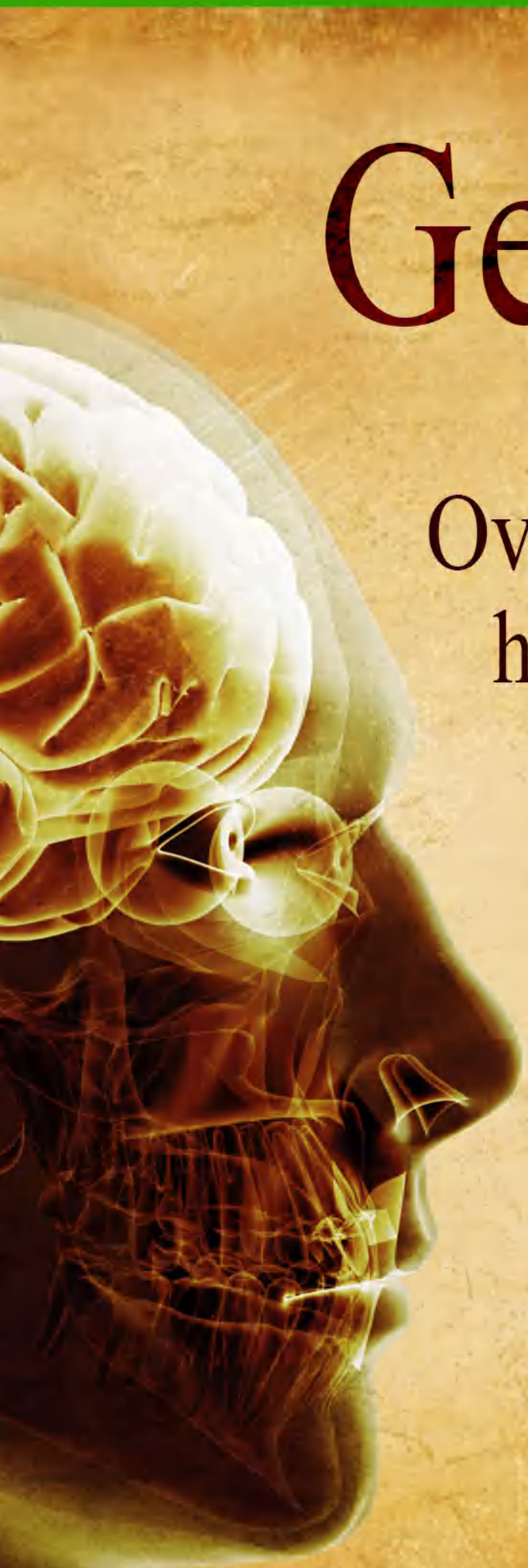
Retained Catheter.—A retained catheter is a catheter that is allowed to remain in the urethra for several days.

The indications for the introduction of a retained catheter are discussed in the respective chapters.

When possible, a Nélaton catheter is selected for retained catheter (Fig. 7), because it gives rise to least irritation of the urethra and bladder. The penis is washed with soap and water and cleansed with benzin (not with ether, which causes burning pain on the skin of the genitals). The prepuce is retracted fully, a gauze strip is wrapped lightly around it, and the catheter is introduced. A perforated piece of leucoplast about five centimeters square is drawn over the catheter and pressed down upon the glans penis.

℞ Leucoplast No. 520, roll .....j
1 yard long and 2 inches wide.

THIS PAGE IS LOCKED TO FREE MEMBERS
Purchase full membership to immediately unlock this page



Get Smart

Over 2,000 years of human knowledge in 797,885 volumes

Instant access
$8.99/month

Continue

*Fair usage policy applies

for temporary closure. The most rigid cleanliness must be observed in drainage.

If the permanent catheter causes pain, relief must be given. Of narcotics, the best is morphin given subcutaneously. The patient must be kept in bed. As long as the permanent catheter remains, prevention of secondary infection must be sought by vesical irrigation three times daily: once with silver nitrate solution 1:1000; twice with mercuric oxycyanid solution 1:5000.

About the eighth day (or earlier in strongly purulent urine) the catheter must be removed for cleansing; otherwise it becomes encrusted within the bladder by the deposition of salts.

ATROPHY OF THE PROSTATE GLAND.

Atrophy is rare; it causes urgency of urination, and in case simultaneous shrinking of the internal sphincter results in a contracted condition, it causes retention of urine. In other cases incontinence exists.

DIAGNOSIS.—It must be remembered that atrophy of the prostate gland may be only a coincidence, and that the symptoms in reality depend on an incipient trouble in the central nervous system.

THERAPY.—Obstructions at the vesical neck are removed with the galvanocautery introduced through the tube of a Goldschmidt urethroscope [or, better, by the instrument of Chetwood.—EDITOR.]. Otherwise the treatment is symptomatic: in retention of urine, catheterization; in secondary cystitis, vesical irrigation; in incontinence, a rubber urinal.

TUBERCULOSIS OF THE PROSTATE GLAND.

This is most frequently combined with other evidences of urogenital tuberculosis.

THERAPY.—Surgical interference must be restricted to the treatment of abscess and fistula. Treatment through the urethra must be omitted as useless; except that retention of urine demands catheterization. Mild narcotics must be ordered to combat the urgency to urination: opium (page 77), belladonna (page 97), antipyrin as clyster (page 98). Greater reliance must be placed in nutritious diet and prolonged residence in a suitable climate.

CARCINOMA OF THE PROSTATE GLAND.

DIAGNOSIS.—The diagnosis of cancer is often very difficult. Irregular enlargement of the gland toward the rectum or bladder (determined by cystoscopy) always creates a suspicion of carcinoma, particularly when spontaneous hemorrhage from the prostate coincides.

THERAPY.—If the diagnosis of cancer is made early, there must be no delay in performing prostatectomy. Bad as the operative results in tumors of the prostate have hitherto been, the distinct progress of prostatic surgery affords hope of betterment in this field. If the neoplasm has once attacked the gland capsule and thereby exceeded the limits of operability, the patient enters upon a long period of suffering during which we can offer him nothing except the treatment of symptoms. Narcotics, the thermophore, hot sitz-baths find employment. In retention of urine catheterization (Mercier, Nélaton) must be resorted to; when catheterization is no longer possible because of distortion of the urethra by the growth, a vesical fistula must be established according to the mode of Witzel.

PROSTATIC CALCULI.

DIAGNOSIS.—The diagnosis is established by palpation *per rectum*; by exposure to the Röntgen ray [by the posterior urethroscope (Mark or Buerger)].

THERAPY.—In case a prostatic calculus causes suffering, the gland must be exposed by a prerectal incision; the gland must be incised, and the stone extracted.

INJURY OF THE PROSTATE GLAND.

Injury by external violence is very rare. The principal symptom is hematuria.

THERAPY.—In case of mild hemorrhage caused by prostatic injury, the insertion of a retained catheter is sufficient. In case of serious hemorrhage the prostate must be exposed by a prerectal incision, and the bleeding controlled by tamponade.

For discussion of injury to the prostate during catheterization see page 89.

NEUROSIS OF THE PROSTATE GLAND.

Neurosis includes painful sensations of various types in the region of the rectum, perineum, and urethra (hyperesthesia of the prostate, pars prostatica urethræ). It most frequently occurs during or following prostatitis. It is often allied with other symptoms of sexual or general neurasthenia. Here is also to be placed that nervous spasm of the vesical sphincter that makes it difficult, and sometimes impossible, to void urine.

THERAPY.—It is seldom that good results are obtained by local treatment of hyperesthesia or paresthesia. Resort may be had to the Winternitz cold sound or to the Arzberger apparatus. Water at room temperature is allowed to flow through the apparatus twice daily, one hour each time. The introduction of metal sounds, prostatic massage, and instillations to the colliculus seminalis may be useful.

General treatment is much more important. It should be carried out in a sanatorium, if possible. Mild physical therapy often promotes marked improvement, if not a positive cure.

With the principles of therapeutic suggestion in mind, medicaments should be given *per rectum:* aspirin, antipyrin (page 98), ichthyol (page 82), belladonna (page 77). Narcotics should be avoided.

It is in the various forms of spasm of the sphincter that local treatment is worthy of consideration. The introduction of a metal sound of large caliber (No. 25) two or three times weekly often allays the condition promptly. The introduction must be practiced under thorough anesthesia of the mucous membrane. The resistance offered by the external sphincter must not be overcome by force, but by steady even pressure of the tip of the sound against the muscle while the attention of the patient is diverted.

THIS PAGE IS LOCKED TO FREE MEMBERS
Purchase full membership to immediately unlock this page

Know Your Bible

Forgotten Books' Full Membership provides unlimited access to more than 28,000 volumes of Christian literature for $8.99/month

Continue

*Fair use policy applies

THERAPY.—By the finger introduced into the rectum, or by the special massage instrument of Feleki, the calculus is pressed against a sound introduced into the urethra and crushed.

CHAPTER IX.

DISEASES OF THE URINARY BLADDER.

ACUTE CYSTITIS.

THERAPY.—Narcotics constitute the first element of consideration in acute vesical catarrh. They lessen pain, allay the vesical spasm, facilitate the diminution of swelling of the inflamed mucous membrane, and so attain a therapeutic effect on the disease process itself. The author gives either:

℞ Morphinæ hydrochloridi .....gr. v
Aquæ destillatæ .....q. s. ad ℥ j
Misce.
Sig.: 10 to 20 drops three times daily.

Or:

℞ Heroinæ hydrochloridi .....gr. iiss
Aquæ amygdalæ amaræ .....q. s. ad ℥ j
Misce.
Sig.: 15 drops three times daily.

Or this emulsion, which is of agreeable taste:

℞ Heroinæ hydrochloridi .....gr. ¾
Emulsi amygdalæ .....q. s. ad ℥ vij
Misce.
Sig.: Tablespoonful three times daily.

Or:

℞ Extracti belladonnæ .....gr. viij
Misce et fiant pilulæ No. L.
Sig.: 2 or 3 pills three times daily.

Or:

℞ Tabellæ dionini .....gr. ½
Fiat tabella No. I. Dentur tales tabellæ No. XXV.
Sig.: 1 tablet twice a day.

Good effect is achieved by this clyster:

℞ Tabellæ antipyrinæ .....gr. xvj
Fiat tabella No. I. Dentur tales
tabellæ No. X.
Tincturæ opii .....ʒ iiss

Sig.: Dissolve a tablet in 1 ounce of lukewarm water, add 5 drops of tincture of opium, and use this quantity as a clysma twice daily with an Oidtmann syringe.

℞ Dionini .....gr. vij
Aquæ destillatæ .....q. s. ad ʒ ij
Misce.

Sig.: 5 cc. as a clysma three times daily with an Oidtmann syringe. (See also pages 76, 82.)

According to the author's experience the application of suppositories is less effective.

If this method is chosen, the suppository should contain belladonna or ichthyol.

℞ Extracti belladonnæ .....gr. vij
Olei theobromatis .....ʒ vij
Misce et fiant suppositoria No. XII.
Sig.: 1 suppository three times daily.

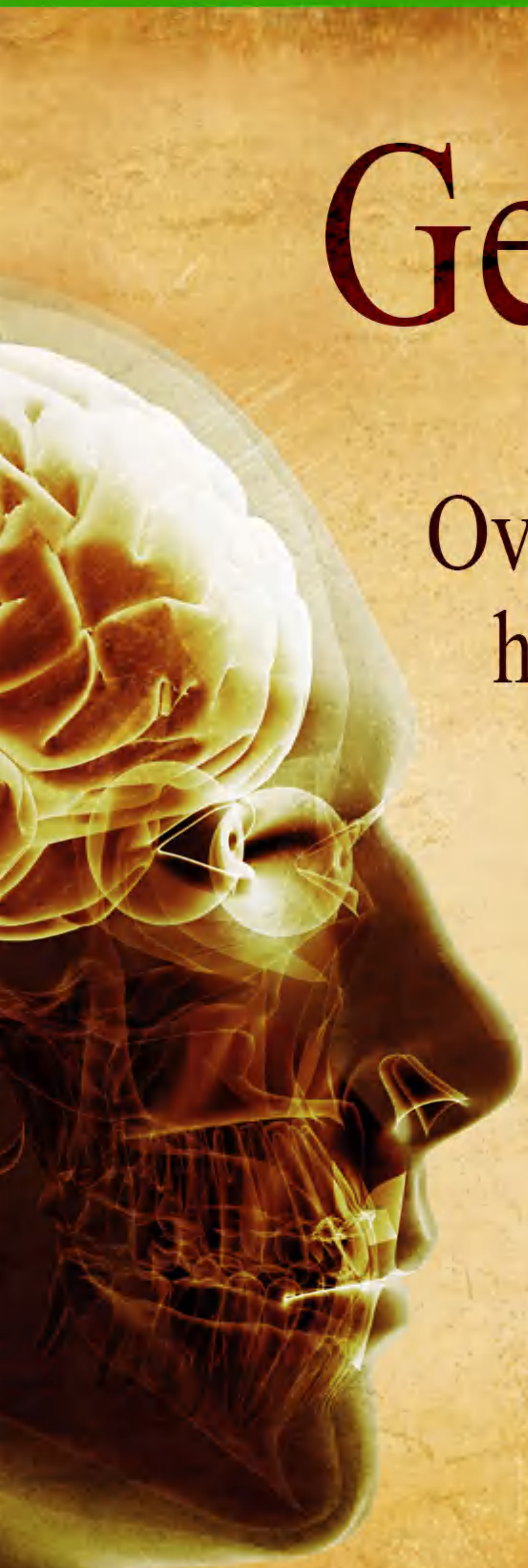
Heat constitutes a second important factor in the cure of cystitis. It is best applied in the form of hot sitz-baths morning and evening. In the beginning of treatment the bath is taken at 36° C. for five minutes; later at 42° C. for fifteen minutes. The instructions usually given are: the patient begins with the water as hot as he can bear it, and maintains the original temperature by the addition of hot water. Between baths the patient rests in bed, applies a hot-water bottle to the region of the bladder, or applies hot compresses (about forty centimeters wide) kept hot by a hot-water bottle. It is necessary to be content with these latter measures in case the hot sitz-baths are not well borne.

Mild diet must be provided for. Condiments and alcohol must be avoided. Regularity of bowel movement must be secured.

Cure is promoted by the prompt removal of purulent secretion from the inflamed mucous membrane; therefore the patient is given drinking fluids in copious quantities. He should drink three quarts of fluid daily; of these, one quart should be milk, one quart some diuretic infusion, and one quart non-alcoholic drinks according to individual taste—tea, coffee, mineral water.

Of diuretic infusions, the author prefers:

THIS PAGE IS LOCKED TO FREE MEMBERS
Purchase full membership to immediately unlock this page



Get Smart

Over 2,000 years of human knowledge in 797,885 volumes

Instant access
$8.99/month

Continue

*Fair usage policy applies

CHRONIC CYSTITIS.

DIAGNOSIS.—It must always be remembered that pyuria, strangury, and pain in the bladder are symptoms, not only of chronic cystitis, but also of purulent disease of the kidneys. (Renal tuberculosis.)

However, it is undoubtedly necessary to make a differential diagnosis between vesical and renal pyuria. A diagnostic error in this connection may be of very serious importance to the patient. Such error should be avoided by applying the simple, essential rule, never to rest content for more than eight weeks with the diagnosis of chronic cystitis, but to assume renal pyuria in every instance where vesical irrigation with silver nitrate solution has not sufficed to establish clear urine. Cystoscopy, ureteral catheterization, and determination of functional capacity of the kidneys should remove all doubt.

THERAPY.—Just as strictly as local treatment is avoided in the acute stage of cystitis, it is patiently applied in the chronic stage. Infusions, urotropin, or mineral waters do not afford the patient so rapid and certain a cure as do appropriate and patiently practiced vesical irrigations. The sovereign remedy is silver nitrate in solution of 1:1000. Only in this concentration is it of trustworthy assistance in establishing the diagnosis. The patient is treated with two or three irrigations a week.

Technic of Vesical Irrigations.—The irrigator, containing three hundred cubic centimeters of 1:1000 solution of silver nitrate is suspended from two to three feet above the reclining patient. Heating the irrigating solution is necessary only in the beginning of treatment.

The bladder is catheterized with a catheter adapted to the case in hand. (Nélaton or metal or prostate catheter.) The author follows the Casper method and omits the preceding irrigation of the bladder with boric acid solution. In spite of all theory to the contrary, silver attains its beneficent effect without that irrigation. The solution is allowed to flow into the bladder slowly until the patient complains of pressure, then the inflow is stopped, the solution is allowed to flow out, and that ends the irrigation. In this manner the bladder is filled with the tolerable quantity of solution, while both forceful and harmful distention, as well as

the introduction of an immoderate quantity in an abnormally large bladder, are avoided.

In case of suppuration of more severe degree the irrigation is done twice in succession.

The syringe is selected instead of the irrigator only:

1. In presence of tenacious pus adherent to the floor of the bladder.

2. In atrophy of the bladder.

3. In case the cystitis is caused by a tumor that might be made to bleed by irrigation.

In the first case the injection is interrupted or jerky; in the second and third, fifty cubic centimeters of solution are injected several times in succession.

The treatment with silver nitrate has only one drawback: it causes after-pains, but luckily only at the beginning of treatment, and then in moderate degree.

The after-pains of silver irrigation are combated by the administration of acetyl-salicylic acid *per os* and belladonna *per rectum*. In addition, a hot sitz-bath is given at 42° C. for fifteen minutes.

Or, antipyrin (page 98) is given in clyster fifteen minutes before the irrigation. (Scharff).

It must be remembered that after-pains of extreme severity are pathognomonic of genitourinary tuberculosis. They demand particular observation.

An idiosyncrasy against silver nitrate may be assumed only when genitourinary tuberculosis can be excluded. In that case silver nitrate may be temporarily supplanted by albargin in 1:-1000 solution, which causes less pain, but is also less efficient.

On the other hand, several irrigations may be practiced with mercuric oxycyanid in 1:5000 solution (page 24).

Local treatment of the bladder is supplemented by the internal administration of urinary antiseptics and diluents. Urotropin is the drug of choice: it may be given for a protracted period of time without injury (page 99).

If it appears desirable to change medicaments, resort may be had to the drugs allied to hexamethylenamin. None of these excel the original urotropin.

℞ Tabellæ hetralinæ .....gr. viiss
Fiat tabella No. I. Dentur tales
tabellæ No. XX.
Sig.: 1 tablet in water four times daily.

℞ Tabellæ helmitolis .....gr. viiss
Fiat tabella No. I. Dentur tales
tabellæ No. XX.
Sig.: 1 tablet in water four times daily.

Dilution of the urine is promoted as in the acute stage of cystitis. (ursi, buchu, mineral waters, milk).

If chronic cystitis persists in spite of vesical irrigation, the patient may be allowed to visit mineral springs or bathing resorts. However, optimistic expectations must not be placed in their possible effect on the bladder. In the selection of baths due consideration must be paid to possible derangements of the patient's organism (circulatory, gastrointestinal, and nervous systems). Mineral waters act merely by flushing the urinary organs without exerting any specific effect. However, they may be used to supplement the local treatment.

Nothing is to be expected of the practice of drinking mineral waters at home, since, as is well known, the beneficient influence of springs depends very largely on the strictly regulated life in good air and also on the removal from occupational exactions.

If the capacity of the bladder has been seriously diminished by chronic cystitis, it is advisable, in occasional cases, to practice vesical instillation with 2 per cent silver nitrate solution instead of vesical irrigation.

In those instances in which regular vesical irrigation does not bring about cure of cystitis—provided, always, that the condition to be dealt with is really cystitis and not renal pyuria—the retention of a permanent catheter for from eight to fourteen days often achieves exceptional success. It is to be recommended especially in cystitis in prostatic patients.

In exceptionally rare cases cystitis persists in spite of the application of all of these modes of treatment. Then, as a last resort, sectio alta must be done, and a fistula according to the mode of Witzel must be maintained for a long time.

Secondary cystitis (following calculus, foreign body, neoplasm, stricture, prostatic hypertrophy) demands immediate relief of the causative condition.

THIS PAGE IS LOCKED TO FREE MEMBERS
Purchase full membership to immediately unlock this page

Know Your Bible

Forgotten Books' Full Membership provides unlimited access to more than 28,000 volumes of Christian literature for $8.99/month

Continue

*Fair use policy applies

orifices in an ulcerated and shrunken bladder. That becomes possible only after the condition of the mucous membrane has been improved.

Silver nitrate irrigation cannot be applied here as in other forms of cystitis because it is not tolerated by tuberculous mucous membrane. The author prefers mercury bichlorid (Casper, Guyon). Under instillation and injection with corrosive sublimate the painful micturition becomes less frequent, and the vesical capacity increases; but these advantages are gained at the expense of severe suffering by the patient.

The treatment with mercury bichlorid is pursued under the following plan:

There should be one or at most two sittings a week. A Guyon drop syringe is used. The solution is instilled upon the floor of the bladder.

30 drops of a 1:10000 solution
30 drops " " 1:8000 "
and so on up to 1:1000 "
Then,
3 cubic centimeters of a 1:8000 solution
3 " " " " 1:6000 "
4 " " " " 1:6000 "
4 " " " " 1:4000 "
5 " " " " 1:4000 "

Then the vesical syringe is used:

10 cubic centimeters of a 1:6000 solution
15 " " " " 1:10000 "
20 " " " " 1:10000 "
25 " " " " 1:10000 "
and so on up to
50 cubic centimeters of a 1:10000 solution.

The bladder must never be filled forcibly.

The required solutions are to be prepared by diluting the 1:-1000 stock solution of mercury bichlorid.

If the pain following an injection is very severe, the strength of the solution is not increased, but rather diminished at the next sitting. After each application of mercury one-sixth grain of morphin is given subcutaneously, and the patient is kept in bed a day or two. If the mercuric chlorid therapy cannot be applied, because of the severe pain it causes, an attempt is made to inject mercuric oxycyanid in a 1:10000 solution two or three times

a week, from twenty to eighty cubic centimeters each time. Or, resort is had to iodoform-guaiacol solution, which is antiseptic and anesthetic:

℞ Iodoformi .....gr. xx
Guaiacolis .....āā ʒ j
Olei olivæ .....q. s. ad ʒ iv
Misce.
Sig.: Inject 5 cc. into the empty bladder three times daily.

When the vesical capacity has risen to eighty cubic centimeters, it is permissible for the operator, provided he is certain of his technic, to undertake a cystoscopic examination, necessarily under spinal analgesia or general narcosis.

The treatment with mercury bichlorid offers a much brighter prognosis when the operator attacks a secondary tuberculosis of the bladder after nephrectomy of the primarily diseased kidney. Often nephrectomy alone suffices to cure tuberculous cystitis. If pyuria persists, however, mercuric-chlorid therapy according to the above-described plan is instituted several weeks after the operation.

It is at this stage of the disease, and at this stage only, that tuberculin therapy is useful. Its principle is, to begin with the minimum dose (0.0025 milligram) and to increase the dose so gradually that a febrile reaction is avoided. To carry out this plan a period of five months is necessary, and about fifty-six injections of tuberculin (Old) are required. (Consult the monograph of Bandelier and Roepke, "*Lehrbuch der spezifischen Diagnostik und Therapie der Tuberkulose.*")

In many cases instrumental interference is not tolerated at all. Then the operator must be content with the internal administration of ichthyol (Goldberg), which may also be used at other times to supplement local treatment.

℞ Ichthyoli
Aquæ destillatæ .....āā ʒ j
Misce.
Sig.: 10 to 70 drops in water three times daily.

In addition vesical spasm must be combated by the application of the thermophore at night, and sitz-baths by day (42° C. for fifteen minutes).

Prolonged residence in a warm dry climate is advisable (Egypt, Algiers, Corsica, Arizona, Texas).

All that can be done in inoperable cases is to relieve the suffering of the patient. It is very seldom that instrumental interference achieves any good result. It is absolutely necessary to quiet the bladder, and morphin constitutes the summation of therapy.

VESICAL CALCULI.

In calculous disease of the urinary bladder a distinction is made between primary calculi having their origin in a general diathesis and capable of moving from kidney to bladder, and secondary calculi having their origin in purulent inflammation of the bladder and renal pelvis, particularly in the presence of simultaneous retention of urine (stricture, prostatic hypertrophy, pyonephrosis).

DIAGNOSIS.—The calculus sound is obsolete and is to be resorted to only when cystoscopic examination fails or when, exceptionally, a cystoscope cannot be introduced. A cystoscopic examination is more exact and more certain than the searching of the bladder with a calculus sound.

THERAPY.—There is no known method of dissolving a stone within the body. A vesical calculus can be removed by operation only. According to considerations in the individual case either lithotripsy or incision is indicated.

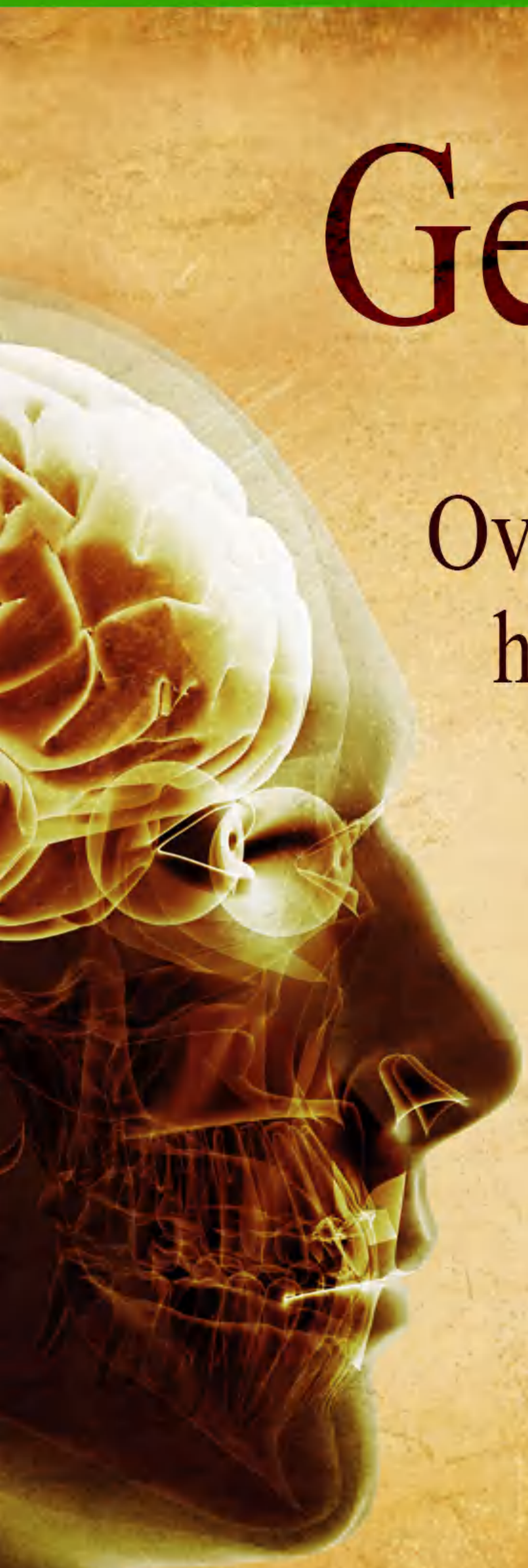
Lithotripsy affords the shorter period of healing, carries the lesser danger (mortality 2 per cent, Nitze), and confines the patient in his bed for only a few days; it should therefore be employed in every case where it is applicable. It is undertaken under general narcosis or under spinal analgesia. In the less difficult cases local anesthesia of the bladder suffices.

