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Prostate symptoms in general practice: seriousness and inconvenience

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Objective – To estimate the seriousness and inconvenience of prostatism in a general practice population and to assess the consultation with the general practitioner (GP) in relation to seriousness of prostatism.

Design – A questionnaire was sent to a random sample of 979 men aged 50 years and over from two general practices in a village, and two in a city in the western part of The Netherlands.

Main outcome measure – Seriousness and inconvenience of prostatism according to the Symptom Index for Benign Prostatic Hyperplasia. Consultation with the GP for urinary symptoms.

Results – The prevalence of prostatism with moderate to severe symptoms was 20%. The majority (60%) of the men with

prostatism did not consult their GP with these symptoms, and one fifth (19%) felt “mostly dissatisfied” to “terrible” due to their symptoms. Of this last group, a few (1.4% of the total population) nevertheless did not consult their GP.

Conclusions – Prostatism is a symptom complex caused not only by benign prostate hyperplasia. Prostatism is under-reported in general practice. Men with micturition problems should be encouraged to consult their practitioner.

Key words: prostatic hypertrophy, prostate, prevalence, general practice, Symptom Index for Benign Prostatic Hyperplasia.

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Benign prostatic hyperplasia, a common disorder in elderly men, can cause a variety of urinary symptoms of both an obstructive and an irritative nature. This symptom complex is called prostatism. Obstructive symptoms include a weak stream and incomplete emptying; irritative symptoms include urgency and nocturia. Most of these symptoms are not very specific for benign prostatic hyperplasia; other disorders such as an urethral stricture, bladder disorders, and cancer of the prostate can also cause symptoms of prostatism. During the last decade benign prostatic hyperplasia has gained greater interest because of the development of more diagnostic and therapeutic possibilities such as transrectal ultrasound, thermotherapy, lasertherapy, and the introduction of medication such as alpha blockers and finasteride. Three population-based surveys on the prevalence of prostatism in males aged 50 years or over found rates of 17% (1), 26% (2), and 35% (3). However, consultation rates in general practice are much lower: in the United Kingdom 1.7% (number of males aged 45 years or older consulting the general practitioner (GP) for symptoms of prostatism per year) (4). In Dutch general practice the percentage of men with known prostatism, estimated from consulting rates and diagnoses made by consultant physicians, ranges from 1% (age 45-64 years) to 10% (age >75 years) (5). The difference in rates between the population-based surveys and general practice suggests

that symptoms of prostatism are underreported in general practice. Therefore we studied the seriousness and inconvenience of prostatism in a general practice population. In addition the consultations of the GP in relation to these symptoms were examined.

METHODS

A random sample of 1000 men aged 50 years and over was selected from four general practices where four of the authors were employed. Two practices were located in a village and two in a town in the western part of The Netherlands. Because of the presence of severe illness, mental inability to answer the questions, or the inability to urinate spontaneously (use of catheter or renal dialysis), 21 men were excluded. In February 1994 a questionnaire was sent to the remaining 979 men, followed by a reminder to the non-responders in April 1994.

The questionnaire consisted of three parts: i) questions about urological history and non-urological conditions that might influence normal micturition such as diabetes mellitus and the use of diuretics; ii) the complete Symptom Index for Benign Prostatic Hyperplasia; and iii) a question if the GP was ever consulted for urinary symptoms.

The Symptom Index for Benign Prostatic Hyperplasia (Symptom Index) was developed and validated by the

American Urologic Association in 1992 (6,7), and was recommended by the World Health Organization in 1993 as the official worldwide symptom assessment tool for patients suffering from prostatism (8). This Symptom Index can be self-administered. It consists of seven questions about the seriousness of urinary symptoms experienced during the previous month and one question about the inconvenience of urinary symptoms. The seven questions are on a five-point scale, resulting in the following prevalence scores: 0-7 mild, 8-19 moderate, and 20-35 severe symptoms. The question to assess the inconvenience of urinary symptoms was: "If you were to spend the rest of your life with your urinary condition as it is now, how would you feel about it?" with the answers on a seven-point scale varying from "delighted" to "terrible".

