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## A Two-year Follow-up of Children with Urticaria in General Practice

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A questionnaire was sent in 1984 to 97 children with urticaria, who had previously been seen in Danish general practice during a period of three months in 1982. The questionnaire included questions about provoking factors and the course of the disease. Replies were received from 79 children, 46 of whom had experienced one attack only, and 33 had had several attacks. Fifteen percent of the former and 48 % of the latter suggested a variety of provoking agents, which were mainly food and food additives in the recurrent group. Previous infections were not suspected, though 20 % had signs or symptoms of infection at the registration in 1982. It is suggested that a first episode of urticaria should be investigated by the practitioner only, with simple questioning and perhaps symptomatic treatment, because the first attack is often the sole one.

**Key words:** urticaria, general practice, children, etiology, prognosis.

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Urticaria in childhood is a common problem, but the literature is dominated by studies from hospital outpatient clinics. In general practice, about 30 % of all patients with urticaria are under 20, and there is no sex difference among them (1, 2, 3).

The aim of the present follow-up study was to trace as many as possible of 97 Danish children with urticaria, two years after their first registration in general practice. Special emphasis was given to possible provoking factors.

### MATERIAL AND METHODS

A previous article (3) has described the registration by 186 general practitioners of 97 Danish children below the age of 16 years, who attended during a period of 3 months in 1982 because of urticaria. Of these children 74 were experiencing their first attack, while 21 had had previous attacks. Information on the remaining two children was insufficient. Two years later a questionnaire was prepared, with questions on the course of the urticaria and on the patient's own suggestions about possible provoking factors. The questionnaires were sent to the same practitioners, to be forwarded to the patients.

Should a patient have changed doctor, he was traced through the central national register and a questionnaire was despatched directly to him. After completion, the questionnaires were to be sent to the Institute of General Practice, University of Aarhus. Reminders were not sent out.

### RESULTS

Of the original 97 children, 79 (81 %) completed the questionnaire. They comprised 61 of the 74 whose first attack was at the 1982 registration, and 18 of the 21 who had already experienced several attacks. Of the 61, 46 had had no further attacks, while 15 had experienced several. The follow-up material therefore comprised 46 children with one attack only, and 33 (18+15) with recurrent or chronic urticaria.

Table I shows, by sex, the suggestions as to provoking factors in children with one attack only, but they were made by only seven children (95 % confidence limits 6.3-28.9 %). Table II gives some provoking factors for children with recurrent or chronic urticaria. Sixteen children (95 % confidence limits 30.8-66.5 %) suggested a provoking factor,

Table I. *Self-reported provoking factors suggested by 46 children with one episode of urticaria*

Provoking factor	Males N	Females N	Total N
Oranges	1	1	2
Pollen/plants	2	0	2
Fleas	1	0	1
Tomatoes	0	1	1
Penicillin	1	0	1
Unknown	17	22	39
Total	22	24	46

most often food or food additives (11 cases). Table III shows the number of attacks in 15 children whose recurrent or chronic urticaria started in 1982, related to duration of the disease. Six children had symptoms for more than 18 months. Three of the 15 children contacted the general practitioner more than once because of urticaria during the follow-up period. Only one child was referred to a specialist.

#### DISCUSSION

The methods used in the present study resulted in a high response rate, compared to analogous investigations (4). Taking the low percentage of the non-participating group into account, it is reasonable to assume that the attending group was representative for children suffering from urticaria seen in general practice. The etiology is clarified only in a few cases of children with acute urticaria in general practice (3). Few patients with urticaria contact the general practitioner more than once in connection with the urticaria attack (3), and in these cases it is of limited interest to explore the etiology. One factor is, however, of considerable clinical importance. Several studies have shown that infections appear to be the most common cause of acute urticaria in children (5, 6). At the 1982 registration, the general practitioners reported that 20% of the first attenders with urticaria also had symptoms or signs of infection, though these were not reported by the patients. It is important for the general practitioners to remember this relationship, because of the risk of misinterpreting the reaction as a type I penicillin allergy (7). The general practitioner often realizes that a child with urticaria has previously received penicillin treatment for an infection, and

Table II. *Self-reported provoking factors suggested by 33 children with recurrent and chronic urticaria*

Provoking factor	Males N	Females N	Total N
Food/food additives	5	6	11
Washing powder	0	2	2
Physical urticaria	1	1	2
Animal hair	1	0	1
Unknown	9	8	17
Total	16	17	33

as a consequence the penicillin rather than the infection is held responsible for the urticaria.

The finding that 48% of the children with recurrent or chronic urticaria in general practice assumed a provoking factor corresponds approximately to the percentage of known allergens found by comprehensive diagnostic evaluation in Nordic hospital studies (5), while the elucidation rate was considerably lower in American studies (8). Our finding that food/food additives were most frequently suspected, while physical factors were mentioned by only two children, contrasts with the findings of a study in Finland, in which physical factors were the most frequent (5). However, there is a tendency to oversuspect food/food additives (9).

Our investigation confirmed that most cases in general practice belong to the acute urticaria type, in contrast to cases of urticaria in outpatient clinics (3). Cases of recurrent or chronic urticaria in general practice seem to have a better prognosis than cases in outpatient clinics (10). Our investigation also confirmed that general practitioners, confronted with a child with its first urticarial rash, should

Table III. *Frequency of attacks in 15 children with recurrent or chronic urticaria in general practice within a two-year period after the first attack*

No. of attacks	1	2-8	9+	Unknown
Duration in months				
0-6	4	-	-	-
7-12	-	2	-	-
13-18	-	1	-	-
18+	-	4	-	2
Unknown	-	2	-	-

take a simple history about provoking factors and should give symptomatic treatment, because the first attack is often the only one. Children with recurrent or chronic urticaria reattend their general practitioners only rarely, and even then these cases are infrequently referred to a specialist.

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