The technic of lithotripsy is best described by Guyon, "*Die Technik der Lithotripsie,*" translated by Berg.

Contraindications to lithotripsy:

1. Very large stones, especially when they are hard (oxalates); very numerous stones.
2. Stones lying in vesical diverticula.
3. Simultaneous vesical tumor.
4. Simultaneous prostatic hypertrophy that would in itself demand operation.
5. Severe, ichorous cystitis.
6. Serious renal disease.

THIS PAGE IS LOCKED TO FREE MEMBERS
Purchase full membership to immediately unlock this page



Get Smart

Over 2,000 years of human knowledge in 797,885 volumes

Instant access
$8.99/month

Continue

*Fair usage policy applies

The question, how far the operator should restrict himself to symptomatic treatment, has not yet been fully answered. Even of the smaller papillomata, many are better handled symptomatically (Posner). Practical experience shows again and again that many patients enjoy a tolerable life for years under conservative treatment.

Symptomatic treatment is to be preferred:

1. In papillomata in old persons.

2. When diffuse papillomatosis exists in addition to an isolated papilloma.

3. In the presence of very large papillomata, covering practically the entire vesical floor.

In the presence of very large papillomata radical removal demands so serious a procedure (resection of the bladder, with resection and implantation of one or both ureters) that the operation had best be omitted if the patient suffers seriously from hemorrhage or cystitis.

The decision in the individual case must be based on the general condition of the patient, the clinical development of the disease, and cystoscopic findings.

[Of late has been developed (first by Bier) a method of treating benign papillomata that has proved of wonderful efficacy: The application of fulguration by the high frequency electric current, through the cystoscope.—EDITOR.]

Symptomatic Treatment of Vesical Papillomata.—It will be understood from the foregoing discussion that symptomatic treatment of vesical papilloma is of very great importance. The object of such treatment is to combat cystitis and hemorrhage, for it is not of the tumor itself, but of these resultant conditions, that the patient dies.

All indications are met by one and the same medicament: silver nitrate.

The bladder is irrigated two or three times a week with two hundred cubic centimeters of a 1:1000 solution of silver nitrate. In order that a fresh hemorrhage may not be incited, the solution is cautiously injected with a syringe in quantities of from twenty to eighty cubic centimeters.

If hemorrhage persists the strength of the solution is increased to 1:500, so that the bleeding surface may be more promptly cauterized.

If success is not yet attained, resort is had to a 2 per cent solution of silver nitrate. With a drop syringe from twenty to thirty drops of this solution are instilled on the floor of the bladder two or three times a week (page 26).

Vesical tenesmus following treatment with silver must be allayed by narcotics and hot sitz-baths.

Local treatment with silver nitrate simultaneously controls cystitis, so that internal medication for the relief of that condition is only occasionally called for. Hexamethylenamin may be given for a prolonged period of time, or its administration may be interrupted by giving camphoric acid in hard gelatine capsules:

℞ Capsulæ geloduratæ cum acido camphorico .....gr. v
Fiat capsulæ No. I. Dentur tales capsulæ No. XX.
Sig.: 1 capsule four times daily.

Diuretic infusions and mineral waters are to be tried. In some patients dilution of the purulent urine gives comfort: in others diminution of quantity of fluid and resultant vesical quiet act better.

Unfortunately, many tumor patients tolerate no method of local treatment. Resort must then be had to the administration of so-called internal medication in that reliance is placed upon styptics, which are far inferior to silver nitrate. Suprarenin is the most efficient of these, though not uniformly so. Of the 1:1000 stock solution of suprarenin, five cubic centimeters are added to fifty cubic centimeters of water, injected into the bladder through a catheter, and allowed to remain. There is no danger of intoxication in this procedure. v. Frisch has injected one hundred and fifty cubic centimeters of the 1:1000 solution in vesical hemorrhage without injury.

The author likes to give gelatin subcutaneously at the same time (forty grains of a 10 per cent solution sterilized).

℞ Gelatini (sterilized, 10 per cent solution) .....1 bottle
Sig.: Use as directed.

Just before the injection the gelatin is warmed on a water-bath to body temperature and injected deep into the subcutaneous tissue of the thigh or breast. The injection may be repeated two or three times if necessary.

The other styptics are still less certain:

℞ Stypticini .....gr. 1
Aquæ destillatæ .....q. s. ad ℥ j

Misce.

Sig.: Inject 1 cc. intramuscularly in the gluteal region three or four times daily.

℞ Hydrastininæ hydrochloridi .....gr. xxiv
Aquæ destillatæ .....q. s. ad ℥ j

Misce.

Sig.: Inject ½ to 1 cc. hypodermatically (Gottschalk).

℞ Ergotini dialysati (Bombelon) .....℥ jss
Aquæ destillatæ .....q. s. ad ℥ j

Misce.

Sig.: Inject 1 cc. intramuscularly in the gluteal region three times daily.

℞ Tabellæ stypticini .....gr. ¾
Fiat tabella No. I. Dentur tales
tabellæ No. XX.

Sig.: 5 to 8 tablets daily.

℞ Fluidextracti hydrastis canadensis ..℥ j

Sig.: 30 to 40 drops on sugar three or four times daily.

℞ Cornutinæ citratis .....gr. j ⅛
Pulveris et extracti glycyrrhizæ ....q. s.

Misce et fiant pilulæ No. L.

Sig.: 2 pills two or three times daily.

℞ Fluidextracti hamamelidis,
Syrupi aurantii .....āā ℥ j
Aquæ destillatæ .....q. s. ad ℥ vij

Misce.

Sig.: Tablespoonful every two hours.

In spite of all precautions profuse hemorrhage may arise, hemorrhage so profuse that the resulting blood-clots cause retention of urine.

Symptomatic treatment is resumed upon relief of the retention of urine. Repeated hemorrhages indicate abdominal section.

CARCINOMA OF THE URINARY BLADDER.

THERAPY.—Correct treatment of vesical cancer consists of radical operation only (resection of the bladder). This is an exceedingly serious procedure with a high mortality rate, especially when resection and implantation of the ureters are demanded. Therefore radical operation and symptomatic treatment are con-

THIS PAGE IS LOCKED TO FREE MEMBERS
Purchase full membership to immediately unlock this page

Know Your Bible

Forgotten Books' Full Membership provides unlimited access to more than 28,000 volumes of Christian literature for $8.99/month

Continue

*Fair use policy applies

FOREIGN BODIES IN THE BLADDER.

THERAPY.—The extraction of foreign bodies from the bladder is done through the urethra whenever possible. Heavily incrusted and jagged objects and pieces of glass are exceptions to this rule.

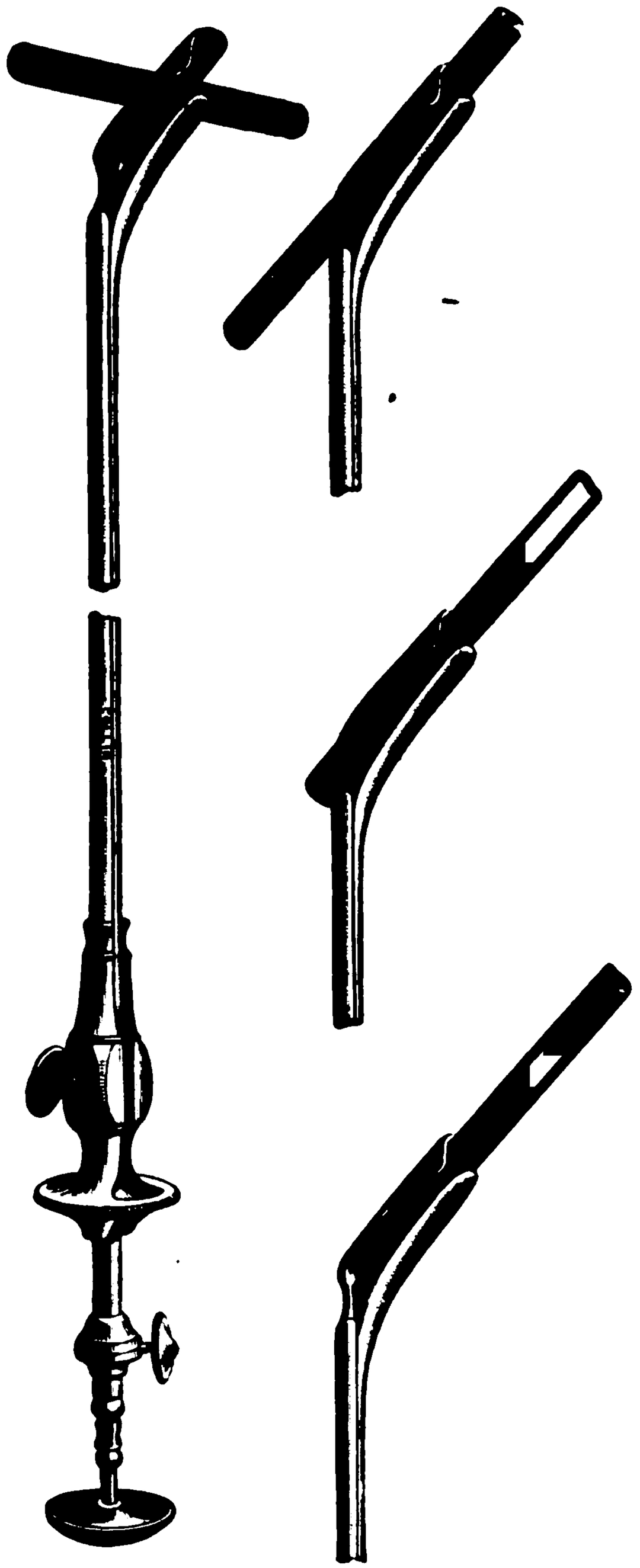


Fig. 39.—Collin instrument for removal of hard catheters from bladder.

Broken catheters and bougies are adapted to this method. These latter are seized with a lithotrite and withdrawn. Hard catheters are best removed with the ingenious instrument of Collin (Fig. 39). Removal through the operating cystoscope is also possible at times (Fig. 23).

If the extraction through the urethra fails, epicystotomy is indicated. Foreign bodies of stearin are dissolved within the bladder by benzin (Lohnstein) or by the non-inflammatory and non-poisonous tetrachlormethane ($c\ cl_4$).

PARASITES IN THE BLADDER.

Parasites occurring in the bladder are *Schistosomum hematobium* and *Filaria sanguinis*. Both parasites are ordinarily of the tropical climate. *Filaria sanguinis* causes chyluria (milky appearance of the urine).

THERAPY.—Residence in a moderate climate is to be advised. Arsenic is given internally. Symptomatic treatment must be pursued. In the presence of bilharzial tumors operation is indicated.

RUPTURE OF THE BLADDER.

THERAPY.—Immediate operation is demanded, even if the case is one that is only suspicious of rupture of the bladder. Of those patients that are not operated on, all die; of those that are operated on, even in the presence of intraperitoneal rupture, 85 per cent recover (Schlange, Nobe). The bladder is exposed as in sectio alta. If the tear is readily found and is accessible, the rent is closed without further opening into the bladder. A permanent catheter is inserted. If the injury is not readily found, the bladder is opened, and the rupture is sought and closed from within. Tamponade is applied. In case the peritoneal cavity has been opened by the same injury, it also must be attended to.

OPEN INJURIES OF THE BLADDER.

Open injuries of the bladder by gunshot and stab-wound are treated as are subcutaneous injuries. (See Rupture of the Bladder.)

VESICAL ECTOPIA.

In ectopia the posterior surface of the bladder lies exposed to view in a cleft in the abdominal wall.

THERAPY.—Ectopia is to be relieved by plastic operations, of which the most useful is that of Maydl: The ureters together with the trigonum vesicæ (to preserve to the ureteral orifices capability of closure) are transplanted into the sigmoid flexure

of the colon. Operation should not be undertaken before the fifth year of life.

FISTULA AND CYST OF THE URACHUS.

Fistula and cyst arise through non-closure of the urachus. which normally becomes the ligamentum umbilicale medium of postuterine life.

THERAPY.—Extirpation of the cyst or of the fistula is the correct treatment.

HERNIA OF THE BLADDER.

Hernia, especially inguinal hernia, occasionlly includes a sacculation of the bladder within the hernial sac.

THERAPY.—The bladder is released from the hernial sac and dropped back into place. If the bladder has been injured, suture and permanent catheter are indicated.

DIVERTICULUM OF THE BLADDER.

A diverticulum of the bladder is usually acquired, seldom congenital. Only the congenital sacculation, which may attain the size of the fist, becomes the object of therapeutic attack, because it may make very serious disturbances during infections of the bladder.

THERAPY.—The correct mode of treatment is to expose the bladder and to resect the diverticulum.

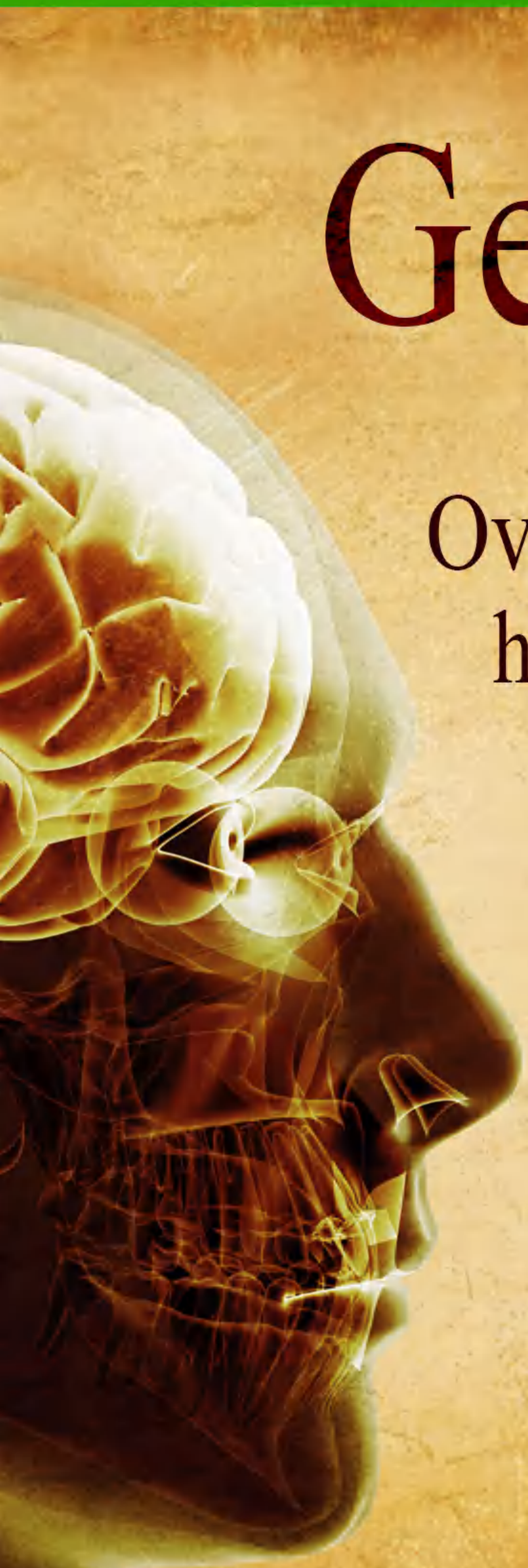
VARICES OF THE BLADDER.

Varices of the bladder are rare. Occasionally they cause severe hematuria.

DIAGNOSIS.—The diagnosis is possible only by use of the cystoscope.

THERAPY.—Vesical varices are to be treated by irrigations with 1:500 solution of silver nitrate or better by injections of solution of suprarenin into the bladder with simultaneous subcutaneous injections of gelatin. If the hemorrhage persists, sectio alta is indicated, with tamponade of the bleeding areas, or, when possible, with excision of the varices.

THIS PAGE IS LOCKED TO FREE MEMBERS
Purchase full membership to immediately unlock this page



Get Smart

Over 2,000 years of human knowledge in 797,885 volumes

Instant access
$8.99/month

Continue

*Fair usage policy applies

℞ Tincturæ nucis vomicæ .....ʒ j
Sig.: 7 to 9 drops three times daily.

Or, the bromids may be given (page 33). It may be of advantage to introduce a metal sound of large caliber, or the sound of Wintermitz. At home the patient may apply the faradic current to the vesical and perineal regions.

The author does not recommend treatment in a sanatorium in these cases in the absence of other nervous symptoms. He prefers to order journeys of considerable duration and even mountain trips, securing good effect by giving the patient new impressions and diverting his thoughts from his condition.

VESICAL PARALYSIS.

In disease of the nerve tracts of the bladder the principal symptom is either involutary urination or retention of urine. In the latter case a condition of ischuria paradoxa ultimately obtains.

THERAPY.—Painstaking treatment of vesical paralysis is extremely important, because it is the paralysis of the bladder with its resultant vesical and renal infection that threatens the life of patients sick of nervous disease.

Retention of urine and residual urine demand catheterization and prophylactic irrigation with silver nitrate. Rigid asepsis must be observed, since the paretic bladder offers excellent soil for bacteria.

In cases of prolonged duration it becomes necessary to instruct the patient in the use of the catheter.

In case of ischuria paradoxa the patient must wear a rubber urinal. The treatment of the bladder with silver nitrate must be continued.

In those cases of disease of the central nervous system in which urinary retention has not yet occurred, but in which difficulty of urination or urgency of urination exists, the introduction of a metal sound of large caliber or of the Wintermitz sound often achieves excellent results. Protracted treatment is necessary; the patient may be taught the introduction of the sound, with emphasis on asepsis.

Strychnin should be given internally; it at least acts as a stomachic:

℞ Strychninæ nitratis .....gr. jss
Extracti glycyrrhizæ .....q. s.
Misce et fiant pilulæ No. L.
Sig.: 2 pills three to five times daily.

In addition the faradic current should be applied. A full bath should be given every evening (32° to 38° C. for from ten to thirty minutes), also sitz-baths, 30° C. for one hour.

BACTERIURIA.

Bacteriuria is a condition in which the freshly passed urine contains bacteria, but no pus-cells. Etiologically the infection has its origin most frequently in the bowel, prostate gland, and urethra. Cases occur in which the origin cannot be determined. It is a painful, but not a dangerous disease.

THERAPY.—The secondary forms of bacteriuria often disappear promptly after correction of the essential condition: regulation of bowel movement, cure of chronic gonorrhea, and so on. Some cases persist in spite of all treatment.

The use of hexamethylenamin, alternating with helmitol, hetralin, and the drinking of copious quantities of water, are to be pursued for months at a time. If a vesical origin of the bacteriuria is assumed (such origin may even be renal), irrigations with silver nitrate in 1:1000 solution or with mercuric oxycyanid in 1:5000 solution are employed three times a week (page 25).

CHAPTER X.

DISEASES OF THE KIDNEYS.

ACUTE PYELITIS.

THERAPY.—Therapeutic effort in acute pyelitis is directed toward alleviation of pain, removal of purulent discharge from the renal pelvis, and the effect of antiseptic drugs on the infected mucous membrane.

In an afebrile case of acute pyelitis, especially in robust young persons (gonorrhea), the treatment is instituted with a sweat-bath, or with a hot full bath, followed by a dry hot pack. In the presence of fever it is necessary to be content with the thermophore or hot-water bottle applied to the painful side.

In addition, narcotics are given when necessary (page 97).

Active diuresis is best promoted by hot drinks: hot milk and seltzer, hot tea, milk of almonds.

℞ Valerianæ .....ʒ iv
Sig.: Use as directed.

℞ Centhemidis .....ʒ iv
Sig.: Use as directed.

℞ Tiliæ .....ʒ iv
Sig.: Use as directed.

Each of these teas is prepared by brewing from one to two teaspoonfuls of tea in one cup of water; about six cups are drunk daily.

Or an infusion acting specifically on the mucous membrane of the urinary passages may be selected: buchu, uva ursi, and so on. Alkaline mineral waters are useful, and may be substituted by Sandow salts. (See pages 98, 99.)

The daily intake of fluid should be six pints and should be evenly distributed through the day.

Limewater must be added to milk for some patients:

℞ Liquoris calcis .....ʒ viij
Sig.: Tablespoonful in glass of milk six to eight times daily.

THIS PAGE IS LOCKED TO FREE MEMBERS
Purchase full membership to immediately unlock this page

Know Your Bible

Forgotten Books' Full Membership provides unlimited access to more than 28,000 volumes of Christian literature for $8.99/month

Continue

*Fair use policy applies

Camphoric acid in hard gelatin capsules may be given temporarily (page 109).

In addition, diuresis must be stimulated as in acute pyelitis. Flushing of the urinary passages may also be secured by a course at mineral springs, provided, always, that it is a simple pyelitis that is to be treated. Cure is never to be expected by the drinking of mineral waters when the pyelitis is only an accompaniment of suppuration in the renal parenchyma.

It must also be remembered that even in uncomplicated cases of pyelitis the drinking of certain waters is useful only when followed for a prolonged period of time and not merely during the short stay at the springs.

In obstinate cases the renal pelvis should be irrigated through the ureteral catheter. This often yields exceptionally good results, especially in gonorrheal subjects. Success is obtained early (in from four to six sittings), or it is not obtained at all.

Technic of Irrigation of the Renal Pelvis.—A ureteral catheter is introduced into the renal pelvis that is diseased. A solution of silver nitrate, 1:1000, is injected until the patient complains of pressure in the region of the kidney, which indicates that the pelvis has been filled. About twenty cubic centimeters of solution will have been used. The ureteral catheter is drawn back into the bladder, and the ureter simultaneously medicated thereby. The procedure is accomplished in a few minutes and under asepsis is without danger. [Argyrol in 6 per cent solution may be alternated with silver nitrate.—EDITOR.]

Occasionally there occurs a case that resists every method of treatment, but leads to no serious consequences.

If the chronic pyelitis results from persistent stagnation of urine (stricture, prostatic hypertrophy), the treatment must be directed against the underlying cause.

In an acute exacerbation of pyelitis occurring during the development of prostatic hypertrophy there must be no delay in the introduction of the permanent catheter, which often allays the symptoms promptly.

PYELONEPHRITIS.

Pyelonephritis is an infection of the renal parenchyma in the form of miliary abscesses without symptoms of retention.

THERAPY.—The urinary passages should be flushed out, and urinary antiseptics should be administered.

Diet.—In acute pyelonephritis the intake of nitrogenous food should be diminished. Three pints of milk should be given daily, with the addition of cereals and green vegetables (see acute nephritis). Three pints of other fluid (water, infusions, and so on) should be given daily in addition to the above. In chronic pyelonephritis the food should be rich in albumin content, and moderate quantities of meat should be allowed. Condiments and alcohol must be forbidden. A strict milk diet is useless and, if long continued, leads to subnutrition.

In a febrile case the treatment is at first expectant. If the fever persists or if chills develop, operation must not be delayed, as otherwise dangerous conditions arise (sepsis, anuria). In contrast, nephrotomy yields excellent results (Israel, Barth, Brewer), even in bilateral disease. In the latter condition the surgical attack must necessarily be made on both sides.

Pyelonephritic attacks in prostatic patients demand the permanent catheter.

PYONEPHROSIS.

Pyonephrosis is a suppurating inflammation of the kidney resulting in cavernous destruction of the renal parenchyma.

THERAPY.—The correct therapy is early extirpation of the destroyed kidney. If nephrectomy appears to be too hazardous because of disease of the other kidney, nephrotomy is demanded immediately, with nephrectomy later.

EPINEPHRITIS.

Epinephritis is an inflammation of the fatty capsule of the kidney (Casper). This inflammation may be either fibrosclerotic or purulent.

Fibrosclerotic epinephritis makes itself uncomfortably noticeable to the surgeon, as it increases the difficulties of operating on the kidney to a marked degree; it has no significance for the general practitioner.

Purulent epinephritis is an entirely different subject. It is particularly dangerous just because it is so rare in its occurrence. The abscess formation is easily overlooked, especially since the symptoms are not clear. If local symptomatology disappears un-

der the symptoms of general infection, very serious confusion with miliary tuberculosis, typhus, and sepsis will arise.

THERAPY.—Just as the diagnosis is difficult, the treatment is simple. There is demanded an early, extensive splitting of the abscess cavity through a lumbodorsal incision, with tamponade of the wound.

If it is demonstrated at the operation that the abscess has its origin in the kidney, the kidney is exposed at a second sitting and either split or extirpated.

PARANEPHRITIS.

Paranephritis is an inflammation of the retroperitoneal fatty tissue (Israel). As a phlegmon it may be an accompaniment of epinephritis; but it may also be an independent entity.

DIAGNOSIS.—Occasionally a sense of fatigue in the leg of the affected side or a slight contracture of the thigh gives a clue to the diagnosis.

THERAPY.—The treatment is the same as that of epinephritis—early, free incision through a lumbodorsal diagonal cut.

RENAL TUBERCULOSIS.

DIAGNOSIS.—See tuberculosis of the bladder.