The seriousness score on the Symptom Index was calculated for the total group, for several age-groups, and for several urological and non-urological conditions. The categorized scores, means, standard deviations (SD), medians (due to skewness of the data), and ranges are presented. The following (sub)questions were studied by means of ANOVA: i) is there an effect of age on the seriousness of prostatism, ii) do men with moderate or severe prostatism visit their GP due to urinary symptoms more often, iii) is there any relation with age regarding the consultation with the GP. ANOVAs were

performed with seriousness of prostatism as a ranked dependent (due to the skew of the data). To check the relation between seriousness and inconvenience of urinary symptoms, Spearman's rank correlation coefficient was calculated.

RESULTS

Of the 979 questionnaires 853 (87%) were returned, of which we were able to use 814 (83%) for analysis, because of missing data in 39 questionnaires. The mean age of the responders was 62.2 years and of the non-responders 60.6 years ($p=0.04$).

The mean seriousness score of urinary symptoms for the total group was 4.7. Twenty per cent of the men had a seriousness score over 7 (moderate and severe symptoms) ($n=138$), 3% of the men had a seriousness score over 19 (severe symptoms) ($n=27$) (Table I). The seriousness score varied with the age groups: the higher the age, the higher the seriousness.

Table II presents the seriousness of urinary symptoms for several urological and non-urological conditions. Non-urological conditions, such as diabetes mellitus and the use of diuretics, influenced normal micturition.

Table III shows a significant relationship between the seriousness of urinary symptoms and the consultation rate with the GP. This relationship was the same for all age groups. Despite this, 62% ($n=100$) of the men with

Table I. Prostatism in total group and per age group.

Group	n	Severity score, unclassified				Severity score, classified		
		mean	(SD)	median	range	mild	moderate	severe
Total group	814	4.7	(5.7)	3.0	0-35	649 (80%)	138 (17%)	27 (3%)
Age 50-59	367	3.9	(5.2)	2.0	0-35	310 (84%)	47 (13%)	10 (3%)
Age 60-69	274	4.7	(5.3)	3.0	0-33	220 (80%)	49 (18%)	5 (2%)
Age 70-79	145	6.1	(6.4)	4.0	0-35	103 (71%)	35 (24%)	7 (5%)
80 and over	28	9.1	(8.4)	6.5	0-28	16 (57%)	7 (25%)	5 (18%)
Effects	age group: $F=12.5$; $df=3$; $p<0.00$							

Table II. Prostatism in several urological and non-urological conditions.

Condition ¹	n	Severity score, unclassified				Severity score, classified		
		mean	(SD)	median	range	mild	moderate	severe
Urethral stricture	20	14.2	(9.2)	13.1	0-33	6 (30%)	9 (45%)	5 (25%)
Benign prostate hyperplasia	38	12.0	(8.2)	9.5	0-35	14 (37%)	18 (48%)	6 (16%)
Prostate cancer	6	10.0	(2.8)	9.0	7-14	1 (17%)	5 (83%)	-
Cerebrovascular accident	33	9.7	(9.6)	6.0	0-35	18 (55%)	8 (24%)	7 (21%)
Diabetes mellitus	40	9.4	(9.3)	6.0	0-35	22 (55%)	13 (33%)	5 (12%)
Use of diuretics	57	7.6	(7.3)	5.0	0-32	38 (67%)	14 (24%)	5 (9%)
Prostate operation	51	6.5	(6.3)	5.0	0-33	32 (63%)	17 (33%)	2 (4%)

¹ Conditions are based on the answers in the questionnaires, and medical records were not checked.

Table III. Prostatism in relation to consultation with the GP.

