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THE PREVALENCE OF URTICARIA IN THE TOTAL POPULATION

By

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In the present investigation done in five geographical areas in Sweden, the prevalence of urticaria, acute and chronic, was determined among total populations of 36,475 persons, 17,502 males and 18,973 females.

MATERIAL AND METHODS

A detailed account of the medical aspects of the epidemiological survey has been given elsewhere (2).

Diagnostic criteria: Whitish or reddish, slightly elevated papules, macules, patches or wheals, often surrounded by a halo. Localized or generalized. Urticaria was considered as chronic if it was of more than 6 week's duration.

Diagnostic reliability: Urticaria is usually easy to diagnose. Even the patients themselves are often familiar with the wheals or flat-topped papules. Urticaria factitia (dermographism) was excluded, i.e. wheals that occur almost exclusively on areas of friction.

Populations investigated: The total general populations over the age of seven were examined as to the prevalence of urticaria in the following five major regions in the counties of: a) Norrbotten: 8,897 persons (3,916 males and 4,981 females); b) Jämtland: 3,302 persons (1,662 males and 1,640 females); c) Skaraborg: 10,465 persons (5,258 males and 5,207 females); d) Kristianstad, west coast: 7,382 persons (3,613 males and 3,769 females); e) Kristianstad, east coast: 5,287 persons (2,571 males and 2,716 females). Re-investigations of non-response in Norrbotten and Kristianstad: 1,142 persons (482 males and 660 females). The distance between the northernmost and southernmost areas is about 1,500 km.

Statistical techniques: Total sampling techniques was used for the primary investigations of the populations over the age of seven (Norrbotten fourteen). Systematic random sampling of the groups not responding to the call for the

primary investigation. Purposive selection technique was used for children under the age of seven. Individual matching of pairs was used to find out if urticaria was mathematically associated with some common skin and rheumatic diseases investigated at the same time, as previously defined, *Hellgren* (2). All persons with urticaria were randomly matched with individuals of the same sex and age and from the same geographical area but without urticaria. The frequencies of other skin diseases and rheumatic diseases were compared among the persons with urticaria and the controls.

Non-response generally varied between 10–20 per cent. Systematic random sampling among the non-response groups in Norrbotten and Kristianstad was performed. Persons investigated in the non-response group were individually matched with persons of the same sex and age and from the same geographical area and belonging to the group of primary investigated. The prevalences of urticaria in the two groups were then compared to find out if the prevalence differed in the non-response group and in those primary investigated.

Investigation routine: All the people who were to be examined within a given area had to pass seminaked through an examination room. The whole skin area (except the genital and anal regions and the feet) was examined.

TABLE 1

The Prevalence of Urticaria (Acute and Chronic) in Total Populations in Five Different Geographical Areas in Sweden.

Region	Males		Females	
	No. investigated	Per cent with urticaria	No. investigated	Per cent with urticaria
Norrbotten	3,916	0.05	4,981	0.21
Jämtland	1,662	0.06	1,640	0.06
Skaraborg	5,258	0.15	5,207	0.15
Kristianstad west	3,613	0.16	3,769	0.16
Kristianstad east	2,571	0.08	2,716	0.04
	17,020	0.11	18,313	0.14

RESULTS

The prevalence of urticaria (acute and chronic added) in sex groups is shown in the five different geographical areas in Table 1.

The prevalence of urticaria in 1,142 primary investigated

persons was 0.01 per cent and among 1,142 matched persons from the non-response was 0.26 per cent*. In the non-response group two rather severe acute cases of urticaria were found.

31 per cent of the males and 34 per cent of the females had acute urticaria. The ages for the urticaria cases ranged between 14–80 years for males and 7–18 years for females. Age median for the males was 44 years and for the females 35 years.

No significant associations were found between urticaria and some common skin diseases and rheumatic diseases previously defined (2).

DISCUSSION

Urticaria has been reported to affect about 15 per cent of the population at a given time (6). However, in the general dermatology practice only 1–2 per cent of the patients complain of urticaria (3). Thus it might be suspected that the prevalence of urticaria is higher than the incidence figures indicate and that only a minority of the urticaria cases are ever referred to a dermatologist. In 1963 *Lomholt* (5) reported 5 cases of urticaria among 10,984 inhabitants in the Faraoese population, i.e. 0.05 per cent. All were chronic urticaria as *Lomholt* "did not come across acute cases". These figures correspond rather well with the prevalence of urticaria among the males in Norrbotten, Jämtland and Kristianstad east coast, but in the other groups in the different areas in Sweden considerably higher prevalences of urticaria were found. About 33 per cent were acute cases. A prevalence of urticaria of in the average 0.11 per cent for males and 0.14 per cent for females means, that if the regional parameters can be applied on the national parameter of Sweden, at least about 4,000 males and 5,000 females suffered from urticaria at the time when the morbidity was investigated. From the

* History of urticaria recidivans (UR) not included here, cf. *Hellgren* 1967 (2).

incidence figures reported in different parts of Sweden (3) it is apparent that only few of them—especially severe cases—are referred to the dermatologist.

The variation in prevalences between different populations might be due to chance or to age differences between the populations in the present series. The higher prevalences of females with urticaria observed are in accordance with many reports in the literature as reviewed by *Hellgren & Hersle* (3).

Epidemiological investigations can sometimes help in the identification of associations between diseases. *Hinkle & Wolff* (4) consider that irrespective of the nature of two illnesses suffered, the temporal pattern of illness in an individual is not random; on the contrary, he is liable to a number of separate and apparently unrelated illnesses within a brief space of time, i.e. due to some common factor (the cluster theory of illness). In the present investigation, however, no significant associations at the time of investigation were found between urticaria and some of the most common skin diseases and rheumatic diseases defined by *Hellgren* (2). Urticaria was combined with for example psoriasis only in one person. In a retrospective investigation on 255 psoriatics with severe lesions there was a significant history of association between psoriasis and urticaria (1).

SUMMARY

The prevalence of urticaria (acute and chronic) was examined in a total population of 36,475 persons, 17,502 males and 18,973 females, distributed on five different geographical areas in Sweden. The average prevalence of urticaria was 0.11 per cent among males and 0.14 per cent among females in the primary investigated total populations and somewhat higher in the non-response group. About 33 per cent was acute urticaria. The median age for males with urticaria was 44 years, for females 35 years. No significant associations between urticaria and some other common skin diseases and

rheumatic diseases were observed. The prevalence figures indicate that only a minority of the urticaria cases are referred to a dermatologist and that the comparatively low incidence figures reported (1-2 per cent) in general dermatology practice might give the impression that urticaria is more uncommon than it actually is.

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