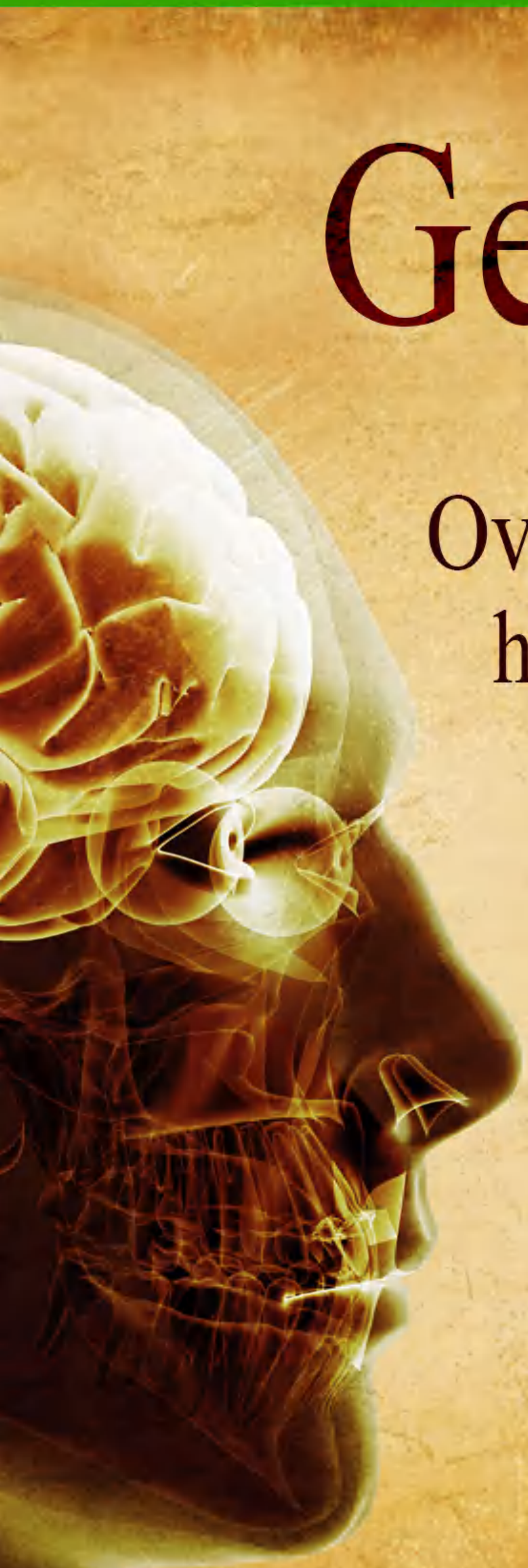
THERAPY.—Early nephrectomy is demanded. The promise of permanent cure is much brighter if the primary focus is removed before a secondary lesion appears in the bladder. Valuable time should not be lost by the application of the tuberculin therapy. Cure of renal tuberculosis by such therapy has not yet been shown (Israel; Zuckerkandl, and others). Very slowly developing, practically stationary cases get well with and without tuberculin. Still, this development can never be predicted, and a favorable case may at any time become a most unfavorable one.

Nephrectomy is contraindicated:

1. When the second kidney is tuberculous.
2. In advanced pulmonary tuberculosis.
3. In the presence of numerous remote tuberculous foci.

In a general way nephritis of the second kidney is not a contraindication.

THIS PAGE IS LOCKED TO FREE MEMBERS
Purchase full membership to immediately unlock this page



Get Smart

Over 2,000 years of human knowledge in 797,885 volumes

Instant access
$8.99/month

Continue

*Fair usage policy applies

Sig: One-half to be taken during an hour, the remainder the following day in the same manner.

This glycerin mixture is nauseating to many sick people. It is best given in bitter hot tea, one ounce of glycerin to one cup of tea. If the ingestion of eight ounces of glycerin in two days (four ounces each day) does not cause the passage of a calculus, this method of treatment is useless.

Under sharp stimulation of diuresis strong ureteral contractions should expel the calculus and newly formed crystals. The selection of a diuretic is unimportant; alternation of diuretics is agreeable to the patient. The following is the plan of Klemper:

7 A. M., one pint of coffee (tea, cocoa, meal soup).

11 A. M., one-half pint bouillon (lemonade, mineral water, milk).

2 P. M., one-half pint soup, one pint tablewater (mineral water, lemonade, beer, wine).

5 P. M., one-half pint milk, coffee, or water.

8 P. M., one pint beer (or water, milk, buttermilk).

11 P. M., one-half pint water (mineral water, sugar water, beer, lemonade).

The total quantity of urine passed in twenty-four hours should approach two thousand cubic centimeters. This requires the ingestion of five pints of fluid daily, evenly distributed over the day. Moderate quantities of beer and wine are permissible.

If the effort to cause the passage of the calculus fails, treatment must be directed to the prevention of formation of other calculi. For this purpose active diuresis is maintained.

Diet in calculous disease cannot be specially ordered, as the chemical composition of the stones within the body is not known. A mixed diet with avoidance of condiments is advisable. If phosphaturia or oxaluria points to a tendency to the passage of such corresponding crystals, the diet is to be ordered as if the concretion present were composed of such crystals—which may not be the case at all.

A regular mode of life must be enforced. All harmful practices that experience shows to be capable of exciting colic (immoderate drinking of alcohol, constipation) must be avoided.

Exercise is to be restricted only so far as it causes increase of pus or blood content in the urine. In cases that are tolerable the urine is examined microscopically every six weeks. It is

well to diminish the intake of fluid on the day of such examination, to secure concentration of the urine.

Treatment of Colic Due to Calculus.—Morphin must be administered subcutaneously. If morphin causes nausea, heroin is substituted:

℞ Heroinæ .....gr. iss
Aquæ destillatæ .....q. s. ad ℥ iiss
Misce.
Sig.: ½ to 1 cc. to be injected hypodermically.

Narcotics also stop the spasmodic contractions of the ureter, so that a stone may pass through more easily. The thermophore is applied to the painful side, or a hot pack is applied and kept hot by a hot-water bottle. Or, a warm full-bath may be given (38° C. for thirty minutes). In the absence of vomiting hot drinks may be given—three pints of hot tea in the course of two hours; also water, mineral water, lemonade. In some patients the colic yields as soon as flatus is passed. Therefore warm enemata of soapsuds are given.

Surgical Treatment of Renal Calculus.—The usual surgical treatment of renal calculus is nephrotomy with very good results. Occasionally pyelolithotomy is indicated (in smaller solitary calculus). Nephrectomy is indicated in either pyonephrosis or renal atrophy.

Prophylaxis of Renal Calculi.—A particular diet can be ordered only when the particular type of calculous diathesis has been determined by examination of a concrement obtained either by spontaneous passage or by operative removal.

1. In the presence of urates: eight ounces of fish or of meat are allowed daily (excepting kidney, brain, etc.). Leguminous foods are restricted. Vegetables, fruit, milk, eggs, and cheese are given in liberal quantities. About two pints of alkaline water are ordered daily.

Instead of natural waters the artificial Sandow salts may be useful—Fachinger, Wildungen. Lemonade may be given, its acidity having been lessened by sodium bicarbonate (Klemper).

The urine should be maintained amphoteric in reaction.

Medication is resorted to only when this diet cannot be enforced, for instance, in travel. Then from twenty to forty grains of sodium bicarbonate are given four times daily. The administration should be so timed that the drug is not taken during the

period of intestinal digestion, as the urine naturally tends to alkalinity at such periods. Sodium citrate may be given in the same way:

℞ Sodii citratis .....ʒ j

Sig.: As much as can be held on the point of a knife four times daily between meals.

2. In the presence of oxalates: cocoa and chocolate are forbidden; coffee and milk and tea are allowed. For the table water, alkaline spring water (½ pint daily) are ordered to lessen the acidity of the gastric juice.

Spinach, rhubarb, cress, and sorrel are forbidden. Meat, cereals, fats, and moderate quantities of cereals and fruits are allowed. Eggs are allowed occasionally.

The urine should be maintained acid in reaction.

Magnesium should be given at the time of ingestion of milk and eggs, because magnesium increases the solubility of calcium oxalate in the urine. It is best given as effervescent magnesium citrate.

℞ Magnesii citratis (Sandow's) .....1 bottle

Sig.: ½ measureglassful in a glass of water four to six times daily.

Or:

℞ Magnesii citratis .....ʒ ij
Sacchari .....ʒ iv
Olei limonis .....ɱ j

Misce.

Sig.: Teaspoonful in a large glass of water three times daily. (Stintzing.)

℞ Magnesii sulphatis .....ʒ j

Sig.: As much as can be held on the point of a knife four times daily.

3. In the presence of phosphates (seldom a primary condition, as most phosphatic calculi are secondary to pyonephrosis and therefore do not constitute a subject of dietetic attack): Fruit juices and alkaline waters are forbidden. Vegetables may be allowed in small quantities. Milk, cereals, meat, and eggs are allowed. Five pints of fluid should be drunk daily. Especially to be recommended are natural and artificial carbonated waters: seltzer, and apollinaris. Medicinally, phosphoric acid should be given (℞, page 130).

These prophylactic measures must be continued steadily, if they are to be of any use; no permanent good is to be expected of several weeks' stay at the springs.

THIS PAGE IS LOCKED TO FREE MEMBERS
Purchase full membership to immediately unlock this page

Know Your Bible

Forgotten Books' Full Membership provides unlimited access to more than 28,000 volumes of Christian literature for $8.99/month

Continue

*Fair use policy applies

In failing cardiac power digitalis, digalen, and camphor are given (page 130).

For the relief of the kidneys sweat baths are given, provided, always, that cardiac strength is unimpaired.

Venesection must be done promptly on the appearance of uremic symptoms; from three hundred to five hundred cubic centimeters of blood are withdrawn. Solution of sodium chlorid, 7-10 per cent, in twice the quantity of withdrawn blood, should be injected subcutaneously or *per rectum*.

If the anuria persists, or if, at the most, a few cubic centimeters of urine are passed (oliguria), nephrotomy must be done after waiting two days at the longest (Israel). The operator must not be deceived by the general appearance of the patient. The prognosis becomes more gloomy with each hour of waiting (Israel, Kummel).

Röntgen ray examination must be made of both kidneys and ureters before the operation. In suspicion of calculus, or with shadow of calculus on the plate, surgical attack should be made on the kidney last obstructed, which is often characterized by sensitiveness to pressure and by reflex distention of the abdominal wall on the corresponding side.

In every case of operation the patency of the ureter must be demonstrated by sounding. If a calculus is found in the ureter, uretero-lithotomy must of necessity be performed.

[The question as to whether a cutting operation for the removal of ureteral stone must be adopted must be influenced also by the question as to whether it is removable by cystoscopic operative methods. In addition to the manipulations already mentioned, there are others definitely planned and proved to be successful in a number of instances, in removing calculi from the lower portions of the ureter. The Editor's operative cystoscope furnishes the ability to enter the ureter by means of flexible forceps, fixed forceps, various forms of dilators (see Fig. 23-B), etc., capable of accomplishing a number of maneuvers appropriate for the object desired. The bullet forceps is prepared to follow the curve of the ureteral channel for two inches, at least, at any point of which it may be opened and closed at will, within the limitations of the ureteral caliber; and the ureteral caliber below the stone may be modified very considerably by the dilators or the ureteral scissors. The use of this method, if successful, obviates the necessity of adopting the more radical, cutting, method; but if un-

successful on account of the unfavorable location of the stone or of its immoderate size, its use does not interfere with the final adoption of uretero-lithotomy.

See "Report on Operative Work in the Ureter Through the Catheterizing and Operative Cystoscopes," by Bransford Lewis, *Cincinnati Lancet Clinic*, March 4, 1905; and also, "The Removal of Ureteral Calculi by Cystoscopic Methods," *N. Y. Med. Jour.*, Nov. 16, 1912, for full discussion.—EDITOR.]

If the anuria persists, the other kidney must be split on the succeeding day, provided the general condition of the patient warrants that procedure. In case a functionally worthless, destroyed kidney has been attacked first—an error that may easily happen in uncertain anamnesis—the other kidney must be split immediately (Israel).

In the anuria of acute and parenchymatous nephritis, sweat baths, diuretics, cardiac remedies, and venesection must be resorted to immediately, as detailed above. If these measures are without effect, nephrotomy must be done after forty-eight hours, or decapsulation of both kidneys must be resorted to. Occasionally a successful result is obtained.

In the anuria of pylonephritis nephrotomy must be done.

In the anuria of hysteria ureteral catheterization suffices to relieve the spasm.

NEPHRALGIA ("NEPHRALGIE HEMATURIQUE").

Nephralgia is an obscure but practically important disease. The principal symptoms are pain in one kidney and hemorrhage. Both symptoms occur in widely varying degrees: from mild suffering and microscopic hematuria to severe colic and dangerous loss of blood. It is often impossible to differentiate the condition from calculus, tumor, and chronic nephritis. Anatomically interstitial changes occur in occasional cases; no changes at all can be found in other cases ("essential hematuria").

THERAPY.—In cases presenting mild symptoms developments may be awaited, provided the possibility of renal tumor is kept in mind. In the presence of severe symptoms and of tumor the kidney must be exposed. Either decapsulation or nephrotomy may allay all of the symptoms at once without the connection being very clear. In exceptional instances the severity of the hemorrhage has necessitated nephrectomy.

OXALURIA.

Oxaluria is the occurrence of excess of oxalates in the urine.

THERAPY.—The therapy is identical with the prophylaxis of oxalate calculi.

PHOSPHATURIA.

Phosphaturia is the occurrence of excess of phosphates in the urine. It is of frequent occurrence in neurasthenia. Occasionally the phosphates appear just at the end of urination, in which case the urine suddenly becomes sandy.

There is no connection between phosphaturia and lithiasis. Phosphaturia neither warrants a conclusion as to the chemical composition of a stone already present, nor does it lead to calculus formation, unless, in addition, disease of the bladder or of the renal pelvis exists.

THERAPY.—In the therapy of phosphaturia fruit juices and alkaline waters are forbidden. Only small quantities of fruit and vegetables are allowed. Milk, egg, cereals, and meat are given with copious quantities of carbonated waters. Attention must be given to neurasthenia and to gastric hyperacidity.

℞ Acidi phosphorici .....m xxv
Aquæ destillatæ .....q. s. ad ℥ j

Misce.

Sig.: 20 drops in water every three hours.

Or:

℞ Acidi hydrochlorici diluti .....℥ j

Sig.: 5 drops three times daily after meals.

BENIGN RENAL TUMORS.

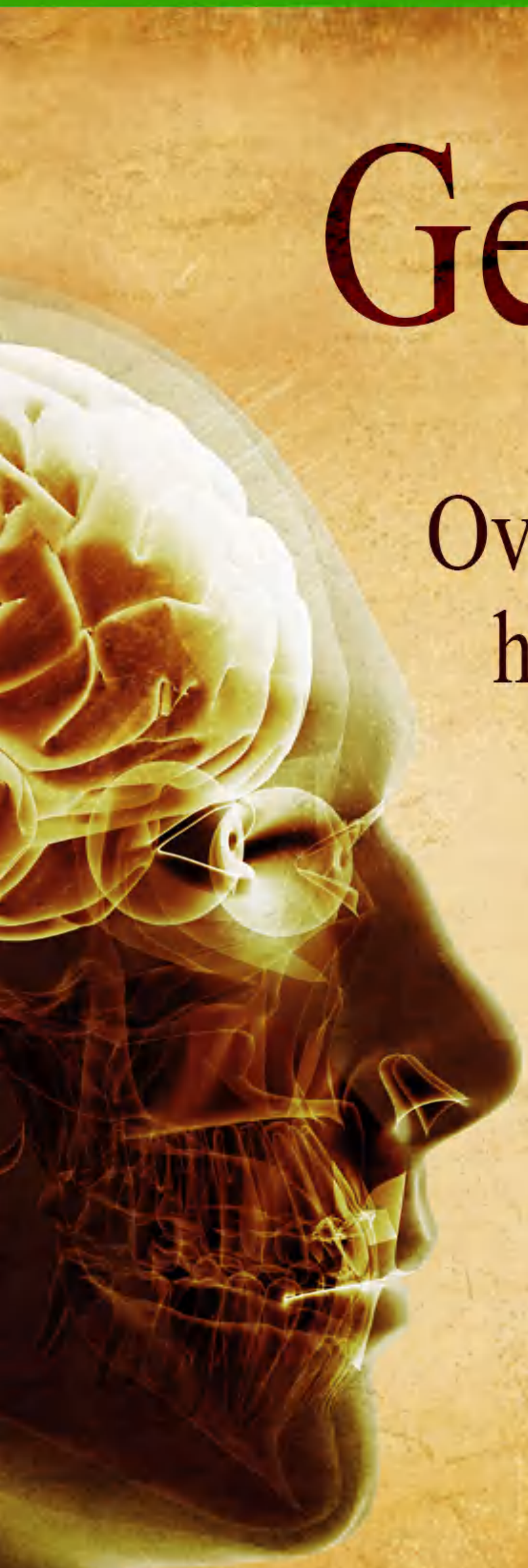
Benign tumors of the kidney are very rare, and often are not to be demonstrated as such by exposure of the kidney, but only by painstaking microscopical examination.

THERAPY.—Practically, nephrectomy is always demanded. It is rarely possible to extirpate the neoplasm by itself.

MALIGNANT RENAL TUMORS.

DIAGNOSIS.—Hematuria is the most important symptom—and often the only symptom—of malignant neoplasm of the kidney.

THIS PAGE IS LOCKED TO FREE MEMBERS
Purchase full membership to immediately unlock this page



Get Smart

Over 2,000 years of human knowledge in 797,885 volumes

Instant access
$8.99/month

Continue

*Fair usage policy applies

ECHINOCOCCUS OF THE KIDNEY.

THERAPY.—Incision and drainage of echinococcus cyst are indicated. [Total removal (nephrectomy) is preferable if possible.—EDITOR.]

MOVABLE KIDNEY.

DIAGNOSIS.—In a patient the subject of movable kidney the examination of the urine should be made before the kidney is palpated, because palpation of a superficially lying kidney may result in the output of red cells, cylindroids, and albumin, thus leading to diagnostic error.

THERAPY.—Movable kidney demands treatment only when it causes suffering. Often the complaint of trouble is due in part to simultaneous ptosis of other organs and to a general neuropathic constitution. Thus the patients often complain of the kidney for the first time when they learn the diagnosis.

In the main the treatment consists in the application of an appropriate bandage, which supports the abdominal walls and prevents the kidney from slipping forward. Snugly fitting binders of drilling or congress-cloth are desirable—for instance, the Teufel binder. Thigh straps of thin rubber are not always necessary. A pad may be dispensed with; if it is required, it is best in the form of a three-cornered cushion reaching from the iliac crest to the costal margin and mammary line (Israel). The typical kidney-shaped pad adopted by many makers is in error; it cannot possibly prevent the dislocation of the kidney and exerts too severe a pressure. Appropriate woven corsets may be worn instead of the abdominal bandage (Israel). In every case the bandage must be applied with the patient in the reclining position immediately after reposition of the kidney. The bandage may be removed at night.

[The straight-front corset of Gallant is of great value in certain cases.—EDITOR.]

In the case of lean, nervous women rest in bed for several weeks is useful, combined with forced feeding, which not only exerts a good influence on the general condition, but also increases the fatty capsule of the kidney—this securing support of the organ in its position.

Massage is applied to strengthen the muscles of the abdominal

wall, but the region of the kidney is to be avoided. Faradization is useful. Both measures tend to correct the coexisting constipation.

Exercise in a gymnasium is valuable. Standing for long periods must be avoided.

Nephropexy becomes necessary only:

1. When twisting of the renal pedicle causes colic.

2. When the suffering continues in spite of the wearing of a properly fitting bandage or corset, and such suffering must be ascribed to dislocation of the kidney.

To these indications may be added:

3. The presence of cylindruria and albuminuria in moderate degree.

Great improvement in cases of movable kidney has been observed after the kidney has been anchored and covered under the costal arch (nephropexy).

Nephropexy is not a dangerous operation (mortality about 1 per cent), but recurrence is seen in about 20 per cent of the cases.

PROPHYLAXIS.—Tight lacing must be avoided. A snug abdominal binder must be worn during the later months of pregnancy and during the first week of the puerperium.

HYDRONEPHROSIS.

Hydronephrosis is a saccular enlargement of the renal pelvis and calyces. It arises through prolonged obstruction to the urinary flow by any cause. At first the urine is clear: aseptic hydronephrosis; later it is purulent: infected hydronephrosis.

THERAPY.—If the obstruction is a stricture, prostatic hypertrophy, calculus, or such like, the essential cause is attacked immediately.

In other cases the causative condition to be treated is a valve-like formation in the ureter, anomalous blood vessels, and so on.

In the case of a small sacculation, an attempt may be made to empty the sac of urine by ureteral catheterization, and to treat the infection by irrigation of the renal pelvis. Renal tuberculosis must be excluded.

However, as the anatomical obstruction continues, emptying the sac is only a temporary expedient, and operation must be finally resorted to.

In the case of larger sacculations, operative interference is

indicated from the beginning. Otherwise the renal tissue suffers destruction through pressure atrophy, and the dangers of pus retention are added to those of infected hydronephrosis.

Operative interference in hydronephrosis has properly become more and more conservative. Whenever possible, the kidney is preserved, and the obstruction is overcome by plastic operation —folding-in of the pelvis, implantation of the ureter at a different site in the pelvis, dilatation of a narrow part of the ureter, and so on. In the presence of infection, nephrotomy must be included in the operation, so that the purulent urine may be discharged without coming in contact with the sutures.

Nephrectomy is to be done only:

1. When the kidney has suffered total destruction.
2. When the social condition of the patient or other factors demand the most rapid restoration.
3. When plastic operation offers uncertain results.

CONTUSIONS OF THE KIDNEY.

THERAPY.—The therapy of contused kidney is generally conservative—the patient must be confined to his bed for three or four weeks, as hemorrhage may occur long after the injury. Most of these traumata heal without operation. Surgical attack is necessary only:

1. In the presence of profuse hemorrhage.
2. In the presence of mild, but persistent, hemorrhage.
3. In the presence of peritoneal symptoms.
4. In the presence of reflex oliguria.
5. In the presence of suppuration, urinary infiltration, traumatic hydronephrosis.

In the case of small tears, the operation consists of suturing the tear and tamponade of the wound cavity; in the case of severe injury nephrectomy is demanded.

Quite frequently there occur simultaneous injuries of the other organs of the abdomen, and these likewise demand surgical attack.

OPEN WOUNDS OF THE KIDNEY.

THERAPY.—In the case of mild hemorrhage an aseptic dressing suffices. In the case of severe hemorrhage drainage must be

THIS PAGE IS LOCKED TO FREE MEMBERS
Purchase full membership to immediately unlock this page

Know Your Bible

Forgotten Books' Full Membership provides unlimited access to more than 28,000 volumes of Christian literature for $8.99/month

Continue

*Fair use policy applies

of milk, two eggs, one hundred and fifty grams of meat (fish), cream cheese, vegetables.

Even after complete cure of the nephritis, it is requisite to enforce for some time moderate ingestion of nitrogenous floods (eighty to one hundred grams), flushing of the kidneys (six pints of fluid), and abstinence from renal irritants.

In addition to careful management of the diet, it is of particular importance to stimulate diuresis, and in the presence of impending uremia, to institute the appropriate treatment promptly.

Diuresis is best stimulated by regular ingestion of fluid (see above). In alarming diminution of urinary output, theophyllin is called for, given in suppository in the presence of vomiting. Simultaneously the heart must be supported with digitalis, strophanthus, caffein. Caffein may be given in three-grain doses three times daily, even in acute nephritis (v. Leube). In case there is total or almost total anuria, decapsulation of the kidneys is demanded.

In the presence of hydrops, so far as diuretic and cardiac remedies do not afford relief, a warm bath is given three times a week (40° C. for thirty minutes) followed by dry hot pack in bed. This is also useful to promote the activity of the skin. In a case of acute nephritis more vigorous sweating processes must be undertaken with great caution because of the danger of uremia (v. Leube). If such procedures are instituted, drinks must be given simultaneously or an enema of salt solution immediately following. In very severe edema puncture drainage or scarification must be practised.

In the convalescent stage the patient should reside in a dry, equable, sunny climate. These requisites are met only by a desert climate—for instance, Arizona. It will be understood that residence in such climate be for six months, at least, and that it should cover the period of our winter.

In the summer, residence should be in a place of moderate altitude, dry and protected from strong winds (Wiesbaden, Elster, Eureka Springs, Ark.).

CHRONIC PARENCHYMATOUS NEPHRITIS.

THERAPY.—The patient should be given a mixed diet, with albumin content of eighty grams, part of which should always be

milk-albumin. Accordingly the daily intake would be three pints of milk, two eggs, one hundred and fifty grams of meat or fish, fifty grams of butter, bread, potatoes, fruits, sugar, vegetables.

Game, sausage, and smoked meats are forbidden, along with spiced sauces and bouillon. Condiments, radishes, and so on must be interdicted. Small quantities of asparagus (v. Noorden), vinegar, and lemon juice are permissible. Alcohol, if possible, must be abstained from altogether.

The total quantity of fluid drunk daily should be six pints: milk, water, fruit juice, tea, mineral water and its substitutes.

If the urinary output begins to fall, *diuresis must be stimulated.* For this purpose there are available:

1. Stimulation of renal activity.
2. Stimulation of cardiac activity.
3. Diminution of quantity of fluid ingested.
4. Salt-poor diet.
5. Mechanical removal of edematous effusion.

Usually several measures are employed at the same time, according to the condition of the patient.

Of diuretic drugs the author uses the salts of theophyllin and theobromin almost exclusively.

Theophyllin itself is badly borne by the stomach. Therefore the sodium acetate of theophyllin is given, beginning with small doses after eating (never on an empty stomach).

℞ Tabellæ theophyllinæ-sodii acetatis .gr. ij ½
Fiat tabella No. I. Dentur tales
tabellæ No. XX.

Sig.: 1 tablet twice a day. If not sufficiently active, double the dose on the second day. Thereafter only on the second, third, or fourth day, and if necessary, in larger doses—viz., 5 grains—three or four times daily (Romberg).

In the presence of gastric derangement the drug must be given in hard gelatine capsules, which are not dissolved until they reach the intestine, or in suppositories:

℞ Capsulæ geloduratæ cum theophyllina-
sodio acetate .....gr. iij
Fiat capsula No. I. Dentur tales
capsulæ No. XX.

Sig.: 1 capsule twice the first day, 1 capsule three times the second day. Thereafter only on the second, third, or fourth day up to four capsules daily.

℞ Theophyllinæ-sodii acetatis .....gr. xxxvij
Olei theobromatis .....ʒ iij
Misce et fiant suppositoria No. XII.
Sig.: 1 suppository two, three, or four times daily.

If rectal medication is impossible because of diarrhea or coma, caffein is given subcutaneously or euphyllin intramuscularly. Euphyllin is the strongest of diuretic drugs and is given at most four days in succession. Caffein is the weakest but has the advantage of being analeptic.

℞ Caffeinæ-sodii benzoatis .....ʒ iss
Aquæ destillatæ .....q. s. ad ʒ j
Misce.
Sig.: 1 cc. hypodermatically three to six times daily.

℞ Euphyllinæ .....gr. xl
Aquæ destillatæ .....q. s. ad ʒ iiss
Misce.
Sig.: 1½ cc. injected intramuscularly three or four times daily.

℞ Diuretini .....ʒ iv ¼
Aquæ destillatæ .....q. s. ad ʒ viij
Misce.
Sig.: Tablespoonful three or four times daily.

The theobromin salts are less active than those of theophyllin but are adapted for prolonged use. If it is desired to secure stronger action from diuretin, the drug is given for several successive days in dosage of fifteen grains three or four times daily, all concentrated in the afternoon.