Consultation with the GP	n	Severity score, unclassified				Severity score, classified		
		mean	(SD)	median	range	mild	moderate	severe
Yes	139	8.6	(7.9)	6.0	0-35	77 (55%)	45 (33%)	17 (12%)
No	667	3.9	(4.7)	2.0	0-33	567 (85%)	91 (14%)	9 (1%)
Effects	consultation:	F=43; df=1; p<0.00						
	age group:	F=7.3; df=3; p<0.00						
	interaction:	F=1.4; df=3; p=0.23						

moderate and severe prostatism had never consulted their GP for urinary symptoms.

The correlation between the seriousness and inconvenience of urinary symptoms was 0.44 ($p<0.001$). Thirty-one (19%) men with prostatism (score over seven) felt "mostly dissatisfied" to "terrible". Of the latter, 11 (1.4% of the total population) had not consulted their GP.

DISCUSSION

This study shows a lower prevalence of prostatism than was expected on the basis of the population-based surveys by Wolfs et al. (2) and Chute et al. (3). The prevalence found by Jensen et al. (1) is more comparable with our study. However, comparison of prevalence rates is difficult because of variation in study design and the definition of prostatism. Wolfs et al. (2) used a self-administered questionnaire modified from Boyarsky et al. (9), and because of the definition of other age groups the age distribution is not comparable with our study. Jensen et al. (1) used a symptom index modified from Madsen and Iversen (10); all subjects were personally interviewed and the age distribution was different from this survey. We do not have a good explanation for the large difference in prevalence rates between Chute et al. (3) and our survey, because Chute also used the symptom index of the American Urological Association to estimate the prevalence of prostatism, and the age distribution in both surveys was the same. The most important difference between the two surveys is that in Chute's, all the men were personally interviewed by trained study assistants.

We assume that our study is quite representative of the Dutch population because four general practices consisting of both rural and urban populations participated and the response rate was very high. However, there was some underrepresentation of men aged 70 years or over (21.3%) in comparison with the Dutch population statistics of 1990 (25.9%). The slightly younger mean age of the non-responders (1.6 years) was not clinically significant, indicating that we did not miss many of the men above 70. In this context it is important to note that all Dutch inhabitants are registered with

local general practices. However, it must be said that there may be a selection bias as a consequence of selecting people from practice lists, because lists are never created at random.

There was a significant difference between the mean symptom index in the total group and in several urological and non-urological conditions. However, these diagnoses were based on answers in the questionnaires, and medical records were not checked. As expected, the symptom index was significantly higher in men with known benign prostatic hyperplasia than in the total group. But as shown in Table II, men with prostatic cancer and non-urological conditions such as diabetes mellitus or cerebrovascular accident have a significant higher symptom index. Again this addresses the important fact that prostatism is a symptom complex caused not only by benign prostatic hyperplasia but also by other disorders, and in particular prostatic cancer, which should never be missed in differential diagnoses.

Compared with consulting and prevalence rates reported from general practice (4,5) we found a much higher rate, which indicates that there is indeed under-reporting of prostatism by the GP. In our study a majority of men with moderate to severe prostatism had never consulted their GP. This consultation rate is comparable with the survey of Wolfs et al. (2) where 70% of the symptomatic men were not seen by a doctor during the previous five years. This can partly be explained by the finding that most of the men with prostatism did not feel unhappy or concerned about their urinary symptoms. On the other hand it would be interesting to know why the men with symptoms, and especially the small number who felt "mostly dissatisfied to terrible" due to their symptoms, had not consulted their GP. Possible reasons are that men think that this kind of symptom belongs to aging or that they are embarrassed to talk about urinary symptoms. More studies on why men do not consult their GPs for problems with micturition are required. As there is already increasing awareness by the general public of benign prostatic hyperplasia (in The Netherlands there is at this moment a radio advertisement for a prostate information telephone number), this might encourage more men to attend their GP with problems of micturition.

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