Occasionally, for prolonged use, the diuretic dialysate of Golaz may be employed. (See page 99.)

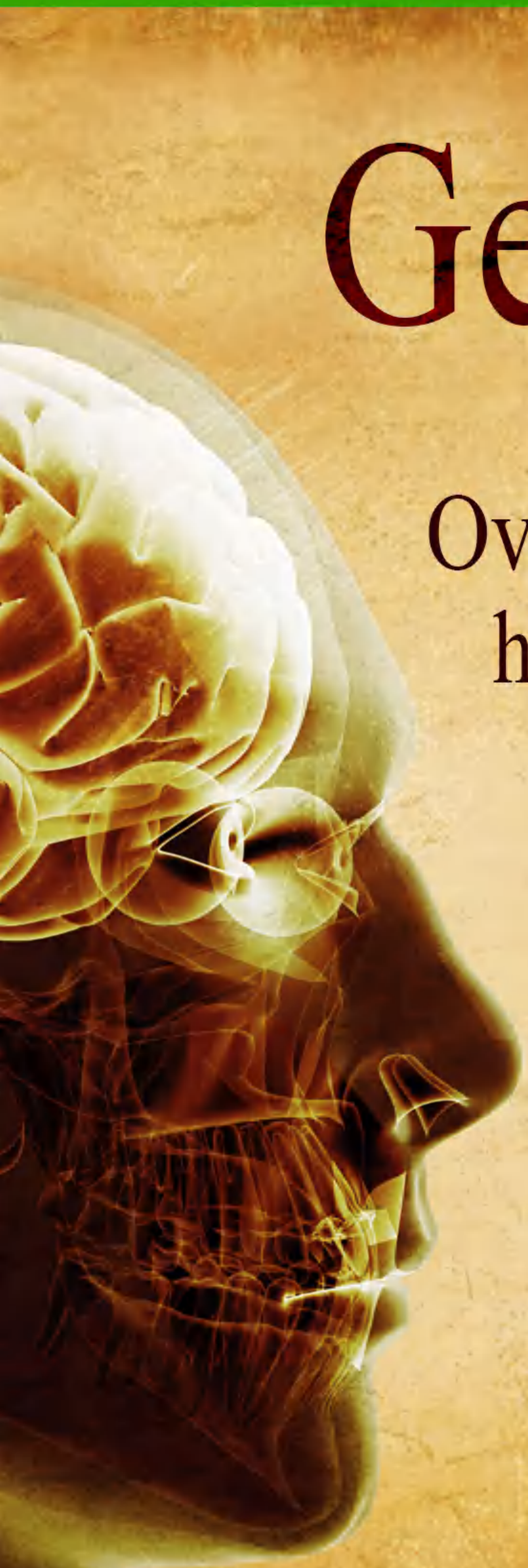
The activity of diuretic drugs is supported, often made possible only by stimulation of cardiac activity. The cardiac remedies are given in combination with, or in addition to, the diuretic drugs.

℞ Infusi digitalis 1:150 .....ʒ vij
Agurini .....gr. lxx
Aquæ menthæ piperitæ .....q. s. ad ʒ viij
Misce.
Sig.: Tablespoonful four or five times daily after meals.

Titrated preparations of digitalis tested on the frog's heart for uniformity of action are better:

℞ Digitalysat (Burger) .. ..ʒ ss
Sig.: 15 drops three times daily.

THIS PAGE IS LOCKED TO FREE MEMBERS
Purchase full membership to immediately unlock this page



Get Smart

Over 2,000 years of human knowledge in 797,885 volumes

Instant access
$8.99/month

Continue

*Fair usage policy applies

In exacerbation of the disease strict diet must be enforced as in acute nephritis.

Residence in an appropriate climate is very desirable, particularly in the more recent cases.

CHRONIC INTERSTITIAL NEPHRITIS (CONTRACTED KIDNEY).

THERAPY.—The therapy of chronic interstitial nephritis is embraced in regulated mode of life and moderate activity with exclusion of overexertion.

For dietetic regulation it is sufficient to exclude condiments and alcohol (coarser irritants) and to keep the nitrogenous content of the food within the average limits (eighty to one hundred and ten grams). In consideration of the heart the nitrogenous content must not fall below these figures. Light, but frequent, meals should be ordered (six meals daily).

The quantity of fluid intake must not exceed six pints; three pints should be milk, the rest water, spring water, lemonade, tea. The circulation must not be taxed with excess of fluid. On the appearance of symptoms of disturbance of compensation, to protect the heart, the daily intake of fluid must be reduced by about two hundred cubic centimeters, daily, until a total of about twelve hundred and fifty cubic centimeters is reached (v. Noorden). In spite of the heart, however, the daily intake must be increased with the first appearance of uremic symptoms. The heart must then be supported with rest, digitalis, strophanthus, and if necessary, camphor; and an increasing hydrops must be combated cautiously with sweating procedures (warm bath followed by a dry hot pack; puncture and scarification).

Climatic treatment of contracted kidney.—A desert climate is not of specific influence, but is often very useful. But the exertions of the journey, as compared with the expected benefit, are too great for these patients. Better adapted are localities of the Riviera in winter, and regions of upper Italy and southern Tyrol in late fall and early spring.

In the summer it is best to resort to treatment as at springs. The stay at the springs should last six weeks, with the use of carbonated waters. Nauheim is best; next come Kissingen, Oeynhausen, and so on.

The carbonic-acid bath may also be used in the patient's home. An oxygenated bath is better for a nervous patient. Salt-baths and indifferent warm baths are still milder.

Treatment by drinking spring waters is resorted to only in the presence of simultaneous disturbances in other organs (stomach, bowel). According to indications Karlsbad, Neuenahr, Marienbad is taken. The concurrent flushing of the kidney is very useful, but it should be only temporary on account of the heart.

CONGESTION OF THE KIDNEY.

THERAPY.—The therapy of renal congestion is embraced in that of the underlying cause (cardiac and pulmonary disease). Digitalis is the most useful of all remedies (℞, page 138). When conditions are alarming the titrate of the powdered leaves may be given in doses of one and one-half grains six times daily for four days in succession (℞, page 139) supplemented by camphor (℞, page 139). In long-continued administration of digitalis the dosage must be small—about five-sixths of a grain three times daily (Kussmaul, Naunyn). Strophantus (℞, page 139) may also be given.

In case the hydrops is more severe calomel may be given tentatively, but only in hydrops of cardiac origin.

℞ Hydrargyri chloridi mitis .....gr. xviij
Opii pulveris .....gr. j
Sacchari lactis .....gr. xlv
Misce et fiant pulveres No. VIII.
Sig.: 1 powder three times daily for one or two days.

SYPHILIS OF THE KIDNEY.

Renal syphilis occurs under various forms:

1. Syphilitic glomerular nephritis occurring just before the eruption of the exanthem.
2. Acute nephritis occurring several months after infection.
3. Interstitial nephritis, isolated or in tumor-like formation.
4. Gummata (rare).
5. Amyloid degeneration (rare).

The toxic nephritis occurring during mercury therapy must be sharply distinguished from these syphilitic forms.

THERAPY.—The treatment with mercury must be instituted, together with potassium iodid, in the presence of gummata. Amyloid degeneration must be treated with potassium iodid alone.

Careful attention must be given the diet.

AMYLOID KIDNEY.

THERAPY.—The therapy of amyloid kidney is embraced in that of the causative disease (tuberculosis, syphilis, suppuration, and so on). The amyloid process itself is not to be influenced.

HEMOGLOBINURIA.

Hemoglobinuria is the appearance of the coloring matters of the blood in the urine, in masses and in cylindroids. Blood-cells as such appear only occasionally or not at all. The condition is caused by toxins and burns. Practically, importance is attached only to the paroxysmal hemoglobinuria usually occurring after syphilis, occasionally after malaria.

THERAPY.—When the hemoglobinuria is caused by syphilis, the mercury treatment must be instituted. Exposure to cold and wetting must be avoided. Malaria is an indication for quinin. [Better, arsenic and mercury.—EDITOR.]

RENAL HYDROPS.

THERAPY.—Mild degrees of renal hydrops disappear when the patient rests in bed. In the presence of more severe edema diuretic drugs are demanded, and, if necessary, cardiac remedies. The quantity of fluid ingested must be decreased, except in the presence of uremic symptoms.

Diaphoresis must always be stimulated. Warm baths (v. Leube) 40° C. for thirty minutes may be given three times a week. During the bath the head must be supported.

After a bath the patient is wrapped without drying in a woolen blanket and placed in bed with plenty of covering. Perspiration thus encouraged is allowed to continue for one hour. Then the patient is given a dry rub.

When the bath is inconvenient or is too depressing in a very sick patient, the hot pack is resorted to (v. Ziemssen):

THIS PAGE IS LOCKED TO FREE MEMBERS
Purchase full membership to immediately unlock this page

Know Your Bible

Forgotten Books' Full Membership provides unlimited access to more than 28,000 volumes of Christian literature for $8.99/month

Continue

*Fair use policy applies

Stab punctures are less successful. With the point of a scalpel from four to eight stabs are made into the subcutaneous tissue in the lateral region of the lower thigh. An aseptic gauze dressing is applied.

The hydrops of chronic parenchymatous nephritis occupies a position peculiar to itself. The salt-poor diet affords a measure that usually secures the removal of the dropsical fluid, even in the most severe cases of edema.

Salt-Poor Diet.—PRINCIPLE.—The principle of salt-poor diet is to avoid foods that in the raw state contain a high percentage of salt (smoked foods, sausage), also foods to which salt must be added to make them palatable (bouillon, meat), and finally, to avoid the addition of salt to food that can be prepared in palatable form without the addition of salt.

The diet in its strictest application is as follows: one to two pints of milk, egg preparations, omelettes with fruits, cream with cereals, rice, grits, barley, potatoes, cauliflower, crisped cabbage, salads with lemon-juice (no spinach, no lentils); bread must be baked without the addition of salt.

To secure variety in the food, fruit and unsalted butter are added.

It is desirable to diminish the intake of fluid as far as possible. In addition to milk—water, lemonade, tea, and coffee are allowed. Spring waters are superfluous.

On the disappearance of the edema moderate quantities of salt are permitted, at the most four grains daily, always provided the edema does not reappear. The food is to be specially cooked, and the previously weighed allowance of salt is to be added to the prepared food by the patient himself. The occasional use of meat is now allowable. The quantity of meat is dependent on the prescribed allowance of albumin. Ordinary bread may now be permitted (five hundred grains).

Loss of appetite and persistent discomfort of the patient are contraindications to the salt-poor diet. The withdrawal of salt must then be tentative and temporary.

UREMIA.

In a condition of chronic uremia the albumin content in the food must be temporarily diminished as far as possible. The quantity of milk allowed must not exceed two pints. Car-

bohydrates and butter must be provided in liberal quantities. The diet should at the same time be salt-poor, as in some cases the milder uremic symptoms disappear under the provision (Magnus-Levy).

The intake of fluid should be copious regardless of increasing edema. The edematous effusion and at least a quart of the toxic products are to be removed by drainage—either puncture or stab-puncture. Diuretic remedies are to be administered: in order to protect the stomach they are given subcutaneously (euphyllin) or *per rectum* (theophyllin).

If cardiac activity threatens to fail, digitalis must be given early. In urgent cases the digitalis therapy is introduced by camphor administered in the intervals between the doses of digitalis until effect of digitalis is observed. In the presence of vomiting, digitalis is substituted by digalen given intramuscularly.

Sweat-baths are to be given three or four times a week, with

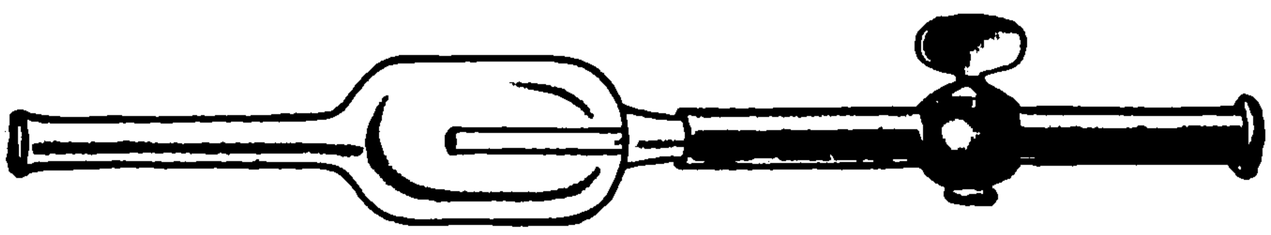


Fig. 41.—Küster drop-cannula.

the administration of water *per os* during the bath, or *per rectum* immediately afterward.

In an acute attack of uremia venesection must be done. Collapse forbids this practice. The venesection may be repeated after several hours. About two hundred and fifty cubic centimeters of blood are withdrawn each time and replaced by double the quantity of salt solution, 7-10 of 1 per cent. The salt solution is best given *per rectum;* in the presence of diarrhea it is given subcutaneously.

Technic of Venesection.—An elastic bandage is wrapped around the left arm in its upper third, firmly enough to obstruct the venous flow but not to obliterate the radial pulse. The skin is cleansed. A strong, sterilized puncture needle is inserted into the vena mediana (*venæpunctio*). The needle lies parallel to the vein, with its point directed proximally. In corpulent individuals it is necessary to expose and split the vein (*venæsectio*). The procedure is conducted under local anesthesia. Infiltration of the deeper layers makes it more difficult to pick up the vein.

The needle is withdrawn, the bandage removed, and a compression dressing applied.

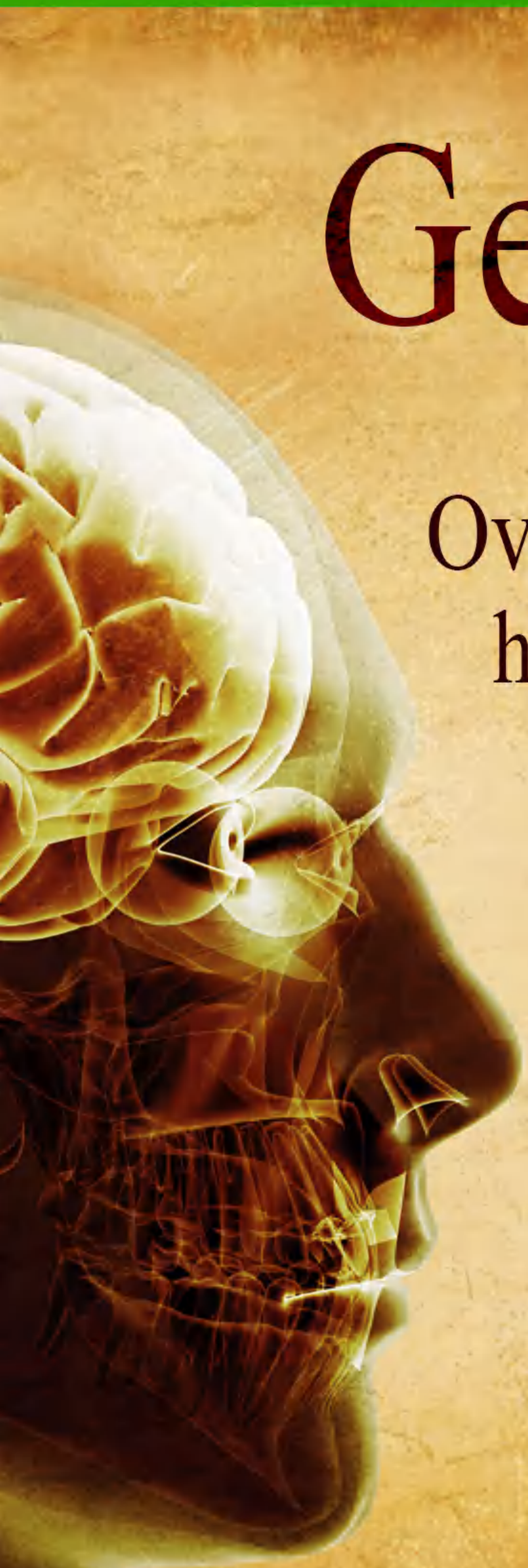
Technic of Rectal Infusion.—A Nélaton catheter No. 19 is introduced into the rectum and connected by a Küster drop-cannula (Fig. 43) with the tube of an irrigator. The irrigator contains a solution of sodium chlorid 7-10 of 1 per cent, kept at a temperature of 37° C. The inflow is regulated by the stop-cock so that one drop of solution enters the rectum every second, that is, about one liter in five hours.

If feeding is possible, bland soup is given. In the presence of obstinate vomiting, the stomach is irrigated.

In the presence of serious restlessness morphin is administered, supplemented by camphor.

In the presence of coma hot baths are given (42° C. for ten minutes) interrupted by cold douches.

THIS PAGE IS LOCKED TO FREE MEMBERS
Purchase full membership to immediately unlock this page



Get Smart

Over 2,000 years of human knowledge in 797,885 volumes

Instant access
$8.99/month

Continue

*Fair usage policy applies

kidney simultaneously, nephrolithotomy is done immediately. During this operation the ureter is sounded, and an effort is made to draw the stone into the renal pelvis or to push it into the bladder. If this maneuver fails the incision is lengthened and ureterolithotomy is done immediately.

TUBERCULOSIS OF THE URETER.

Tuberculosis of the ureter is always associated with tuberculosis of the corresponding kidney.

THERAPY.—As ureteral tuberculosis tends to heal after extirpation of the corresponding kidney for renal tuberculosis, complete extirpation of the ureter is not generally necessary. During the nephrectomy only as much of the ureter is removed as can be reached without seriously enlarging the wound of incision.

Fistulæ (granulation tuberculosis), which persist after the operation, finally heal after repeated curettage and packing with iodoform.

Extirpation of the ureter is indicated only in those rare cases in which symptoms of ureteral disease persist even after nephrectomy.

URETERITIS.

Judging from isolated instances, ureteritis is secondary to suppuration in the corresponding kidney.

THERAPY.—Nephrectomy may be indicated, after which the ureteritis usually heals spontaneously. Only in the presence of serious changes in the ureter is ureterectomy indicated in addition to nephrectomy.

TUMORS OF THE URETER.

Tumors of the ureter are very rare. Usually they are papillomata.

THERAPY.—The indication is for ureterectomy and nephrectomy.

INJURIES OF THE URETER.

Injuries of the ureter caused by external violence are very rare.

THERAPY.—Operative interference is demanded only in the presence of alarming symptoms (urinary infiltration in the lumbar

region, reflex oligura, traumatic hydronephrosis). If possible, suture of the ureter is done. If that is impossible, nephrectomy is demanded.

Operative injuries of the ureter are of much more frequent occurrence—usually during gynecological operations.

CHAPTER XII.

DISTURBANCES OF THE GENITAL FUNCTION IN THE MALE.

NERVOUS IMPOTENCE.

The nervous form of impotence is practically the form of most frequent occurrence. It is rarely seen in diabetes, advanced nephritis, and chronic alcoholic intoxication. Usually it is a feature of neurasthenia sexualis. In addition to the impotence there frequently are pollutions, spermatorrhea, and the impotence itself in the form of ejaculatio precox ("impotence through irritable weakness").

In a part of these cases the impotence has a local cause: prostatitis, posterior urethritis, and particularly inflammation of the colliculus seminalis, each of these in turn being the result of gonorrhea, masturbation, or coitis interruptus.

Effort must be directed against these inflammatory changes, as potency often returns after their removal. Therefore it is always necessary to employ the two-glass test; to examine the prostatic secretion; and to search the colliculus seminalis with the olive-tipped sound. Posterior urethroscopy is more efficient (Goldschmidt, Mark, or Buerger urethroscope, and it is also adapted to endoscopic treatment).

THERAPY.—If disease of the posterior urethra or of the prostate gland is shown to exist, local treatment is demanded. The general condition of the patient, naturally, must always enter into consideration. At first instillations are made two or three times a week into the colliculus seminalis, preceded by massage of the prostate gland. These instillations are practiced only at the beginning of treatment, from four to ten times all told. The instillation consists of ten drops of a 2 per cent solution of silver nitrate (Technic, page 27).

Endoscopic treatment of the posterior urethra is more certain of results. This means cauterization of the diseased areas with silver nitrate or with the galvanocautery.

THIS PAGE IS LOCKED TO FREE MEMBERS
Purchase full membership to immediately unlock this page

Know Your Bible

Forgotten Books' Full Membership provides unlimited access to more than 28,000 volumes of Christian literature for $8.99/month

Continue

*Fair use policy applies

faradic current is also useful; it may be applied by the patient himself.

The diet need not be free from irritants. Mixed, nourishing food should be given. Alcohol in small quantities may be allowed. A milk and vegetable diet is of temporary resort; it is best adapted to cases in which seminal emissions are prominent.

Easy defecation should be promoted. Spermatorrhea and pollutions must receive due consideration.

Of medicaments, atropin, strychnin, and phosphorus appear to exert specific influence in impotence. Lecithin, of recent popularity, is better and cheaper in the form of yolk of egg. Phosphorus is given as phosphoric acid, or as glycerin-phosphoric acid, or:

℞ Zinci phosphatis .....gr. iv
Extracti nucis vomicæ .....gr. xvj
Fluidextracti calami .....q. s.
Misce et fiant pilulæ No. L.
Sig.: 1 pill three times daily. (Hammond.)

Atropin may be prescribed as follows:

℞ Atropinæ sulphatis .....gr. ½
Extracti glycyrrhizæ .....q. s.
Misce et fiant pilulæ No. L.
Sig.: 1 pill twice daily.

Unfortunately, all of these medicaments are uncertain of effect. The same is to be said of yohimbin and muiracithin, although their effect on the reaction center has been demonstrated by experiment.

Yohimbin is the alkaloid from the bark of Corynanthe Yohimbi. Muiracithin is a preparation of indefinite composition, obtained from the rind of muirapuama with addition of lecithin. The earliest time at which good is to be expected from these remedies is toward the end of the treatment, when strong erections appear spontaneously, seminal losses cease, and the general condition has improved. At that time they strengthen the erections, raise the patient's self-confidence, allay the psychic restrictions, and in this manner bring coitus to a successful issue.

℞ Tabellæ yohimbini (Riedel) .....gr. ½
Fiat tabella No. I. Dentur tales
tabellæ No. XX.
Sig.: 1 tablet three to six times daily.

℞ Pilulæ muiracithini .....No. L
Sig.: 3 or 4 pills three times daily.

Erektol tablets (Hadra) may be substituted for muiracithin:

℞ Tabellæ erektol (Hadra) No. L.
Sig.: 2 tablets three times daily.

The author does not advise coitus, even when the patient is considered potent, because it serves a better purpose for the patient to follow his libido in a natural manner than on the instruction of a physician.

In those cases that present no inflammatory changes in the posterior urethra the therapy differs in that the local treatment recedes in importance, while the treatment of the general condition advances to first consideration. Instillations and massage of the prostate are not practiced at all because there is no indication for them. The introduction of sounds is practiced tentatively and with due attention to the general status of the patient. If local procedures are not well borne, the operator is restricted to the above detailed physico-dietetic measures. These are best undertaken in a sanatorium where they can be carried out more systematically and therefore more successfully. Moderate mountain climbing is advisable. Sea bathing is of value except in anemic persons.

Impotence in patients sick of diabetes and of nephritis demands treatment of the essential disease.

PARALYTIC IMPOTENCE.

In paralytic impotence there is complete failure of erections and pollutions. Potency is fully extinguished. It arises through destruction of the nerve tracts, especially in tabes, or it is the terminal stage of nervous impotence.

THERAPY.—Cure of paralytic impotence is impossible. If humanitarian reasons prompt the operator to take charge of a case, the treatment is on the principles laid down in the discussion of nervous impotence.

PSYCHIC IMPOTENCE.

In a condition of psychic impotence, potency itself is retained, but is interrupted by psychic influences: excitement, antipathy, lack of self-confidence, abnormal sexual condition.

Treatment, as far as it is called for at all, must be suggestive in character. On this understanding hydrotherapy and electrotherapy may be instituted; the Winternitz sound or ordinary sounds of large caliber may be introduced; yohimbin or muiracithin may be administered.

Coitus is to be interdicted for a long time.

In cases of contrary sexual condition proper hypnotism is indicated.

IMPOTENCE DUE TO ANATOMICAL CAUSES.

In a condition of "organic impotence" potency itself is fully retained, but insertion of the penis is impossible on anatomical grounds: malformations, tumors, elephantiasis penis. The condition is rare.

Of greater practical importance is an infiltrate in the corpora cavernosa, causing chorda chordee of the penis during erection and therapy rendering coitus impossible. This condition occurs most frequently after gonorrhea, less frequently after lues. In isolated cases the condition is independent.

THERAPY.—If normal anatomical relations can be established by plastic operation, potentia coeundi is attained.

In the presence of gummatous induration therapy with mercury and potassium idodid is indicated. [Fibrolysin.—EDITOR.]

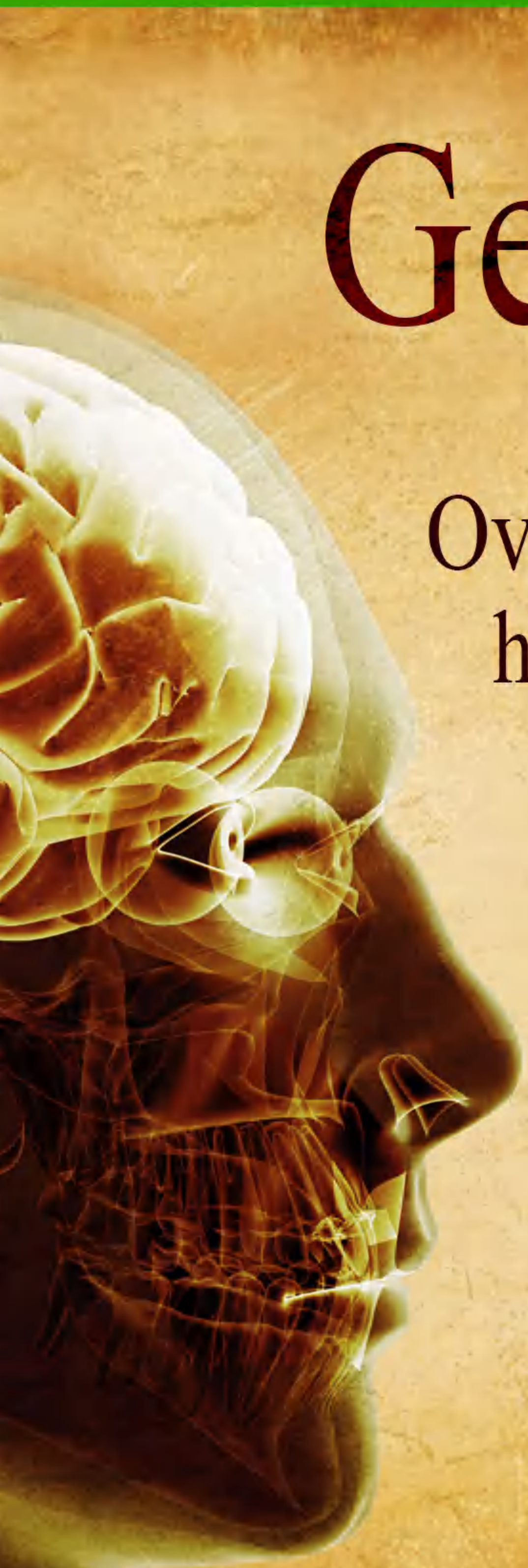
NEURASTHENIA SEXUALIS.

Sexual neurasthenia is a form of nervous weakness that usually, but not always, results from damage to the sexual apparatus by gonorrhea, sexual abuse, onanism, coitus interruptus, and so on, and in its turn causes disturbances in the genital sphere.

The most important symptom of sexual neurasthenia is impotence due to irritable weakness; in addition there are other disturbances of the genital apparatus, such as spermatorrhea, frequent pollutions, and prostatorrhea. Moreover, there are radiations along other nerve tracts: prostatic neurosis, irritable bladder, and so on. Ultimately, general neurasthenia results.

Pollutions are to be taken as evidence of disease only when they occur oftener than once in ten days and leave the patient

THIS PAGE IS LOCKED TO FREE MEMBERS
Purchase full membership to immediately unlock this page



Get Smart

Over 2,000 years of human knowledge in 797,885 volumes

Instant access
$8.99/month

Continue

*Fair usage policy applies

℞ Valisan pearls .....No. xxx
Sig.: 2 or 3 pearls two or three times daily after meals.

℞ Gynoval pearls .....No. xxv
Sig.: As directed.

In very severe occurrence of seminal losses and in sleeplessness, bromural (a combination of bromine, valerian, and urea) may be given; also neuronal (an organic combination of bromine). These are very desirable measures (Ziehen).

℞ Tabellæ bromuralis .....gr. v
Fiat tabella No. I. Dentur tales
tabellæ No. XX.
Sig.: 1 tablet dissolved in water twice during the day and two tablets before retiring.

℞ Tabellæ neuronalis .....gr. viiss
Fiat tabella No. I. Dentur tales
tabellæ No. X.
Sig.: 1, 2, 3 tablets before retiring.

Both bromural and neuronal may be given for three or four days. Then there should be an interruption of three or four days during which the above-named remedies may be given.

Somnifacient drugs proper are given only temporarily. The author prefers:

℞ Tabellæ sodii diethylbarbituratis ...gr. viiss
Fiat tabella No. I. Dentur tales
tabellæ No. X.
Sig.: 1 tablet in one-quarter glass of water half an hour before retiring.

In addition, the evening meal should be light with scant fluid; the bed cool and hard; the hours of retiring and of rising should both be early.

To combat spermatorrhea and prostatorrhea ergotin and strychnin (page 117) are constantly recommended and also:

℞ Ergotinæ (Bonjean) .....gr. lxxx
Pulveris glycyrrhizæ .....q. s.
Misce et fiant pilulæ No. L.
Sig.: 1 pill three times daily.

Cornutin, an alkaloid of Secale cornutum, is also recommended (Kobert, ℞, page 110).

The author has never seen any good follow the use of these remedies. However, good results follow upon instillations into the colliculus seminalis, and the introduction of sounds—when-

ever the patient tolerates local interference at all. Easy defecation must be promoted.

For discussion of the treatment of nervous impotence see page 150.

The usefulness of hydro- and electro-therapy must be remembered. The mode of life must be regulated. Physical activity with the exclusion of overexertion is generally useful.

A meat-free, milk and vegetable diet is of the greatest usefulness, especially when it can be enforced in a sanatorium, and in combination with hydrotherapeutic measures. Such a diet should consist of seeded fruits, green vegetables, cereals, eggs, milk, cheese. Easy defecation is promoted by buttermilk, raw and cooked fruits, and salads.

In a condition of general nervous suffering, in addition to the above named bromids, bornyval and valyl are of service.

℞ Bornyval pearls .....No. xxv
Sig.: 1 or 2 pearls two or three times daily.

℞ Valyl pearls .....No. xxv
Sig.: 2 or 3 pearls two or three times daily.

In the anemic conditions of neurasthenia arsenic, iron, and quinin are valuable:

℞ Liquoris potassii arsenitis .....ʒ j
Dispense in a drop bottle.
Sig.: 2 drops three times daily. Increase by 1 drop every third day until 8 drops three times daily are taken, and then decrease.

℞ Arseni trioxidi .....gr. ¾
Ferri reducti .....gr. xlviij
Piperis .....gr. xxiv
Extracti glycyrrhizæ .....q. s.
Misce et fiant pilulæ No. L.
Sig.: 2 pills three times daily.

℞ Liquoris ferri albuminati .....ʒ viij
Sig.: 2 tablespoonfuls three times daily.

℞ Ferri lactatis .....gr. xlviij
Calcii glycero-phosphatis .....gr. lxxx
Extracti gentianæ .....gr. xxxij
Pulveris gentianæ .....q. s.
Misce et fiant pilulæ No. L.
Sig.: 2 or 3 pills three times daily.

℞ Pilulæ ferri carbonatis.....No. C.
Sig.: 2 or 3 pills three times daily after meals.

℞ Quininæ sulphatis .....gr. xxvj
Ferri reducti .....gr. lxxx
Pulveris gentianæ .....gr. viij
Extracti gentianæ .....gr. xxx
Misce et fiant pilulæ No. L.
Sig.: 2 pills three times daily.

℞ Quininæ glycerophosphatis,
Quininæ ferro-citratis .....āā gr. lxxx
Arseni trioxidi .....gr. ¾
Extracti gentianæ .....gr. xlviij
Pulveris glycyrrhizæ .....gr. xxxij
Misce et fiant pilulæ No. C.
Sig.: 2 or 3 pills three times daily.

If the local neurosis has been transformed into a condition of general neurasthenia, skilled interference must be undertaken with extreme caution, as it can at this stage do more harm than good. Physico-dietetic measures are to be preferred, best undertaken in a sanatorium.

STERILITY IN THE MALE.

Azoöspermia.—In a condition of azoöspermia potency is fully retained. The act of ejaculation is normal, but the ejaculated fluid contains no spermatozoa. Microscopic examination is necessary, of course.

The most frequent cause of azoöspermia is obliteration of the seminal ducts by cicatrices, as after epididymitis and funiculitis duplex. In rare instances the secretion of semen ceases temporarily, as in exhausting diseases and after sexual excesses.

THERAPY.—The treatment of azoöspermia is of no use in the presence of cicatrices. Fibrolysin is of no value. Azoöspermia after exhausting diseases and sexual excesses disappears spontaneously.

[Latterly the operation of epididymo-vasostomy of Martin has been successful in reclaiming a number of patients to fecundity. See Trans. Am. Assn. of Genito-Urinary Surgeons, 1906, page 55.—EDITOR.]

Oligospermia.—Oligospermia is not an independent disease. It is only preliminary to azoöspermia or transitional from azoöspermia to cure.

THERAPY.—For discussion of the therapy of oligospermia see Azoöspermia above.

THIS PAGE IS LOCKED TO FREE MEMBERS
Purchase full membership to immediately unlock this page

Know Your Bible

Forgotten Books' Full Membership provides unlimited access to more than 28,000 volumes of Christian literature for $8.99/month

Continue

*Fair use policy applies

CHAPTER XIII.

DISEASE OF THE URINARY ORGANS IN THE FEMALE.

ACUTE GONORRHEA OF THE URETHRA.

DIAGNOSIS.—Microscopic demonstration of the gonococcus is demanded in every case. The urethral orifice is cleansed with 1:1000 solution of mercury bichlorid, a sterile platinum loop is introduced into the urethra, and a drop of discharge is removed. If no discharge is to be obtained in this manner, the lower surface of the urethra is stripped from behind forward. [If unsuccessful, investigate for gonococci in a specimen of urine passed voluntarily.—EDITOR.]

THERAPY.—No local treatment must be instituted. Only general measures are to be undertaken, and these must be employed with extreme care in the presence of very severe suffering.

Strangury must be combated with balsams, above all with oil of sandalwood. In more severe suffering mild narcotic drugs are indicated: belladonna, antipyrin, pyramidon, or narcotics proper. (See pages 77, 97, 98.)

The utmost cleanliness must be enforced. A sitz-bath is to be taken every evening (30° C. for twenty minutes). In the presence of copious discharge the external genitals are cleansed twice daily by the stream from an irrigator containing 1 per cent solution of lysoform.

℞ Lysoformi .....ʒ viij
Sig.: Mix half a measureglassful with a quart of water.

The discharge is irritating and easily leads to eczema of the external genitals. Protection is sought by application of zinc salve:

℞ Unguentum zinci oleatis .....ʒ iv
Sig.: Remove the salve remnants with oil and cotton (not with water) and apply the zinc oil after the sitz-bath.
Surgical cotton, 4 ounces.
Cotton-seed oil, 4 ounces.

The patient must be instructed to rest in bed during the first days of illness and again during the menses.

As soon as strangury has been lessened, diluents are substituted for balsams, especially milk and diuretic infusions. These diluents are given in copious quantities, as much as six pints daily, evenly distributed at regular intervals in order to secure thorough flushing of the urethra.

For dermatological reasons (Neisser and others) local treatment is recommended even in the acute stage (injections, page 162). It should be restricted to cases in which the urethra alone is diseased. It is positively forbidden in the presence of gonorrhea of the cervix. In local treatment during the acute stage of gonorrhea the infection may be carried over to hitherto intact parts of the genital apparatus. As acute gonorrheal urethritis in the female occasionally heals spontaneously, it is better to omit all local treatment.

CHRONIC GONORRHEA OF THE URETHRA.

After the sixth week of urethral gonorrhea the stronger symptoms of inflammation have disappeared. If cure has not been obtained in that time the chronic stage has supervened.

DIAGNOSIS.—It is necessary to make a microscopic examination for gonococci and to differentiate the diagnosis from that of cystitis, the patient should retain the urine for at least five hours. The urethra is stripped after careful cleansing of the orifice. If no discharge appears after stripping, the sterile platinum loop is inserted into the urethra to remove a bit of epithelium.

The two-glass test is used as follows: If the first glass is turbid the second less turbid or clear, the condition is generally one of urethritis. If both glasses are turbid, at least a part of the discharge comes from the upper urinary passages. In that case the two-glass test does not suffice. It is necessary to make a cystoscopic examination.

In every case of chronic gonorrhea due consideration must be given to coexisting disease of the glands of Skene, of Bartholin, of those of the vulva; also to the cervix uteri.

THERAPY.—In chronic gonorrhea local treatment must be applied regularly. The injection is made four times daily, the antiseptic solution being of stronger concentration than is that employed

in the male. Simple astringents are useless. Silver nitrate is the best medicament.

℞ Argenti nitratis .....gr. xxxvj
Aquæ destillatæ .....q. s. ad ℥ viij

Misce.
Sig.: Use as directed.

Ichthyol is useful.

Or the following may be used:

℞ Albargini .....gr. xxxvj
Aquæ destillatæ .....q. s. ad ℥ viij

Misce.
Sig.: Use as directed.

℞ Argonini .....gr. lv
Aquæ destillatæ .....q. s. ad ℥ viij

Misce.
Sig.: Use as directed.

℞ Protargoli .....gr. xxxvj
Aquæ destillatæ .....q. s. ad ℥ viij

Misce.
Sig.: Use as directed.

[Argyrol may be employed in 2½-10 per cent solution.—EDITOR.]

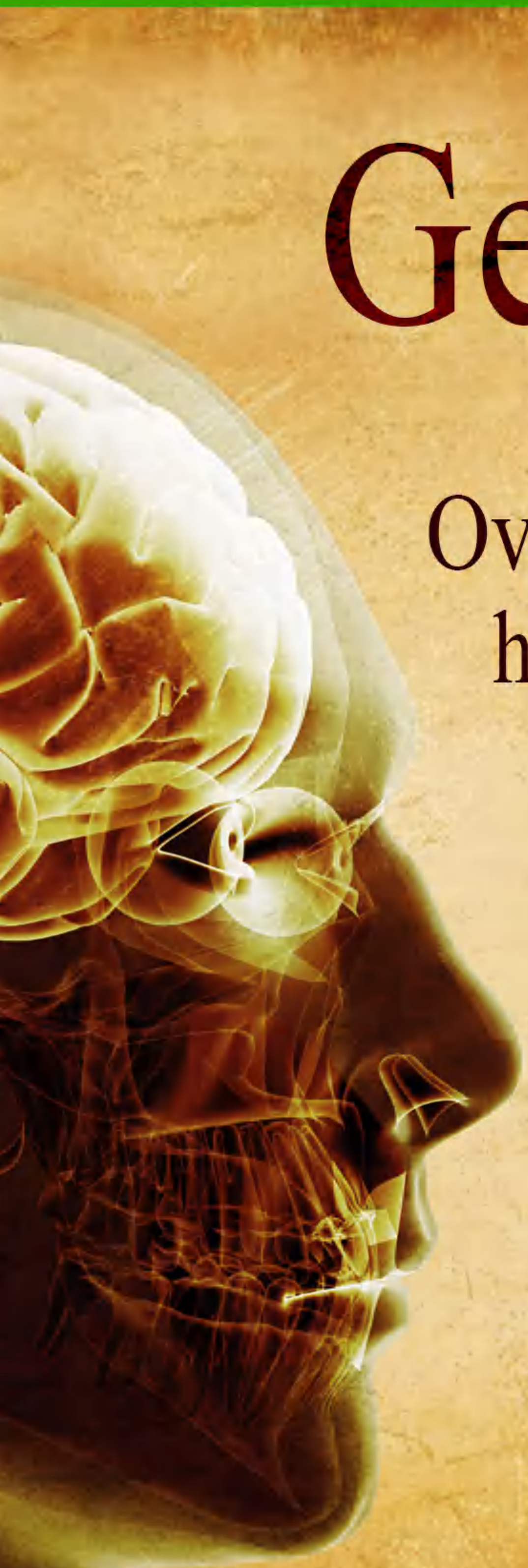
The injection is made with a penile syringe with conical soft-rubber tip. The urethral orifice is first cleansed with 1 per cent solution of lysoform. About one-half the contents of the syringe are injected, until the resistance offered by the sphincter is encountered. The solution is retained in the urethra for one minute, allowed to escape, and the rest of the syringe contents injected. A cotton pledget is placed in the entrance of the vagina to prevent soiling the linen. The patient passes urine just before the injection; and retains the urine for one hour following the injection.

This local treatment is undertaken on the proviso that the patient learn to make the injections herself. It is usually possible. The utmost cleanliness of the vaginal entrance must be observed.

Professional attendance is necessary only when the patient cannot make the application herself, or in the presence of complications. (Disease of the glands, of the bladder, or of the cervix uteri.)

In that case the operator must see to it that the irrigation is

THIS PAGE IS LOCKED TO FREE MEMBERS
Purchase full membership to immediately unlock this page



Get Smart

Over 2,000 years of human knowledge in 797,885 volumes

Instant access
$8.99/month

Continue

*Fair usage policy applies

urethral orifice or just behind the orifice and within the urethra. They are very important, but often unobserved foci of gonorrhea. Frequently a gonorrheal process is maintained in virulent activity by these foci, the infection being carried over to healthy mucous membrane lying between areas that have been healed.

THERAPY.—Destruction of the ducts of the glands is indicated. In very narrow ducts the procedure is accomplished with a fine wire dipped in concentrated fluid phenol.

Or the Unna apparatus may be used.

In the case of a tortuous duct a knife-shaped galvanocautery is introduced into the duct while cold, then brought to glow heat, and the mucous membrane cleft toward the vagina. This method is convenient, and causes very slight pain.

If it is impossible to sound the duct, a painted cautery is pushed into the gland, and the gland and its immediate surroundings are destroyed. This method is somewhat rough, but does no damage.

Retention cysts of these glands are also cleft toward the vagina. A knife-shaped galvanocautery is used. Incontinence of urine need not be feared, as the vesical sphincter is not near the line of incision. Instead of the galvanocautery a grooved director may be used, and the cleft made with scissors.

All of these procedures cause very slight pain. However, they may conveniently be done under local anesthesia. The field of operation is surrounded by injections of solution No. I (page 6) made into healthy tissue. Otherwise pressure application of a cotton pledget dipped in 10 per cent solution of novocain to which suprarenin is added attains good results (page 3).

GONORRHEA OF THE VULVAR GLANDS.

The vulvar glands are small glands especially numerous in the fossa navicularis. They furnish important localizations for gonorrhea.

THERAPY.—The treatment is the same as that of infection of Skene's glands. Cauterization is accomplished with a pointed cautery or with concentrated fluid phenol.

GONORRHEA OF BARTHOLIN'S GLANDS.

THERAPY.—Cauterization of the ducts of Bartholin's glands is useless. Simple splitting tends to fistula formation. Extirpation of the glands is the best procedure.

The field of operation is surrounded with four injections of novocain solution No. I (page 6), made into healthy tissue. The addition of suprarenin controls the fairly severe hemorrhage. Unfortunately, in many excitable females, psychic reasons demand resort to general narcosis.

The incision is carried around the duct, and the gland is removed by blunt dissection. The wound is closed by suture, provision being made for drainage. Healing usually occurs by first intention.

GONORRHEA OF THE VAGINA.

Vaginal gonorrhea is frequent in children, infrequent in adults, and occurs only in acute form (Bumm). Usually vaginitis is a simple inflammation caused by discharge from the cervix.

THERAPY.—Vaginal irrigation with silver nitrate in 1:1000 solution should be practiced once each day, under which the symptoms subside promptly. Treatment is continued with 2 per cent solution of silver nitrate, of which about twenty cubic centimeters is poured into the vagina through a glass speculum. The patient should rest reclining after this, so that the medicament may remain in prolonged contact with the vaginal walls. A cotton pledget is placed in the entrance of the vagina. There should be two or three sittings each week until cure is obtained.

GONORRHEA OF THE CERVIX UTERI.

DIAGNOSIS.—In the acute stage of cervical gonorrhea it is not necessary to demonstrate the gonococcus. In the chronic stage such demonstration is very important and also very difficult. Repeated examinations are necessary, especially after the menses, which often act as a provocative factor.

THERAPY.—In the acute stage there must be no local treatment applied. Neither must such treatment be applied in the chronic stage in the presence of recent disease of the uterine adnexa.

Otherwise the cervix is swabbed with a 2 per cent solution of silver nitrate. An ichthyol tampon is then applied. The treatment is tedious; the outcome is uncertain.

For a further consideration of gonorrhea of the cervix, as well as of the uterus and adnexa, the reader is referred to textbooks on gynecology.

URETHRITIS.

In rare instances non-gonorrheal urethritis occurs in the female, just as it does in the male.

THERAPY.—The treatment corresponds closely with that of gonorrheal urethritis. In the acute stage all local treatment is to be omitted. Narcotics and diluents must be given. In the chronic stage injections are demanded (page 162). [Also, urethral dilatation with anterior Kollmann dilator.—EDITOR.]

STENOSIS OF THE URETHRAL ORIFICE.

THERAPY.—Treatment is demanded only when the introduction of instruments becomes necessary. If the orifice does not yield without severe pain, it is incised right and left with scissors to a depth of two millimeters. Local anesthesia is necessary.

STRICTURES OF THE URETHRA.

Urethral strictures in the female are moderately rare. They usually follow upon injuries sustained during parturition.

THERAPY.—The introduction of sounds of steadily increasing caliber is demanded. The stricture may be so narrow that dilatation must be begun with filiform bougies. Forceful dilatation is not permissible; it may cause uncomfortable hemorrhage.

PROLAPSE OF THE URETHRAL MUCOUS MEMBRANE.

THERAPY.—The prolapsed mucous membrane is removed by a circular incision. The edge of the wound is stitched to the edge of the urethral orifice. If the patient refuses to submit to operation, a **Pousson catheter** is introduced as a permanent catheter (Fig. 38). The prolapsed membrane is ligated at the base with a silk thread. The ligated portion dries in two days; the thread cuts through. The catheter is removed on the third day. This is a bloodless, painless operation and is not dangerous (Fritsch).

THIS PAGE IS LOCKED TO FREE MEMBERS
Purchase full membership to immediately unlock this page

Know Your Bible

Forgotten Books' Full Membership provides unlimited access to more than 28,000 volumes of Christian literature for $8.99/month

Continue

*Fair use policy applies

MALIGNANT TUMORS OF THE URETHRA.

THERAPY.—Early, radical extirpation is demanded. The operation is a very serious procedure and often causes incontinence. Recurrence is frequent.

CALCULUS IN THE URETHRA.

A calculus in the urethra may have been caught in its descent from the upper passages, or it may be of primary formation in a diverticulum.

THERAPY.—The calculus is extracted with forceps. In the case of a diverticulum, the sac is split from the vagina, the stone is extracted, the sac is resected, and the wound closed by suture.

ACUTE CYSTITIS.

THERAPY.—The treatment is identical with that of acute cystitis in the male; narcotics, diluents, hot sitz-baths.

CHRONIC CYSTITIS.

DIAGNOSIS.—Confusion between cystitis urethritis and renal pyuria is frequent because the clinical symptoms of these conditions are often merged with one another. Painstaking differential diagnosis is essential, because the oversight of renal suppuration carries very important consequences. The diagnosis of urethritis is made by examination of the expressed urethral discharge and by the two-glass test; that of renal suppuration is made by cystoscopy and ureteral cauterization.

THERAPY.—The treatment is the same as that of the same condition in the male. Silver nitrate in 1:1000 solution is the sovereign remedy. (See pages 22, 100.)

The irrigations are carried out with glass catheter and irrigator. The syringe is employed in exceptional cases only. A rubber tube is attached to the glass catheter. In withdrawing the urine and irrigating solution a small quantity must always be left in the bladder, because complete emptying of the bladder in the female is followed by painful spasmodic contraction. If the returning solution is mixed with air, it is a sign that the bladder is nearly empty. The rubber tube is then

cleansed; the catheter is removed; or, if the irrigation is to be continued, the bladder is immediately refilled.

In severe cases of chronic cystitis the bladder is put at rest for fourteen days by the introduction of a permanent catheter.

In particularly severe cases a temporary vesicovaginal fistula is established by colpocystotomy.

Catheterization.—The labia majora are separated by two fingers. The introitus vaginæ is cleansed with a cotton pledget dipped in 1:1000 solution of mercury bichlorid. The urethral orifice is cleansed with a second pledget of cotton. The glass catheter is slowly and gently introduced, the beak of the catheter pointing upward.

It is not necessary to lubricate the catheter. Such lubrication causes confusion in the subsequent microscopic examination of the urine, as glycerin droplets and washed-out red cells (Schatten) are easily confused with one another.

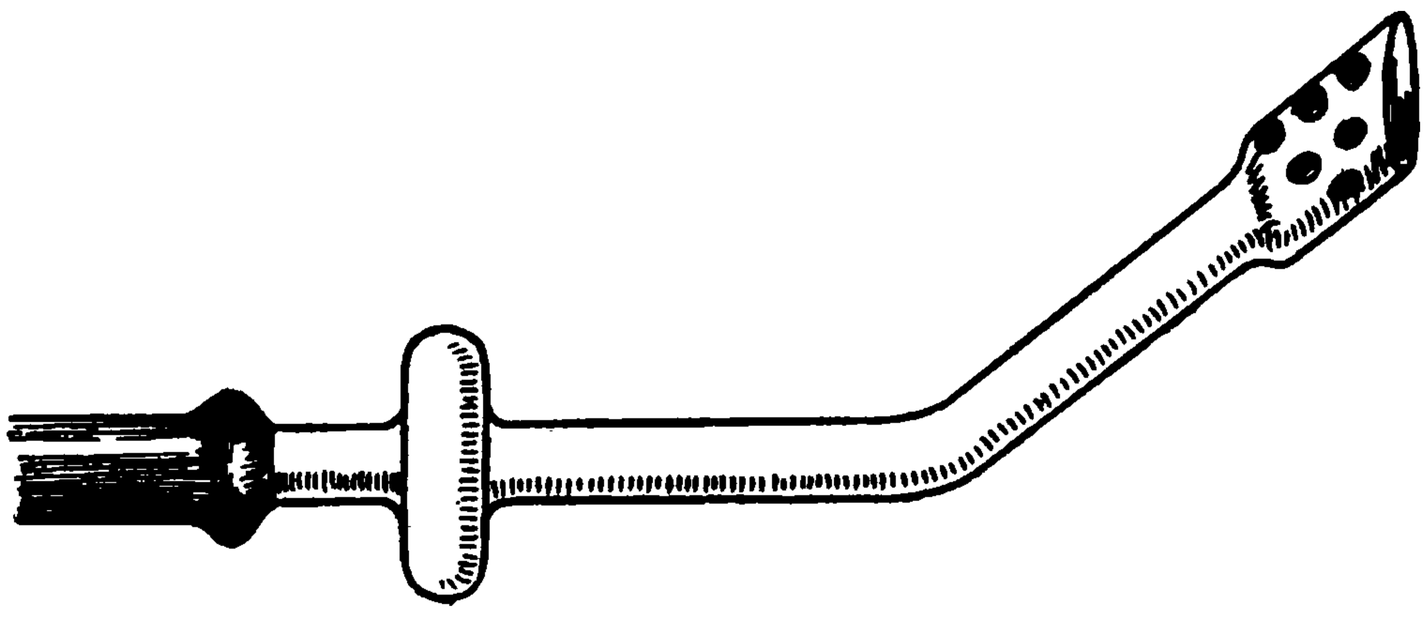


Fig. 42.—Skene glass catheter.

DISINFECTION.—The catheter is boiled for five minutes in ordinary water. Or, it is continuously kept in 1:1000 solution of mercury bichlorid.

Permanent Catheter.—The glass catheter of Skene is best adapted for a permanent catheter (Fig. 42). The technic of introduction is described above. To the catheter is attached a rubber tube about four inches long leading to a proper receptacle. Urotropin is given internally to guard against infection (℞, page 99). If the permanent catheter is introduced because of cystitis, the bladder must be irrigated twice daily, alternately with 1:1000 solution of silver nitrate (℞, page 22) and 1:5000 solution of mercuric oxycyanid (℞, page 25). The irrigation must be done cautiously, to avoid distention of the bladder. The catheter is removed every second or third day for cleansing and is immediately replaced with one held in readiness.

DISINFECTION.—If the catheter is kept in solution of mercury bichlorid, it should be rinsed in sterile water just before being introduced.

If, in exceptional instances, the Skene catheter causes pain, resort may be had to the catheter of Pousson (Fig. 38), which must be introduced over a stylet. Likewise trial may be made with the catheter of Malécot (Fig. 36) and of de Pezzer (Fig. 37).

The permanent catheter is remarkably well tolerated in females. It causes urethritis less frequently than in the male.

CYSTITIS TRIGONI.

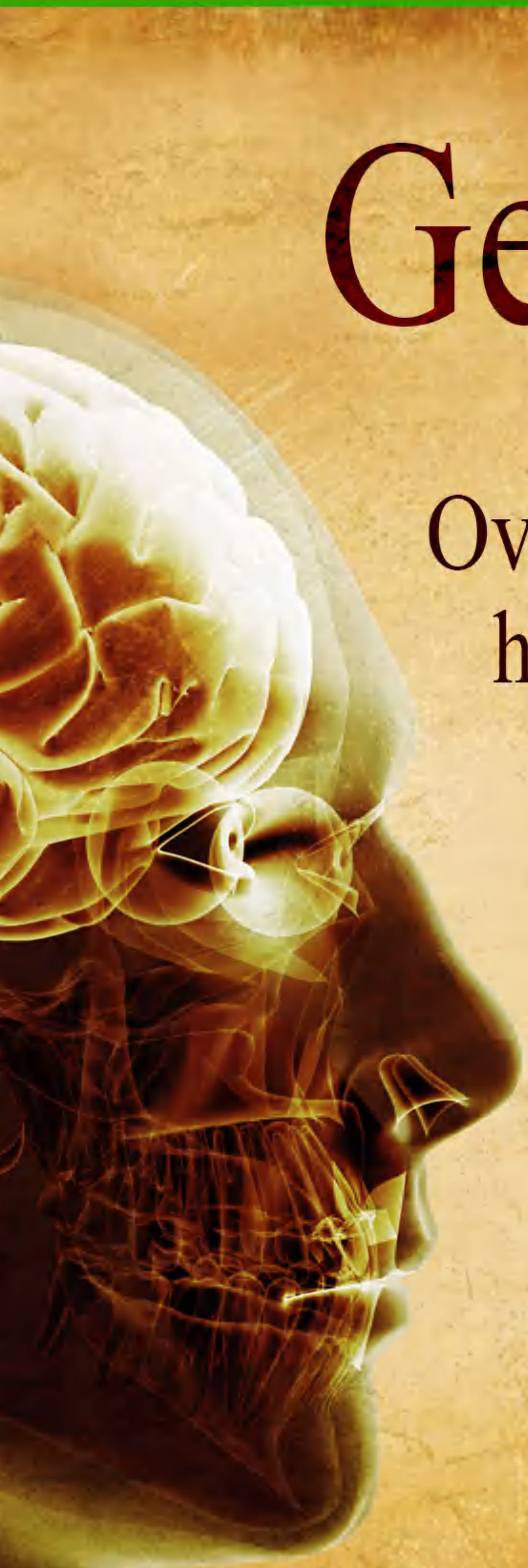
Cystitis trigoni corresponds to cystitis colli in the male.

The certainty that it is only the trigonum that is diseased is to be established only by employment of the cystoscope. Error may occur during cystoscopy in two ways: shreds of pus floating in the distending fluid may be misjudged by reason of their deceptive forms; and the occasional complications at the vesical sphincter may be mistaken for real tumors.

THERAPY.—Cystoscopic diagnosis of these cases makes possible a more rapid cure. If it is only the trigonum that is to be treated, it suffices to apply silver nitrate to the trigonum only, but in higher concentration than elsewhere. A Guyon drop syringe is used (Fig. 10), the catheter of which is introduced through the vesical sphincter. Ten drops of a 2 per cent solution of silver nitrate are thereby instilled upon the floor of the bladder. There are two or three sittings each week. Instead of this, urethra and vesical neck may be swabbed with silver nitrate.

After the patient has passed her urine, a urethroscopic tube, No. 25 or No. 27 Charriere, provided with an obturator and well lubricated, is introduced through the urethra into the bladder. The obturator is then removed. The floor of the bladder is mopped dry with cotton wrapped on a Playfair sound passed through the cystoscopic tube. A second sound is wrapped with cotton, dipped in 2 per cent solution of silver nitrate, and introduced through the tube. The tube is then withdrawn. The vesical sphincter contracts strongly and expresses the solution, which flows over the floor of the bladder. In the removal of the sound the urethra also is medicated. The procedure is re-

THIS PAGE IS LOCKED TO FREE MEMBERS
Purchase full membership to immediately unlock this page



Get Smart

Over 2,000 years of human knowledge in 797,885 volumes

Instant access
$8.99/month

Continue

*Fair usage policy applies

of the urethra (up to No. 28 Charriere). The exact locations of the stone should be determined by previous cystoscopy. Then the cystoscope is removed, and the stone is seized and extracted with forceps. In the presence of a large calculus lithotripsy is indicated. If this cannot be carried out colpocystotomy is demanded.

INCONTINENCE OF URINE.

THERAPY.—Urinary incontinence following parturition is corrected by the application of a pessary, provided such incontinence depends on prolapse of the vaginal wall and not upon fistula. An abdominal binder should be worn.

Incontinence due to fistula, myoma, retroflexion of the uterus, and so on demands correction of the underlying cause.

It is necessary to wear a urinal in case the incontinence is due to vesical paralysis (see below).

If neither nervous disease nor anatomical changes are present, the incontinence must be treated as such ("essential" incontinence). In this condition the application of solutions of silver nitrate to the vesical neck is very useful. The Guyon drop catheter is used. Ten drops of a 2 per cent solution of silver nitrate are instilled in the vesical neck; the procedure is repeated four or five times at intervals of several days. Or the bladder is filled, through a glass catheter, with about one hundred cubic centimeters of 1 per cent solution of silver nitrate. The patient herself passes this as she does urine. At the same time belladonna (℞, pages 97, 98, 115), strychnin (℞, pages 116, 117), and rhus aromatica (℞, page 177) are given internally. With all of these measures the principles of suggestive therapeutics are of distinct influence, as, indeed, in the entire treatment of "essential" incontinence suggestive therapy plays a very important rôle.

In this manner faradization is of value. One electrode, in the form of a bougie, is introduced into the bladder, the other electrode is placed on the lower abdomen. A current as strong as can be borne is used for fifteen minutes several times a week.

Plastic operation is resorted to only when everything else has failed. The object is to reduce the caliber of the sphincter and vesical neck. For instance, the ingenious operation of Gersuny dissects out the urethra and turns it on its long axis.

In case failure attends plastic operation, success sometimes follows the injection of paraffin (Gersuny). Liquid paraffin is injected into the cervical neck in a circle around the urethra to form a substitute for the vesical sphincter.

The wearing of a urinal is the only recourse left in hopeless cases. The form devised by Wulff is worthy of recommendation.

ISCHURIA PARADOXA.

In a condition of ischuria paradoxa the urine flows drop by drop while the bladder remains full. The cause is to be found in:

1. Disease of the central nervous system.
2. Compression of the vesical neck by incarcerated, retroflected gravid uterus.

THERAPY.—Regular catheterization is demanded in vesical paralysis. The women themselves learn to practice the catheterization followed by irrigation with solution of silver nitrate (see page 116). It is necessary to wear a urinal.

Ischuria paradoxa in pregnancy is of greater practical importance. It is necessary to empty the bladder, to replace the uterus, or, in some instances, to empty the uterus. It is essential that the emptying of the bladder be done gradually; otherwise fatal hemorrhage e vacuo may occur.

At each attempt, not more than one thousand cubic centimeters of urine are withdrawn, to be immediately replaced with one-third of that quantity of 1:1000 solution of silver nitrate. There should be an interval of fifteen minutes between the withdrawals. At the close three hundred cubic centimeters of silver nitrate solution are introduced. If hemorrhage occurs the bladder is immediately filled to capacity with the silver nitrate solution. To fill the bladder is the best method of stopping the hemorrhage. In case the bladder is filled with blood, the fluid blood is allowed to flow out, the bladder is immediately refilled with the silver nitrate solution, and the process of emptying is conducted more slowly than before.

Catheterization in a case of ischuria paradoxa during pregnancy may be very difficult. The catheter must be introduced perpendicularly from below upward. If it is impossible to pass the catheter, capillary puncture must be done as in the male.

If it is impossible to empty the bladder in the last-named method because the cannula becomes obstructed by blood-clots, sectio alta is indicated. The same must be said if, in the later development, shreds of mucous membrane do not flow off readily.

Prophylactically, timely reposition of the retroflected uterus must be accomplished.

VESICAL FISTULA.

A distinction is drawn between vesicovaginal, vesicouterine, and several subvarieties of fistula.

THERAPY.—The first effort must be to secure the greatest possible reduction in the size of the fistula. To this end vaginal douches and lukewarm sitz-baths are given daily to promote cleanliness. The skin is protected by zinc ointment. A permanent catheter is introduced (Figs. 38, 41), to stop the flow of urine through the fistula.

Under this treatment marked reduction in the size of the fistula occurs; occasionally spontaneous healing occurs. There must be no cauterization of the fistulous orifice, as this only leads to cicatricial thickening of the edges. Plastic operation must be deferred at least six weeks (Fritsch).

KIDNEY OF PREGNANCY.

THERAPY.—The patient must be confined in bed. Warm baths are given. Diet is enforced as in subacute nephritis. In the presence of serious edema, the fluid intake must be reduced to fifteen hundred cubic centimeters daily and a salt-poor diet must be provided. If the evidences of nephritis increase, or if even mild symptoms of impending eclampsia appear, the pregnancy must be interrupted.

PYELONEPHRITIS OF PREGNANCY.

THERAPY.—In the presence of serious symptoms, as chills and fever, choice lies between induced labor and nephrectomy. In debilitated women nephrotomy usually has the preference. It is generally well borne and does not necessarily interrupt pregnancy.

[Pelvic lavage often serves a good purpose.—EDITOR.]

THIS PAGE IS LOCKED TO FREE MEMBERS
Purchase full membership to immediately unlock this page

Know Your Bible

Forgotten Books' Full Membership provides unlimited access to more than 28,000 volumes of Christian literature for $8.99/month

Continue

*Fair use policy applies

CHAPTER XIV.

DISEASES OF THE URINARY ORGANS IN CHILDHOOD.

GONORRHEA IN BOYS.

Gonorrhea is of rare occurrence among boys. It often causes stricture.

THERAPY.—Treatment is the same as in the adult male.

GONORRHEA IN GIRLS.

Gonorrhea is of frequent occurrence among girls. It usually takes the form of vulvovaginitis. It is extraordinarily infectious, both for the carrier and for other children. Prophylaxis is of extreme importance.

THERAPY.—The utmost cleanliness is essential. A sitz-bath (30° C. for twenty minutes) is given once or twice daily. The skin is protected by zinc ointment (℞, page 160). Rest in bed is enforced in the acute stage. Antiseptic injections of solution of silver nitrate are given. The concentration of the solution at the beginning is 1:5000; it is gradually raised to 1:1000. Albargin, argonin, ichthyol, and protargol are useful. The injections are made with the usual penile syringe, the tip of which is gently set in the hymeneal orifice. The injection is made slowly, and the syringe left *in situ* for one minute. Three or four injec-

fifth year of life.

HYPOSPADIAS AND EPISPADIAS.

THERAPY.—Plastic operation should not be undertaken before the fifth year of life.

ENURESIS INFANTUM.

DIAGNOSIS.—It must always be determined whether it is not an increased urgency of urination to be treated. This is deceptive of enuresis. Increased frequency of urination always leads to enuresis. An essentially causative disease may easily be over-

looked, as vesical calculus, urinary tuberculosis, diabetes, central nervous disease, and so on. In every instance where pus or blood appears in the urine the enuresis must be considered secondary to some other process.

THERAPY.—Any causative condition present must receive appropriate treatment.

A prepuce that is too long or too narrow must receive attention. A narrow urethral meatus must be split. Onanism must be held in suspicion. The possible presence of intestinal parasites must be remembered.

Only scant quantities of fluid are to be allowed in the evening. A cold sitz-bath (26° C. for ten minutes) is to be given at bedtime. A cold rub may be substituted. The child should sleep on a hard mattress under light cover. The foot of the bed may be raised, so that the urine as it collects does not immediately impinge upon the vesical sphincter. The child should be awakened several times during the night and encouraged to urinate.

By day the child should empty the bladder at stipulated intervals. Immediate response to a mild call to urinate should be discouraged. Encouraging example is valuable in this connection, but parents must not be overzealous in their attentions. Punishment and ridicule exert only harmful influence on the nervous system.

Medicaments must be given for a protracted period of time:

℞ Fluidextracti rhois aromaticæ .....ʒ j
Sig.: 5 to 20 drops, according to age, twice daily.

Occasionally this may be given:

℞ Tincturæ nucis vomicæ .....ɱ xlviij
Tincturæ ferri pomatæ .....q. s. ad ʒ j
Misce.
Dispense in drop bottle.
Sig.: 10 drops twice daily.

If this therapy fails, recourse must be had to local treatment, although it is not to be determined whether such treatment is really curative or only terrifying. The author believes the latter to be the case. In isolated cases he has seen direct therapeutic influence obtained by a very short course of treatment with silver nitrate.

The treatment with silver nitrate is applied in two forms:

1. As irrigation: a metal catheter No. 8 Charriere is introduced,

and about fifty cubic centimeters of 1:1000 solution of silver nitrate are injected. The catheter is removed. The child passes the solution the same as it passes urine.

2. As instillation: a Guyon drop catheter No. 10 is employed. Ten drops of 2 per cent solution of silver nitrate are instilled upon the vesical neck.

Good effect is obtained in three sittings, or it is not obtained at all. The applications occur at intervals of two days.

The introduction of a soft bougie is also recommended.

Electrotherapy is only suggestive in its mode of influence. The faradic current is the simplest. It is applied over the perineum and abdomen three times a week, ten minutes each time.

Massage must not be practiced. Its value is problematic, its capability of inducing onanism generally recognized. The same is to be said of prolonged instrumental treatment. Hypnotism may be the final recourse. [The regular passage of urethral sounds is often of marked benefit.—EDITOR.]

Every effort fails in many cases until puberty puts an end to the unconquerable condition.

ACUTE CYSTITIS, PYELITIS, PYELONEPHRITIS.

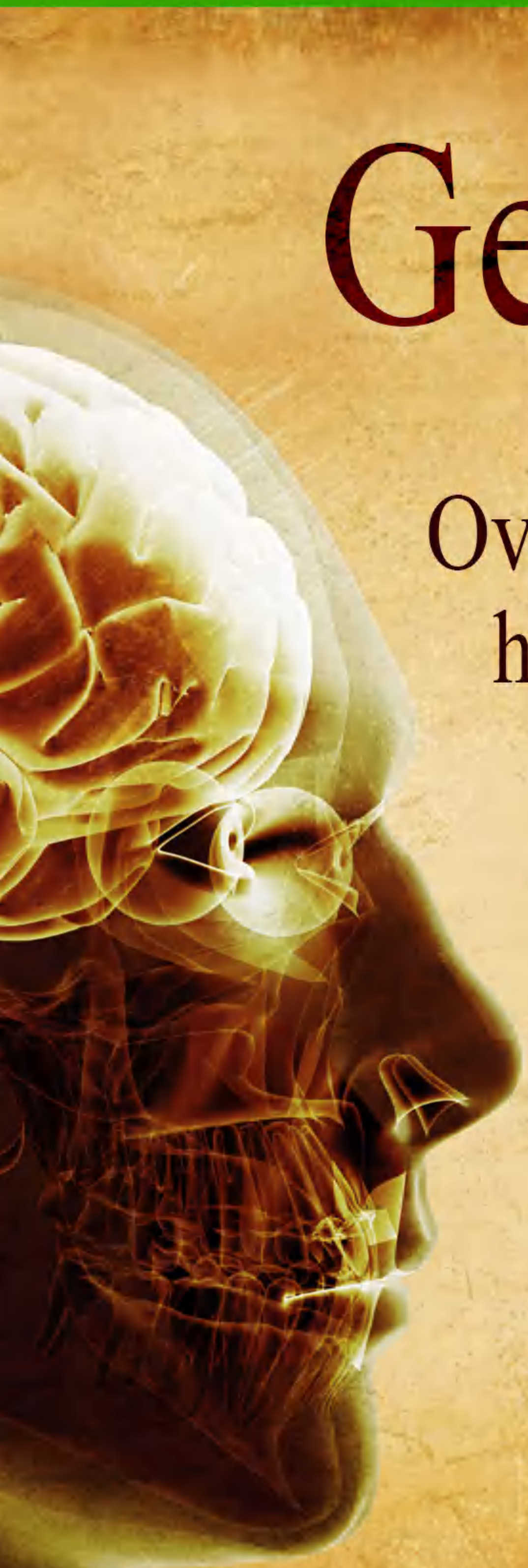
It is sufficient to give a general discussion of acute cystitis, pyelitis, and pyelonephritis because an exact diagnosis of these several conditions is seldom possible; they often occur jointly; the clinical symptoms are often merged; and above all, the treatment is always the same.

THERAPY.—Urotropin is administered internally (℞, page 99). Copious quantities of drinking water are provided. If water cannot be given by the mouth, it is given as saline enemata. In older children diuretic infusions are administered. Pain is combated by hot applications. [Autogenous vaccine therapy.—EDITOR.]

CHRONIC CYSTITIS AND PYELITIS.

In chronic cystitis and pyelitis a differential diagnosis is not always possible. It can only be made when pain can be definitely localized in the diseased organ. Diagnostic difficulties are increased by the attempt to distinguish between pyelitis and pyelonephritis on the one hand and pyonephrosis on the other. Practically, it is well to await the outcome of therapy, to make

THIS PAGE IS LOCKED TO FREE MEMBERS
Purchase full membership to immediately unlock this page



Get Smart

Over 2,000 years of human knowledge in 797,885 volumes

Instant access
$8.99/month

Continue

*Fair usage policy applies

disappears promptly while the patient is reclining. The cause, in at least a part of the cases, lies in extreme lordosis (Jehle).

DIAGNOSIS.—The centrifugalized sediment of the urine must be examined microscopically. Cylindruria, except for the presence of an occasional hyaline cast, excludes the diagnosis. Cylindruria of higher degree, cardiac hypertrophy, and retinitis indicate nephritis. A differential diagnosis from incipient, as from convalescent nephritis, is often impossible, as albuminuria of the orthostatic type sometimes appears in nephritis. Examination of the urine should occur at intervals for a number of years.

THERAPY.—Appropriate physical exercise and nourishing diet must be provided. Sport, gymnastics and school attendance are allowed. Protection against cold, wet, and overexertion must be afforded. Spices and alcohol are to be forbidden. A preponderance of milk and vegetables in the diet should be secured.

Anemia is an indication for the administration of iron (page 157).

The summer should be spent in the mountains.

NEPHRITIS.

Nephritis in childhood occurs in all forms as in adults. Particularly frequent is an important form that seldom appears in grown persons: the albumin is under 1-10 of 1 per cent, often orthostatic in type; hyaline and granular casts occur; also red blood-cells. It is a true nephritis without the results that usually follow nephritis: edema, uremia, cardiac hypertrophy, retinitis. The course is uncertain; the disease may exist for years, with transition into contracted kidney.

THERAPY.—Strict diet and rest cure are not enforced in these cases (v. Noorden, Heubner). Only on the presumption that albuminuria and cylindruria are of recent occurrence are rest in bed and dietetic restrictions enforced tentatively. The same holds for exacerbations.

HEMATURIA.

DIAGNOSIS.—[Be sure to ascertain a definite diagnosis.—EDITOR.] Barlow's disease, hemorrhagic diathesis, and nephritis must be kept in mind. Examinations for cylindruria must be made frequently. Only the microscopic examination prevents confusion with hemoglobinuria. If the cause of the hematuria is obscure,

cystoscopic examination is demanded, and as the condition to be dealt with, outside of vesical calculus and tumor, may be a renal neoplasm.

THERAPY.—The therapy appropriate to the underlying cause must be applied.

THIS PAGE IS LOCKED TO FREE MEMBERS
Purchase full membership to immediately unlock this page

Know Your Bible

Forgotten Books' Full Membership provides unlimited access to more than 28,000 volumes of Christian literature for $8.99/month

Continue

*Fair use policy applies

being in some gonococcus arthritis, in others gonococcus endocarditis.

The writer in the last few years has likewise met some instances of positive blood culture in gonorrheal infections. In one case, that of acute gonococcus endocarditis in a young woman of 22, the typical lesions of verrucous endocarditis were found post-mortem and the organisms were found in the vegetations. The other instance occurred in a young man suffering from subacute urethritis and acute gonococcus arthritis. He ultimately recovered.

The synovial fluid in the case of acute gonococcus arthritis frequently shows many gonococci easily demonstrated both in smear and in culture.

Thus we see that gonococcic infections may be specifically diagnosed by demonstrating the organisms in the discharge, as in the infections of the outer genitalia or by finding the bacteria in the joint fluid in arthritis or in the blood in cases of general gonococcic sepsis. The recognition of the great difficulty to obtain accurate specific diagnosis in many instances and the great importance of accurate diagnosis in all forms of gonococcic infections has properly led to considerable study on other specific methods of diagnosis, especially the serological. This method of diagnosis consists in determining the specific immune bodies in the blood produced in the human body during the course of infection by any bacterial agent.

Examination of the blood for immune bodies produced during the course of gonococcic infections.

I. Agglutination studies.
II. Opsonic studies.
III. Precipitin studies.
IV. Bactericidal tests.
V. Complement fixation studies.
IV. Skin reactions (Phenomena of Allergy).

I. AGGLUTINATION STUDIES.

The gonococcus like the meningococcus and the other members of the Gram-negative group of cocci, namely the pseudo-meningococcus, micrococcus catarrhalis, micrococcus pharyngis

siccus, chromogenic Gram-negative cocci, the diplococcus mucosus and the parameningococcus does not lend itself well to accurate agglutination studies. Many of the strains show spontaneous agglutination; other strains are inagglutinable. The agglutinogenic properties of the organisms are also very easily influenced by the ingredients of the culture media on which they grow, especially if serum be present.

Teague and Torrey and others have shown that the gonococcus family is made up of a number of different strains of organisms which differ markedly in their serum reactions. Thus in diagnostic tests it would be necessary to use as many strains as possible. On account of the varying agglutinating response of different gonococcus organisms this would be impossible.

Most of the studies on agglutination have been made on the immune sera of animals highly immunized by repeated injection with the gonococcus. Even in these sera where one would expect the highest response to the formation of agglutinins, irregular results have been obtained. It is agreed by all observers that great care must be employed in the test and that many controls must be used before any readings can be made.

Torrey, using different strains of gonococci, obtained agglutination varying from 1-100 to 1-700,000 and found that the group agglutinins in antigonococcic sera, reacted with the meningococcus in dilutions varying from 1-10 to 1-500.

Wollstein examined a group of four gonococcus immune sera and was unable to obtain high agglutination in any. She found that apparently the agglutinins produced were largely common to both gonococcus and meningococcus.

Warden in a recent article notes that agglutination of gonococci by anti-sera have been disappointing in his hands and that he has been unable to substantiate the claim of many who report that they have produced sera which will agglutinate in very high dilution.

Very little work and that unsatisfactory has been done on agglutinins in the blood serum of those suffering from gonococcus infections, but judging from the results obtained with highly immune animal sera one would be justified in eliminating this method of diagnosis from practical consideration. The few observations that have been reported show either the apparent

total absence of agglutinins or its presence in very small quantity, even if other immune bodies be demonstrated in appreciable quantity.

Bruck, for example, notes that the blood serum of three adult cases of gonorrhea failed to show the presence of agglutinins and precipitins though the complement fixation test was strongly positive.

II. OPSONIC STUDIES.

What has been said concerning the agglutinins likewise holds true about the opsonins. The spontaneous phagocytosis of many strains of gonococci, the failure of phagocytosis of other strains renders this test inaccurate, especially since it is necessary to include all strains of the gonococcus for accurate diagnosis.

Some observers, including Weiderholter, refer to this test as being of diagnostic value and note that a low opsonic index indicates gonorrhea; a normal index being of no value. From my personal experience with many tests using the antimeningitis serum against the meningococcus and the gonococcus, and the antigonococcus serum against these organisms, I feel that this test is very inaccurate, especially from a technical standpoint and is impractical for general diagnostic application.

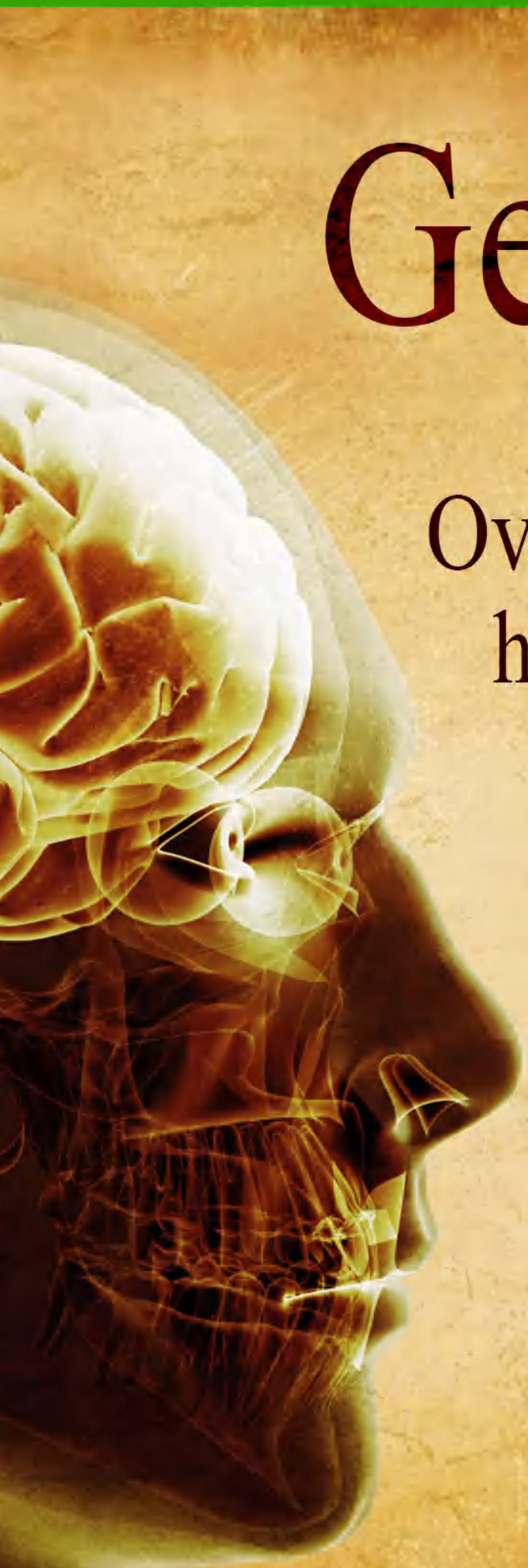
III. PRECIPITIN STUDIES.

Specific precipitins have likewise been demonstrated in the blood serum of immunized animals. Torrey in 1907 noted the presence of specific precipitins in the blood serum of immunized animals, observing that there was apparently no relationship between the precipitin and agglutinin properties of antigonococcic serum for a culture of gonococcus, and that group precipitins were also present for the meningococcus.

Wollstein obtained precipitin reactions only in one of a series of four immune sera tested and that only in low dilution.

Brickner and Cristenau found the precipitin reactions with gonococcus and meningococcus to be identical. Bruck failed to find precipitins in any of the sera of three adult cases of gonorrhea. It is therefore manifest that the determination of precipitins in the blood serum is only of academic interest and cannot be applied in diagnosis.

THIS PAGE IS LOCKED TO FREE MEMBERS
Purchase full membership to immediately unlock this page



Get Smart

Over 2,000 years of human knowledge in 797,885 volumes

Instant access
$8.99/month

Continue

*Fair usage policy applies

Torrey made very careful complement fixation studies against different strains of gonococci and noted that the serum of an animal immunized to one strain of gonococcus may not cause "fixation of complement" when tested against an antigen obtained from another strain. This confirms the view already advanced by Torrey from a study of the agglutinins and precipitins of the gonococcus, that we are dealing with a heterogeneous family of organisms.

In applying this method of "fixation of complement" to the differentiation of the gonococcus from other microörganisms, erroneous conclusions are apt to be drawn on account of this heterogeneity. The use of serums immune to several selected strains may prove to be a solution of this difficulty.

In attempting the diagnosis of gonorrheal infections by this method, extracts of several different strains should be employed.

In 1910, Watabiki working with gonococcus antigen prepared from different strains of gonococci, made tests against immune animal serum and the serum of patients suffering from gonococcic infections. He found like the previous observers that the serum of gonorrheal patients contained specific amboceptors for the complement fixing reaction; that in chronic cases the results were usually positive; that of the serum of professedly gonorrheal patients at the time of the test one chronic case was positive and one acute case negative; that normal human serum and the serum of other animals gave negative reaction.

In 1911 Schwartz and McNeil employed this test for diagnosis in a great many clinical cases and reported more uniform results than had yet been observed and proved that this test could be regularly used for diagnosis if carefully and properly done. Employing Torrey's observations that the gonococcus family is made up of a number of different strains of organisms varying in their reaction, they prepared a gonococcus antigen which included every known strain. This was undoubtedly the secret of their uniform results.

While in the Research Laboratories of New York, the writer was fortunately able to observe the method employed by Dr. McNeil and has since used the test in a considerable number of cases. The technic employed by these workers follows:

(1) PREPARATION OF THE SPECIFIC GONOCOCCUS ANTIGEN.—Nine

to twelve different strains of gonococci were used. These were the strains originally isolated by Torrey from many cases and subsequently classified by him into a smaller number of different "strains." The cultures are grown and kept alive by frequent transplantation on glucose serum agar. For preparation of the antigen the cultures are transplanted and grown from 24 to 48 hours on Thalmann's agar to which 2 per cent of glucose has been added.

Thalmann's agar is prepared as follows:

Boil over free flame for 15 minutes, 500 grams of chopped beef in one liter of distilled water. Filter through cotton. Add 1.5 per cent agar. Boil 45 minutes over free flame in bath containing 40 per cent solution of salt. Now render mildly alkaline to litmus by means of a saturated solution of sodium carbonate. Then cool to 50° C., and clear in the usual way.

Two cc. of normal saline solution are added to each fully grown culture tube and the culture scraped off with a loop. The suspension of bacteria in saline is heated to 56° C. for half an hour in the water bath, then placed in a mechanical shaking apparatus and agitated for 24 hours at room temperature. The suspension is then centrifuged. The supernatant fluid is pipetted off and placed in a sterile bottle, a small drop of lysol being added as a preservative.

McNeil subsequently observed that the antigen prepared according to the above formula, while giving very good results in clinical tests, was unsatisfactory in that it was unstable, deteriorated and quickly became very anticomplementary. It also invariably fixed complement with the antimeningococcus serum. After employing a number of different methods, McNeil believed that he had found one by which he could produce a specific stable gonococcus antigen which was specific only for gonococcic sera but not for meningococcic sera.

The *technic* for preparing this antigen is as follows:

Cultures are grown on plain veal agar (neutral in reaction to phenolphthalein) and without the addition of the usual 5 per cent of salt. On this media cultures grow more luxuriantly than on media containing the additional salt. The cultures washed off in distilled water, rapidly disintegrate. The suspension of cocci is placed in a water bath of 55° C. for two hours,

is then centrifuged and the supernatant fluid passed through a Berkfeld filter. The filtrate makes a permanent antigen if kept in a cool place. Before using bring up to normal tonicity by taking 9 parts of the antigen to 1 part of 9 per cent salt solution.

(2) SERA TO BE TESTED.—Heat to inactive at 56° C. for half an hour.

(3) USE EITHER SHEEP OR HUMAN HÆMOLYTIC SYSTEM.—Schwartz and McNeil did most of their tests using the sheep hæmolytic system, the test being done in one tenth the bulk of the usual Wassermann test. In this way is eliminated the necessity for obtaining large quantities of serum for the test, 1 cc. of blood from the patient giving ample serum for a few tests.

Technic of the Test.—Titrate the antigen to determine the maximum quantity which can be used without inhibiting hæmolysis. Titrate all materials before commencing the test.

Test: In the front tubes place .01 cc. and .02 cc. serum respectively, in the back control tube place .02 cc. serum. Complement: .1 cc. of 10 per cent solution of complement; antigen in maximum quantity; 1 positive and negative control each with its own separate control.

Incubate one half hour in water bath.

Add 1 cc. of 5 per cent suspension of sheep corpuscles, .1 cc. of antisheep amboceptor, equal to two units.

Incubate in water bath 1 hour and make readings.

The test was employed by Schwartz and McNeil in a series of cases of which the following is a detailed report:

Clinical Diagnosis.	Cases. Total No.	No. Positive.	Per cent. Positive.	No. Negative.	Per cent. Negative.
1. Acute gonorrheal urethritis, first attack					
(*a*) Duration 3 days to 3 weeks ...	5	0	0	5	100
(*b*) Duration not stated	1	1	100	0	0
2. Acute urethritis; cocci not found	1	0	0	1	100
3. Chronic urethritis of gonorrheal origin					
(*a*) Gonococci present	4	4	100	0	0
(*b*) Gonococci not found	36	27	80	9	20
(c) No examination made for gonococci, but serum was taken from cases at stage when gonococci are usually absent	8	7	90	1	10
4. Chronic urethritis; history of gonorrhea doubtful	4	1	25	3	75
5. Chronic prostatitis.					
(*a*) Gonorrheal history	25	17	68	8	32
(*b*) Gonorrheal history doubtful ...	2	1	50	1	50

THIS PAGE IS LOCKED TO FREE MEMBERS
Purchase full membership to immediately unlock this page

Know Your Bible

Forgotten Books' Full Membership provides unlimited access to more than 28,000 volumes of Christian literature for $8.99/month

Continue

*Fair use policy applies

stimulated a great deal of further work in the same direction, so that in a short time a large series of very valuable and confirmatory statistics were reported by other observers.

P. F. O'Neil of the Massachusetts General Hospital reported a series of 256 tests:

CASES OF GONOCOCCUS HISTORY CLINICALLY UNCURED

Number	Positive	Negative
109	95	14

CASES IN WHICH THE CURE WAS DOUBTFUL

Number	Positive	Negative
27	9	18

CASES IN WHICH THE DIAGNOSIS WAS DOUBTFUL

Number	Positive	Negative
16	5	11

CASES WITH NEGATIVE GONOCOCCUS HISTORY

Number	Positive	Negative
17	0	17

CASES NEGATIVE TO GONORRHEA BY CLINICAL EXAMINATION AT TIME OF TEST. HISTORY OF GONORRHEA IN MOST CASES

Number	Positive	Negative
52	9	43

CASES FROM SERVICE

Number	Positive	Negative
35	11	24

Gardner and Clowes of Buffalo reported a series of 185 cases. Positive reactions were obtained in all undoubted gonococcus cases except in the first three weeks of the acute stage. Normal individuals gave a negative reaction.

Lewis E. Schmidt of Chicago reported a series of 103 cases:

NO GONORRHEA	ACUTE	CHRONIC	CURED
34	3	24	42
100% Neg.	100% Neg.	70% Pos. 29% Neg.	11% Pos. 88% Neg.

Gradwohl reported 50 cases. Eighteen cases of acute gonorrhea gave negative results. Other cases of gonococcus arthritis, chronic gonorrhea in the female and cases of deep infection gave positive results.

Victor Lespinasse and Maurice Wolfe report similar findings.

H. L. Rockwood of Cleveland reports a series of 193 tests. In over 80 per cent of the cases where there was reason to suspect an active gonococcus infection the blood examination was positive. A positive reaction was found in no case in which the absence of gonococcus infection was certain. In clinically cured cases over 80 per cent were negative. In no case where a negative reaction was found had there been evidence of recurrence of active infection.

An analysis of the results of the complement fixation test shows that this test is an extremely valuable aid from a diagnostic and a therapeutic standpoint.

1. Acute cases of gonorrhea give a negative reaction in the first three weeks of the illness.

2. Subacute and chronic infections caused by the gonococcus give a positive reaction. The type of cases in which serological examination is of particular value for diagnosis is that in which bacteriological diagnosis is doubtful or impossible, as

(a) *In the male.*—Epididymitis, prostatitis, chronic urethritis.

(b) *In the female.*—Chronic leucorrhea, pelvic infections as pyosalpinx, pelvic cellulitis or peritonitis. As an illustration of the value of this test in gynecological diagnosis may be quoted the following case, examined by the writer:

A married woman, aged 30, was admitted to the hospital suffering from arthritis of the right wrist. There was no history of gonorrhea. An examination of the leucorrheal discharge was negative. A few days after admission to the hospital, the patient developed signs of acute inflammation in the pelvis, especially involving the right side, so that an acute appendicitis, or acute pyosalpinx, was suspected. About 12 hours after the inception of these symptoms, general symptoms of peritonitis developed. The patient was very ill, vomited and had a high temperature. On account of the joint condition, it was suspected that the infection might be due to the gonococcus, with the tube as the local focus. From a therapeutic standpoint, the differential diagnosis was extremely important. A blood examination gave a very strong gonococcus complement fixation reaction. It was therefore decided to be conservative and watch the patient carefully. Symptoms subsided in a few days, though local signs of tubal involvement persisted. Under the administration of gonococcus vaccine there was a rapid improvement both in this condition and in the arthritis.

3. Differential diagnosis of gonococcus arthritis from other forms of arthritis. Positive complement fixation reaction is obtained in most of these cases.

4. In ophthalmological diagnosis of subacute cases of obscure origin, this test has proved of decided value.

5. This test may be used as a guide for treatment. A persistent positive reaction indicates that a latent uncured gonorrhea is still present and shows the need of further treatment. Antibodies persist in the blood as long as any live gonococci remain in the body and are not supposed to remain long after the disappearance of the organisms.

6. The test may be applied medico-legally and in cases where marriage is considered. Keyes' case, that of a man who acquired gonorrhea twice, is very significant. The first time he and his wife were infected and under treatment both were cured. The man later developed a fresh acute gonorrhea. The question then considered—whether this was a fresh infection or a recurrence—was very important. Examination of his serum was at first negative, but after four weeks became positive. His wife's serum was negative. The serological examination therefore pointed to an undoubted fresh infection. This was proved later by the confession of the husband.

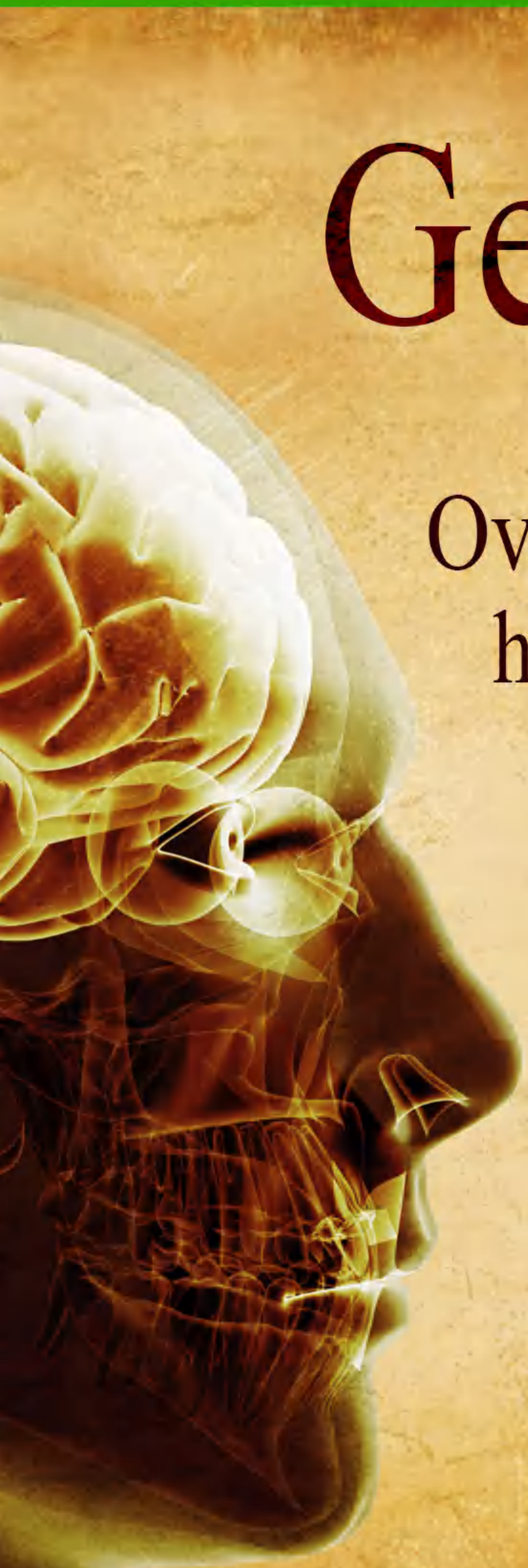
It may be well to add another word of caution before leaving the subject of complement fixation tests in diagnosis of gonorrheal infections. This test must be done with great care as to the preparation of all materials and in checking up results if one desires to obtain systematic findings. The antigen must be polyvalent, carefully prepared and carefully tested and should include as many known strains of the gonococcus as possible. The later method described by McNeil, of preparing a specific antigen should be used. Irregular results may be obtained if the blood of those recovered from meningitis or who have been vaccinated against meningitis be examined. Such sera fix gonococcus antigen as well as the antigonococcic serum. Further studies should be made, testing out the specificity of the antigen now recommended by McNeil.

VI. SKIN REACTION (PHENOMENA OF ALLERGY).

(Cutaneous Reactions Following Injections of Gonococcus Vaccine.)

Bruck first noted that the intradermal injection of gonococcus vaccine caused a reaction at the site of injection (cuti-reaction).

THIS PAGE IS LOCKED TO FREE MEMBERS
Purchase full membership to immediately unlock this page



Get Smart

Over 2,000 years of human knowledge in 797,885 volumes

Instant access
$8.99/month

Continue

*Fair usage policy applies

In his summary he stated:

"The cutaneous inoculation of glycerin extracts of autolyzed gonococci in patients infected by the gonococcus produces a well-defined reaction. This reaction is not usually obtained in normal persons, nor in those suffering from other infectious diseases.

In persons recently infected, the reaction is negative and increases gradually during the course of the disease.

In the more chronic forms of gonococcal infection, such as arthritis, the degree of the cutaneous reactivity varies from day to day and these variations may be correlated with the changes in the clinical course of the disease.

Cases of severe infection, such as extensive arthritis, may give negative reactions. Later, when improvement has occurred, the reaction becomes positive.

In general, a positive reaction is obtained in patients with gonococcal infection at some time during the course of the disease.

In normal persons the gonococcin prepared in the manner described gives a cutaneous reaction rarely more than 2 to 3 mm. in diameter.

Occasionally in adults and somewhat more frequently in children fairly marked reactions are met with where previous gonococcal infection can be excluded. In these cases the normal antibodies may be increased to an unusual degree. It is possible that normal individuals may be found who will give reactions to antigens prepared from many pathogenic organisms. The possibility must also be borne in mind that infection by one organism may give rise to an increase in the proteolytic power of the serum for other organisms.

The cutaneous reactions obtained with meningococcal and gonococcal antigens suggest that we are dealing with a group reaction.

In diagnosis, a positive reaction is to be regarded as confirmatory evidence of gonococcal infection. Other infections such as those by the meningococcus or *M. catarrhalis*, which may give rise to a group reaction, must be excluded. The clinical value of the reaction must be determined by further tests, and its limitations defined by a study of many groups of cases."

He notes in infected individuals giving weak cutaneous reaction, that the reaction may become positive on the second test after inoculation of gonococcus vaccine. A number of adults gave a positive reaction 1–2 years after a single gonococcus infection and some even 2–12 years after the original infection.

Positive results have been obtained by Irons in cases of meningitis in the latter part of the disease or in convalescence, and have been similarly noted by the writer in using both antigens, meningococcic or gonococcic, and in using meningitis antigen instead of gonococcus antigen for the test in gonorrhea patients. Therefore the precaution mentioned by Irons of excluding the group reactions which would occur in performing this test on patients who had suffered from meningitis or who have been prophylactically vaccinated against meningitis, must be borne in mind.

London made a number of tests on "cutaneous allergy" by employing the "Stich Reaktion." He used vaccine containing

50–100 million killed bacteria per cc., injecting 2–3 minims directly underneath the skin so as to raise a wheal. This method is somewhat more desirable than the scarification method. He noted that of 18 cases suffering from gonorrhea, 16 were positive. Of 14 control cases, 12 were negative and two gave slight reaction. Of 3 cases of arthritis, two were positive. Cured cases gave negative results. He believes that this test could be used in diagnosis. Likewise, Eising obtained similar results and found in a series of 30 cases which he tested that the skin reaction corresponded to clinical and bacteriological findings. The writer used this method and the scarification method two years ago in testing meningitis cases and found some cross reaction here, as with the scarification method.

Y. Noguchi and Watabiki prepared a gonococcus toxin which they used for making skin reaction, but found that this preparation was inert.

Further Observations on the Reaction Following Cutaneous or Intramuscular Injection of Vaccine.

The reaction following the subcutaneous or intramuscular injection of vaccine has been carefully studied, and may be classified as (A) local at point of inoculation, (B) the so-called "Herd" reaction described by the Germans, consisting of a reaction in the diseased area, and (C) general constitutional and febrile reaction.

In a careful analysis of this subject, Fromme concludes that the injection of vaccine causes a very sharp local reaction in acute cases of gonorrhea, less marked in chronic cases, and that it occurs in those free from gonorrhea, so that the local reaction is of no value in diagnosis. He describes the "Herd" reaction as consisting of pain in the diseased area in deep infection, and in cervical or urethral gonorrhea, increased secretion. The reaction occurs 8–10 hours after the injection and lasts 12–24 hours. This reaction, however, is not specific. He noted increased pain in one case free from gonorrhea, but suffering from uterine myoma. A very important point, also noted by other observers, is the fact that the increased discharge which frequently follows the injection of vaccine often shows the presence of the gonococcus which could not previously be demonstrated.

He describes the general reaction as consisting of fever and general constitutional symptoms. He believes that fever is of considerable significance as it did not occur in any of his acute cases of gonorrhea, or normal cases, but he noted it in some cases of gonococcus pyosalpinx. He believes that in these cases a febrile reaction is significant of a fresh involvement of the tube.

Guggisburg noted that old cases of infection responded most often by local reaction, and that acute cases by temperature reaction.

Simon likewise believes that neither local nor "Herd" reaction is specific. He believes the general reaction is more important. The skin (v. Pirquet) reaction in his experience has not given definite results.

Neu believes that very irregular results have been obtained with the skin reaction in diagnosis, and that at the present time it must be considered of uncertain value.

Kingsbury reported the occurrence of itching papulovesicular eruption, which occurred after the use of gonococcus vaccine. The significance of this reaction is very doubtful.

Eye Reaction in Diagnosis of Gonococcal Infection.

Irons notes the occurrence of ocular reaction following vaccination of those who had previously suffered from eye infection.

Ziemann, in his observation on a series of thirty-eight cases, notes that there is frequent congestion of the conjunctivæ, which is probably due to the liberation of toxins. He made a series of observations on local eye reaction, after the instillation of sterile gonococcus filtrate.

He prepared the antigen by growing the organisms on ascitic agar. He then dried the bacteria and rubbed them up in a mortar and diluted them 1–100 in one-half per cent carbolic and physiological salt solution. The preparation was placed in the incubator for twenty-four hours. For the test 1–2 drops of the filtrate was put into the conjunctivæ.

In 23 of 38 cases of chronic gonorrhea, a reaction occurred, consisting of congestion and slight discharge. Acute cases and those free from the disease gave a negative reaction.

THIS PAGE IS LOCKED TO FREE MEMBERS
Purchase full membership to immediately unlock this page

Know Your Bible

Forgotten Books' Full Membership provides unlimited access to more than 28,000 volumes of Christian literature for $8.99/month

Continue

*Fair use policy applies

but before using such a vaccine, one should if possible determine the method of preparation.

Mixed Vaccine.—*Staphylococcus albus, Staphylococcus aureus,* diphtheroid bacteria and small Gram-negative bacilli can frequently be isolated, together with the gonococcus from the urethral discharge, especially in the subacute and chronic stages. A number of writers have recommended that these accompanying bacteria be included with the gonococcus vaccine. Boehm, for example, advises the use of combined staphylo-gonococcus vaccine, and states that he has obtained better results after its use.

The general consensus of opinion, however, is that the gonococcus is the organism almost entirely at fault in most cases and that the secondary invaders are of little importance; that the infection from the secondary contaminating bacteria will promptly clear up if the primary causative agent (the gonococcus) be eliminated.

Preparation of Vaccine.—CULTURE.—Use as many known strains as possible, growing the cultures on the optimum medium, usually one of ascitic-glucose agar, the reaction being neutral to phenolphthalein. If sufficiently good growth can be obtained, on a serum free medium, as for example Thalmann's medium, such media should be preferably selected. The growth should be washed off with salt solution and then well shaken for one-half hour, and standardized by any of the accepted methods. The emulsion should be killed by heating. It is important to use as low temperature as possible in killing the bacteria. The writer is accustomed to killing the emulsion by heating at 50° C. for one hour. The emulsion should then be tested for sterility and prepared in suitable doses. The addition of a strong preservative is not desirable, so the writer is accustomed to adding no preservative or only a minimum quantity.

It is generally accepted that a dose of any bacterial vaccine should be controlled by clinical symptoms; that the opsonic control is very misleading and furthermore impracticable. As a general rule, it may be accepted that an acute infection should be treated with initial small doses—e. g., five million killed bacteria, gradually increasing the dose; and that in chronic infections, a larger initial dose—e. g., 25–50 million killed bacteria may be used.

The absence of local or general reaction following the infection

of the vaccine may be considered as an indication to increase the dose. A fairly accurate guide is to increase the dose until a rather sharp local reaction at the point of inoculation results, and to diminish the dose slightly when a severe reaction occurs. The writer believes that somewhat better results can be obtained by using smaller doses frequently than by using larger ones at longer intervals. The writer has obtained best results by injecting at intervals of from three to four days.

Vaccine in Urethral Gonorrhea.—Many conflicting reports have appeared on the results obtained with gonococcus vaccine in acute urethritis. The general opinion and experience has been that vaccine treatment of acute urethritis is of little if any value. The very encouraging experience of many observers in the use of vaccine in acute and chronic urethritis, however, indicates that this form of therapy has some use in this stage of disease.

One German writer reporting 12 cases of acute arthritis noted that the total duration of the illness was considerably shortened, that cases were more completely cured under vaccine treatment and that epididymitis occurred as a complication under vaccine treatment only in 8.4 per cent as compared to the usual 15 to 20 per cent.

MacCullum of Kansas City obtained similar results in a series of 20 acute cases treated with vaccine, and noted that recovery occurred sooner, appeared more complete, and that complications likewise were much less frequent.

Mark of Kansas City in a much larger series of cases not yet reported, has obtained equally good results, and believes that vaccine is a valuable aid in addition to the usual local treatment. Many cases appeared to respond under vaccine treatment that were not influenced by the usual treatment.

Eyre and Stewart are very strongly in favor of using gonococcus vaccine in all cases of acute gonorrhea. MacGowan noted that his cases progressed better and that complications were much less frequent and in milder type under proper vaccine therapy.

On the other hand Hartwell found that absolutely no effect was noticed in the urethral discharge, and Felix Hagen states: "Vaccine is of no therapeutic value in gonorrheal urethritis." Boehm believes that vaccine is harmful in acute cases.

Similar conflicting reports are recorded concerning the value of vaccine in female gonorrhea.

In the experience of the majority of observers gonorrheal vulvovaginitis in children fails to respond to vaccine treatment. Most favorable results have been reported by Hamilton, who notes in a series of 84 cases that many were cured. Fully 85 per cent were cured after only 6 injections. A number of these cases, however, could not be followed for subsequent relapse. It is a well-known fact that relapse is very common in these cases among children. Weinstein and others, however, report equally good results.

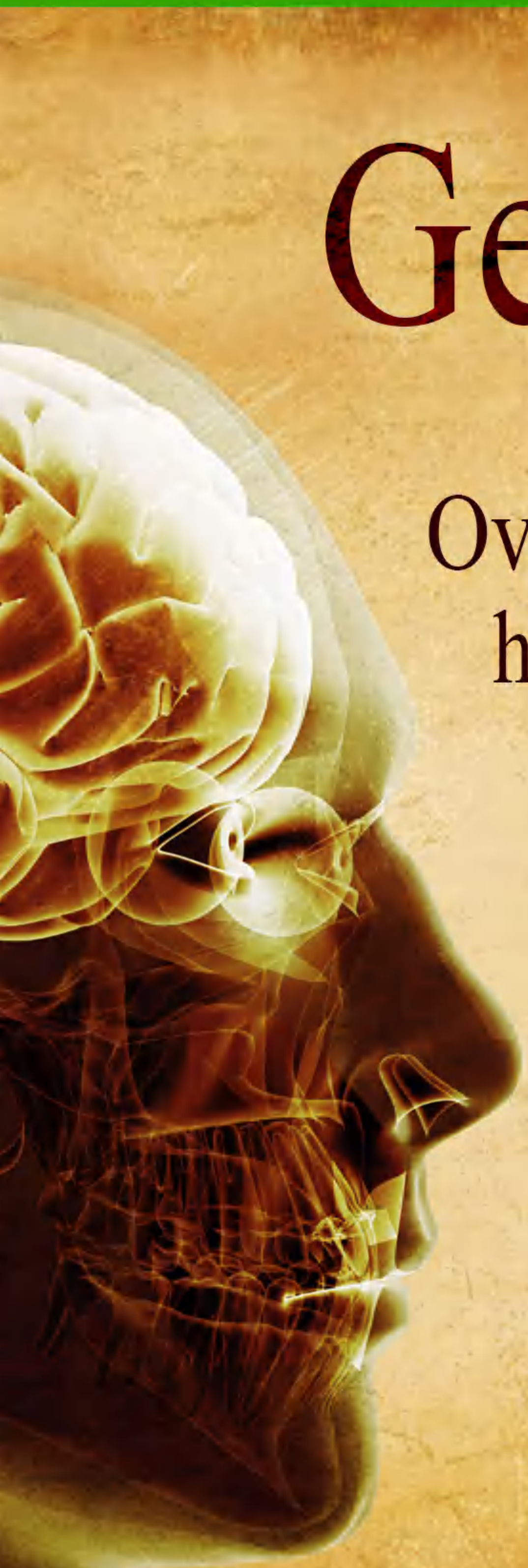
In the experience of the best observers gonorrheal vaginitis, cervicitis and urethritis in the adult fail to respond to vaccine therapy, though some observers have obtained as good results in these cases as in the male. Thus Schmidt obtained good results in vaginitis and cervicitis. Fromme, after a careful analysis of many cases, concludes that the measure is not only of no value in acute cases, but may be harmful and, in some cases, may be followed by complications in the tubes.

The irregular results obtained in vaccine therapy in acute and chronic gonorrhea may be summarized as follows: In the male most cases of acute and chronic gonorrhea have failed to respond to vaccine treatment. Those, however, who have obtained best results have used small initial doses. The writer believes that this undoubtedly is one of the reasons for such irregularity of results. Small doses should be used and carefully increased. Large doses causing general reaction and reaction in the diseased area are decidedly harmful. The writer believes that further observations in this field are warranted. Vaccine treatment should also be used only in addition to the usual local treatment.

There appears to be much less promise in vaccine therapy in female gonorrhea. The favorable results reported in vulvovaginitis have not been substantiated by most observers. Huddelston and the writer treated a series of cases in the Willard Parker Hospital of New York City and obtained absolutely negative results.

Vaccine Treatment of Complications.—1. IN THE MALE.—Many observers have reported favorable results in cases of epididymitis and prostatitis under vaccine therapy. Many among

THIS PAGE IS LOCKED TO FREE MEMBERS
Purchase full membership to immediately unlock this page



Get Smart

Over 2,000 years of human knowledge in 797,885 volumes

Instant access
$8.99/month

Continue

*Fair usage policy applies

by the gonococcus tends to spontaneous recovery; that other cases, however, do not recover quickly and the condition passes into a chronic stage which may last months or years. In the first class of cases immunity develops rapidly and clinically little benefit appears to result from injection of dead gonococci. In chronic cases the injection of dead gonococci has seemed to be of distinct value. He notes that no harm appeared to have followed injections.

Keyes states in cases of gonorrheal arthritis 75 per cent should be greatly improved by vaccine treatment.

Baetz recently reports twenty-nine cases of gonorrheal arthritis and notes that brilliant results were obtained in his cases. He placed the patient in bed and administered hexamethylenamine, aspirating the pus from the most severely involved joints and administering a potent polyvalent vaccine subcutaneously. He notes where some cases of acute arthritis will recover without vaccine treatment; that in most cases the patient will suffer far less pain and get well much more rapidly with vaccine treatment.

Gonococcus Sepsis.—Nichol and Wilson recently reported a case of acute gonococcus septicæmia complicating acute gonococcal arthritis, which responded promptly to gonococcus vaccine. The usual forms of gonococcus sepsis which complicate acute or subacute gonococcus arthritis respond in most cases very well to vaccine therapy. This group probably belongs under the consideration of gonococcal arthritis.

The cases of *Verrucous endocarditis* with general gonococcus bacteræmia have not responded to any form of therapy, at least judging by the limited number of cases reported.

Gonorrheal Ophthalmia and Iritis.—Recently a report appeared in *The Medical Record* of a series of nine cases of gonorrheal ophthalmia which responded immediately to vaccine therapy, and a series of four cases which were cured under exhibition of gonococcal vaccine.

Vandegrift reported, similarly, a very successful result in the vaccine treatment of a case of gonorrheal chorditis.

II. GONOCOCCUS IMMUNE SERUM.

Gonococcus immune serum is prepared by immunizing animals (rabbits, goats, sheep and horses) against the gonococcus. A number of different methods have been recommended. Probably the best one consists of injecting the animals, at first every three days with increasing doses of autolysed culture made up of as many strains of gonococcus as possible. As larger doses are reached, live culture is given, likewise in increasing doses. Injections are made into the soft parts. After larger doses are reached the interval is increased to five to seven days, then to every two weeks, live culture and autolysate being alternately injected. The serum is standardized by the various recognized methods of immune serum tests. Animal protection tests give irregular results. In my experience the most satisfactory results are obtained by complement fixation tests, considering a positive fixation at 1:1000 dilution as the lower limit of efficiency for a therapeutic serum. Opsonic and agglutination tests may also be used but with less satisfactory results.

Subcutaneous and Intravenous Administration of Antigonococcic Serum.—The antigonococcic serum has not been extensively used and few systematic observations have been made. The serum is especially indicated in general gonococcic sepsis, complicating acute gonococcic arthritis or urethritis and in acute or subacute sepsis accompanying *verrucous endocarditis*. In such cases serum has been used in varying doses by subcutaneous or intravenous injection.

Serum treatment should be conducted along the same lines as for any form of general sepsis. Large doses of serum averaging 20 cc. to 100 or more should be injected and doses repeated at frequent intervals if the infection persists. In acute cases of arthritis where such treatment has been employed, good results have been reported in a number of cases. Sepsis complicating endocarditis probably proves fatal in all instances.

Swinburne reports twenty-seven cases of epididymitis treated with serum; the majority were relieved of pain in 48 hours and almost all went on to complete recovery. Indifferent or negative results have been obtained in subcutaneous serum therapy of urethral gonorrhea.

Local Administration of Antigonococcic Serum.—Many of the advances in modern serum treatment of infectious diseases have occurred through recognition of the efficacy of applying curative serum directly in contact with the infected tissues. Thus the brilliant results in epidemic meningitis with subdural serum treatment and the excellent results frequently following the application of normal or streptococcic serum to surface wounds.

Lord and Netter first reported cases of meningococcus arthritis which promptly recovered after tapping followed by the injection of antimeningitis serum. The writer has no record of such treatment of gonococcic arthritis and has had as yet no opportunity of employing it.

The rationale of this method of treatment, especially judging by the results obtained by this treatment in joint infections caused by allied organism of meningitis would warrant the use of this remedy. The writer suggests that the joint be first tapped, then a moderate dose of immune gonococcic serum be introduced directly into the joint cavity in quantity of 10—20—30 cc. or more but not enough to cause distress or overdistention.

Local Treatment of Urethritis.—The same principle of local serum therapy described in the above discussion may be applied in the treatment of acute urethritis.

At my suggestion Leopold and Reuben treated some cases of vulvovaginitis in children by applying immune serum directly to the infected parts. In the few cases so treated no improvement was manifest. This measure should be tried further. MacCallum of Kansas City applied this measure in treating acute gonococcus urethritis in the male. Serum was injected into the anterior urethra and allowed to remain there from 10 to 15 minutes. Two cases so treated apparently responded very favorably both subjectively and objectively as demonstrated by examination of the discharge. Almost equally good results were obtained, however, by normal serum so applied. Further observations are now being made by MacCullum.

Normal serum has been used instead of immune serum in treating many infections both by subcutaneous injection and local application and in a number of instances has produced as good results as immune serum. Thus Horder reports favorable response in gonococcus arthritis in cases treated with normal or immune

THIS PAGE IS LOCKED TO FREE MEMBERS
Purchase full membership to immediately unlock this page

Know Your Bible

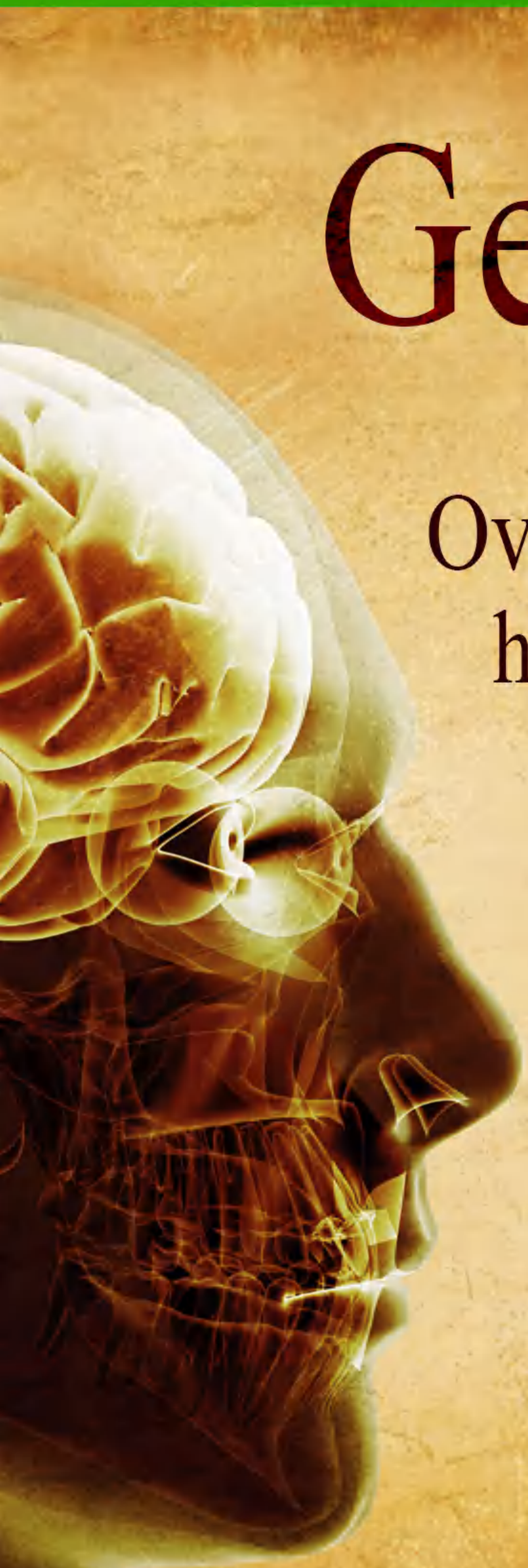
Forgotten Books' Full Membership provides unlimited access to more than 28,000 volumes of Christian literature for $8.99/month

Continue

*Fair use policy applies

INDEX.

THIS PAGE IS LOCKED TO FREE MEMBERS
Purchase full membership to immediately unlock this page



Get Smart

Over 2,000 years of human knowledge in 797,885 volumes

Instant access
$8.99/month

Continue

*Fair usage policy applies

Bladder—(*contd.*)
hernia of, 114
inflammation of, 103 (*see* also Cystitis)
irritable, 115
open injuries of, 113
paralysis of, 116
parasites in, 113
rupture of. 113
tuberculosis of, 103
diagnosis, 103
treatment, 103, 104
tumors of, diagnosis, 107
therapy, 107
treatment, 108
varices of, 114
Bougies, 1
manipulation of, 11
filiform, 61
with screw-joint, 63
Bransford Lewis automatic rectal syphon, 78
Bromids, 33

C

Calculi, of the seminal vesicles, 95
prostatic, 93
renal, 123
surgical treatment of, 125
urethral, 53, 147, 168
vesical, 106, 171
Cancer (*see* Carcinoma)
Catheter, Bartrina, 85
Bastos, 85
Malécot, 91
Mercier, 11
manipulation of metal, 10, 11
mistakes made in, 10
Nélaton, 1
Pousson, 91
Pezzer de, 91
permanent, 169
broken, removal of, 54
Skene, 169
Tiemann, 85
Catheterization, of the bladder, 100
of the male, 10
in chronic cystitis, 169
in childhood, 179
in ischuria paradoxa, 173
instructions for self-catheterization, 87
Cervix uteri, gonorrhea of, 165
Chancre of urethra, 40
Chancroid, treatment of, 43
of urethra, 40
Chetwood's operation for prostatic hypertrophy, 90
Circumcision, Bransford Lewis' method of, 49, 50
Collin foreign-body forceps, 53, 56
instrument for removal of hard catheters from bladder, 112
Colic, due to calculi, treatment of, 125
Complement fixation studies, 187
specific gonococcus antigen, preparation of, 188-190

Complications of gonorrhea, 19, 33
vaccine treatment of, 202, 203
Condom, 32
Condylomata acuminata, 41
Contusion of the scrotum, 71
of the testis, 71
of the urethra, 57
Cowper's glands, inflammation of, 37
Cystitis:
acute, in the male, 97
in the female, 168
in childhood, 178
chronic, in the male, 100
in the female, 168
in childhood, 178
trigoni, 170
Cystocele, 167
Cystoscope, Bransford Lewis operative, 55
disinfection of, 2
lubrication of, 8
manipulation of, 55
Cysts, of urethra, 39

D

Diagnostic value of fixation of complement test, 188, 193
of agglutination reaction, 185
of bactericidal test, 187
of opsonic test, 186
of precipitin test, 186
of skin reactions, 198
Diday irrigation in chronic gonorrhea, 20, 21, 22
Dilators, disinfection of, 1
Disinfection of cystoscopes, 1
of irrigators, 2
of metal instruments, 1
of rubber instruments, 1
of silk instruments, 1
of syringes, 2
Diverticulum of the bladder, 114
Douglas' pouch, puncture of abscess in, 79

E

Echinococcus of the kidney, 132
Enuresis infantum, 176
therapy of, 177
treatment of, 177
Epididymis, syphilis of, 71
tuberculosis of, 70
tumors of, 72
Epididymitis, treatment of, 67
vaccine in, 202, 203, 205
value of serological method of diagnosis in, 193
Epinephritis, 121
fibrosclerotic, 121
purulent, 121
Epispadias, 53, 167, 176
Erections in gonorrhea, 33
Europhen, 44
Eye reaction in diagnosis of gonococcal infection, 198

F

FIBROMATA of urethra, 39
Filiform bougie, 61
Fistula, ureteral, 175
  urethral, 53
  vesical, 174
Foreign bodies in urethra, 54
  in the bladder, 112, 171

G

GLUTOL, 52
Gonococcic infections, serological diagnosis of, 183-198
  agglutination studies, 184
  bactericidal immune bodies, 187
  complement fixation studies, 187
  opsonic studies, 186
  precipitin studies, 186
  skin reaction (phenomena of allergy), 194
Gonococcic infections, specific treatment of, 199-207
  autosero therapy, 207
  gonococcus immune serum, 205
  vaccine therapy, 199
Gonococcus. method of staining, 12
  Jadassohn's irrigation test, 13
  two-glass test, 13
Gonococcus immune serum, 205-207
Gonococcus sepsis, 204
Gonorrhea:
  acute, in the male, 12
    abortive treatment of, 13
      Blaschko's method for, 13
    complications of, 19
      treatment for, 19, 20
    diagnosis of, 12
    systematic treatment of, 14-18
      diet in, 15
      drinks in, 15
      suspensory worn in, 16
      technic of injection in, 15
  acute, in the female, 160, 161
    diagnosis, 160
    therapy, 160
    treatment, 161
  chronic, in the male, 20
    after-pains in, 27
    balsams in, use of, 21
    coitus in, 21
    complications of, 33
    dilatation in, 27
    Guyon's instillation in, 26
    injection medicament, 27
    physical exertion in, 21
    prophylaxis of, 32
    silver nitrate, use of in, 22
    treatment, irrigation in, 20
      instrumental, 20
      with sounds, 27
      length of time, 30, 31
  chronic, in the female, 161

THIS PAGE IS LOCKED TO FREE MEMBERS
Purchase full membership to immediately unlock this page

Know Your Bible

Forgotten Books' Full Membership provides unlimited access to more than 28,000 volumes of Christian literature for $8.99/month

Continue

*Fair use policy applies

Injury of the bladder, 113
of the prostate gland, 93
of the ureter, 148
Iodoform, 43, 45
Irrigation of the bladder, 100
of the female urethra, 163
of the posterior urethra, 24
of the renal pelvis, 120
in chronic cystitis, 168
Irrigating dilatations, 29, 30
solutions, 24, 26
Irritable bladder, 115
Ischuria paradoxa, 86, 173
Isoform, 43

J

JADASSOHN'S irrigation test, 13
Janet irrigation in chronic gonorrhea, 20, 23

K

KIDNEY:
amyloid, 142
congestion of, 141
contracted, 140
contusions of the, 134
echinococcus of the, 132
inflammation of the, 121
movable, 132
open wounds of the, 134
polycystic degeneration of the, 131
syphilis of the, 141
Küster's drop-cannula, 145
Kutner's pressure irrigation, 20, 21

L

Landau's trocar, 79
Le Fort's method of dilating strictures, 63
Löffler's solution of methylene blue, 12
Lubrication of urethral instruments, 8
prescription for, 8
Lymphangitis of the penis, 34

M

MALÉCOT catheter, 91
Mark's operating urethroscope, 54, 56
Meatus, stricture of the, 52
Mercury bichlorid, 45
Movable kidney:
diagnosis of, 132
prophylaxis, 133
therapy of, 132
treatment of, 132

N

NECROSPERMIA, 159
Nephralgia, 129
Nephritis:
acute, 135
therapy, 135
treatment, 136

Nephritis—(*contd.*)
chronic parenchymatous, 136
therapy, 137
treatment, 138
chronic interstitial, 140
therapy, 140
treatment, 140
in childhood, 180
Nervous impotence, 150-153
Neurasthenia, sexual, 154
Neurosis of the prostate gland, 94
Novocain, 3, 6

O

Oil of sandalwood, 36
Oligospermia, 158
Opsonic studies, 186
Orchitis, 70
Orthostatic albuminuria, 179, 180
diagnosis, 180
therapy, 180
Oxaluria, 130

P

Pappenheim-Unna stain, 12
Paracystitis, 103, 171
Paranephritis, 122
Paraphimosis, 51
Parasites in the bladder, 113
Paraurethral follicles, 37
Penis, edema of the, 45
carcinoma of the, 45
contusions of the, 65
lymphangitis of the, 34
open wounds of the, 65
Periurethral infiltrations (Cavernitis), 37
Pezzer de, catheter, 91
Phenol, 43
Phimosis, 47
Phosphaturia, 130
Pollutions in gonorrhea, 33
Polycystic degeneration of the kidney, 131
Polypi, urethral, 39
Potassium permanganate, 14
Pousson catheter, 91
Precipitin studies, 186
Pregnancy, kidney of, 174
pyelonephritis of, 174
Pressure irrigation of Kütner, 20, 25
Prophylaxis of gonorrhea, 32, 33
Prostate gland:
atrophy of the, 92
carcinoma of the, 93
calculus of the, 93
hyperthrophy of the, 82-91
first stage (prostatism), 82
acute retention of urine in, 83
catheterization, 82
treatment, 82
hemorrhages in, 88

Prostate gland, hyperthrophy of the—(*contd.*)
second stage, 84
catheterization, 84
retention of urine, 84
treatment, 84
surgical treatment of, 89 (*see* Prostatectomy)
third stage, 85
retention of urine in, 85
urosepsis of, 88
injury of the, 93
neurosis of the, 93
tuberculosis of the, 92
Prostatectomy, indications for, 89
method of, 89
method of Chetwood or Wishard preferred to, 90
mortality after, 89
Prostatism, 82
Prostatitis:
acute, 76-79
catarrhal, 76
follicular, 76
parenchymatous, 76
treatment, 77
chronic, 79-82
diagnosis, 80
treatment, 80
vaccine, use of in, 202, 203
value of serological diagnosis in, 193
Prostatorrhea, 155
Pyelitis:
acute, 118
in childhood, 178
chronic, 119
in childhood, 178
Pyonephrosis, 121
in childhood, 179
Pyosperma, 159

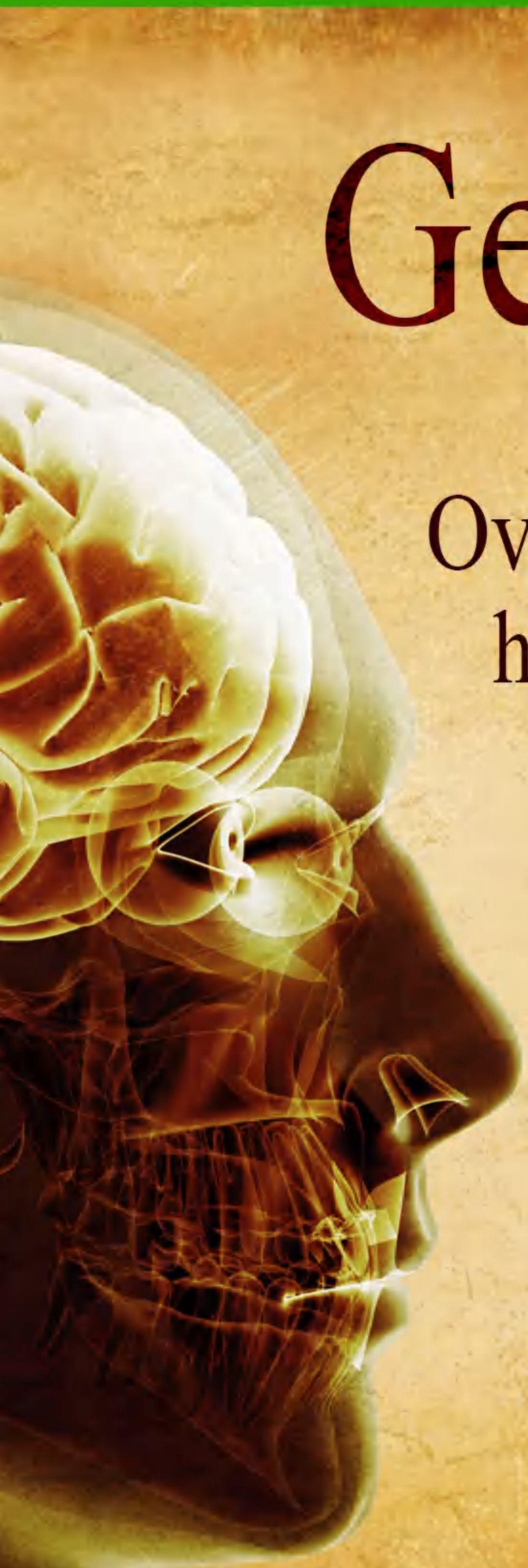
Q

Quinin sulphate, use of, in stricture of the urethra, 60

R

Reactions, cutaneous, following injection of gonococcus vaccine, 194-197
Reactions following cutaneous or intramuscular injection of vaccine, 197
Rectal infusion, technic of, 146
Renal calculus, 123
prophylaxis of, 125
surgical treatment of, 125
Renal congestion, 141
hydrops, 142
irrigation of, 120
pelvis, tumors of, 131
syphilis, 141
tuberculosis, 122
Retained catheter in the urethra, 90
Retention of urine, 34, 173
acute, in prostatic patients, 83
chronic, in prostatic patients, 86
in case of stricture, 62

THIS PAGE IS LOCKED TO FREE MEMBERS
Purchase full membership to immediately unlock this page



Get Smart

Over 2,000 years of human knowledge in 797,885 volumes

Instant access
$8.99/month

Continue

*Fair usage policy applies

Test for infectivity, 31, 32
Testis, contusions of the, 71
luxation of the, 71
open wounds of the, 71
retention of the, 72
syphilis of the, 71
tuberculosis of the, 70
Teufel suspensory, 38
Bransford Lewis' modification of the, 38
Thallin sulphate, 14
Thalmann's agar, preparation of, 189
Tiemann rubber catheter, 84, 85
Torsion of the cord, 75
Tuberculosis, of the epididymis, 70
of the prostate gland, 92
of the testis, 70
of the ureter, 148
of the urethra, 39
Tumors, of the bladder, 107-111
of the kidney, 130
of the renal pelvis, 131
of the seminal vesicles, 95
Two-glass test, 13

U

Urachus, cyst of, 114
fistula of, 114
Uremia, 144, 145
Ureter, calculus of the, 147, 148
injuries of the, 148, 149
tuberculosis of the, 148
tumors of the, 148
Ureteritis, 148
Urethra:
acute gonorrhea of the, 12, 160
anesthesia of the, 28
calculi in the, 53, 168
carcinoma of the, 40
chancre of the, 40
chancroid of the, 40
chronic gonorrhea of the, 20, 161
condylomata of the, 41
contusions of the, 57
cysts of the, 39
dilatation of anterior, 28
fibromata of the, 39
fistula of the, 53
foreign bodies in the, removal of, 54
gland follicles, inflammation of the, 37
gummata of the, 41
hemorrhages of the, 58
lubrication of instruments, 8
open wounds of the, 59
polypi of the, 39
retained catheter in the, 90
strictures of the, 59, 166
resilient, 61
extremely narrow, 61
tuberculosis of the, 39
tumors of the, 167, 168

Urethral gonorrhea, vaccine in, 201-203
Urethral mucous membrane, prolapse of, 166
Urethral orifice, stenosis of the, 166
Urethritis, acute posterior, 35
administration of balsam in, 36
irrigation in, 35
oil of turpentine, use of in, 36
santyl, use of in, 36
sitz-bath in, 35
strangury in, 35
anterior peracute, 34
in the female, 166
serum therapy in treatment of, 206
simple, 38
Urethrocele, 167
Urethroscope, operative (Mark), 54, 56
Urethrorrhea ex libidine, 155
Urethrotomy, internal, 60
external, 60
Urine, albumin in, 179
bacteria in, 117
hemoglobin in, 142
incontinence of, 172
infiltration of, 66
retention of, 34
due to prostatic hypertrophy, 83-86
due to stricture of the urethra, 62
Urinary abscess, 66
poisoning, 88
Urosepsis, 88

V

Vaccine, autogenous, 190
mixed, 200
preparation of, 200, 201
in urethral gonorrhea, 201
Vaccine therapy, 199-204
treatment of complications, 202
effect of, on gonococcal arthritis, 203, 204
Vagina, gonorrhea of the, 165
Varices of the bladder, 114
Varicocele, 74
Vas deferens, inflammation of, 75
tuberculosis of, 75
Venesection, technic of, 145
Vesical calculi, 106, 171
in childhood, 179
ectopia, 113
fistula, 174
papillomata, 107
paralysis, 116
tuberculosis, 103

W

Winternitz cold sound, 81
Wishard's operation for prostatic hypertrophy, 90

Z

Zinc sulphate, 18, 19
Zinc salve, 160