

Hymenoptera stings in conscripts

THE CLINICAL weight of Hymenoptera venom allergy can be assessed by evaluating both its mortality rate and prevalence in the general population. Studies have suggested a mortality rate ranging from 0.09 to 0.45 cases per million of inhabitants per year (1). The prevalence of systemic reactions to Hymenoptera stings ranges between 0.3 and 3.3%

More than half of the Italian male population is stung before 20 years of age. Systemic reactions occur in 2.7%.

(1-4). In Europe, a study in France (2) reported prevalences of 0.9-3.3% in three different surveys; studies in Switzerland found rates of 1.3 and 5%, depending upon how data were collected (1); and a recent cross-sectional study in Sweden found a 1.5% rate (3). Some studies also considered the prevalence of the so-called large local reactions (LLR), involving a diffuse swelling around the site of the sting, and reported rates from 2.8% (1) to 18% (4). The natural history of this allergy shows that, after an initial systemic reaction, at least 50% of people tolerate subsequent stings of the same insects (5), while, if the initial reaction is an LLR, 95% have no systemic reactions to re-sting (6). The present study assessed the prevalence and the natural history of allergic reactions to Hymenoptera stings in the first two decades of age among conscripts in Italy.

■ During January and February 1994, all conscripts referred to the military hospital of Piacenza (Italy) were administered a questionnaire dealing with Hymenoptera venom allergy. This questionnaire was intentionally simple, and the subjects were asked whether they had been stung by Hymenoptera, described as honeybees, wasps, and hornets. If so, they were asked whether these stings had elicited a normal local reaction, characterized by slight swelling, or an LLR, defined as a swelling with a diameter larger than 10 cm (1), or a systemic reaction. The systemic reactions were classified according to Mueller (7) in four degrees of increasing severity. Finally, those with an LLR or systemic reaction were asked whether they had been subsequently restung and, if so, whether they had had further allergic reactions. The questionnaire was drafted by an allergist with experience in reactions to insect stings.

Table 1. Data from questionnaire in 701 subjects

Number of subjects stung by Hymenoptera	Never stung 304 (43.4%)		Stung 397 (56.6%)	
Kind of insect indicated	Honeybee 115 (29%)	Wasp 258 (65%)	Hornet 24 (6%)	
Kind of reaction	LLR 17 (2.4%)		Systemic reactions 19 (2.7%)	
Classification of systemic reactions according to Mueller (7)	Degree I 5 (26.3%)	Degree II 7 (36.8%)	Degree III 5 (26.3%)	Degree IV 2 (10.6%)

■ During the 2 months of the survey, 701 conscripts completed the questionnaire, 397 (56.6%) having been stung by Hymenoptera. A total of 115 (29%) indicated honeybees, 258 (65%) wasps, and 24 (6%) hornets. Table 1 reports the number of LLR and systemic reactions and the category of the latter by Mueller's classification (7). The prevalence was 2.4% for LLR and 2.7% for systemic reactions. Of these, 12 (63.2%) were slight/moderate, whereas seven (36.8%) were life-threatening. Of the 36 subjects who had reactions to stings, 14 were restung by Hymenoptera; six (42.9%) normally tolerated the sting, whereas eight (57.1%) had a further reaction. Five had had an LLR and repeated the same reaction, and the other three had a systemic reaction of the same degree, namely, two of degree I and one of degree II.

■ Epidemiologic studies on Hymenoptera venom allergy report prevalences of systemic reactions to stings of 0.3-3.3% (1-4). The prevalence observed in the present study was 2.7%, near the highest value. The factors likely to account for the different rates in different studies are the kind of population investigated, the country where the survey was conducted, and the method of collecting data. Considering the first factor, Hymenoptera venom allergy mainly affects those exposed to insect stings because they spend time outdoors, and consequently more males than females (1). We studied only young men and this may account for the relatively high prevalence. Regarding where the study was conducted, a recent study in Sweden (3) showed the importance of climatic factors in determining the presence of Hymenoptera, which is less prolonged in countries with a short summer; the particularly long warm season in Italy makes the prevalence we observed reasonable. The importance of the method of collecting data is illustrated by several observations. In France, three different prevalences, namely, 0.9%, 1.9%, and 3.3%, were obtained depending upon the method of investigation, which was either interviews in hospital by allergists, "door-to-door" questioning by medical

students, or by a "telematic" network, although the questionnaire was the same (2). This confirmed observations by Müller, who noted a wide difference in the prevalence of insect sting allergy among patients in hospital in Bern depending on whether the histories had been collected by the doctor on duty or by a single doctor dealing with allergic diseases (1). We used a particularly simple questionnaire, and the questions were asked by an allergist experienced in insect venom allergy, in order to achieve reliable data. The results indicate that over half the population we studied, 56.6%, had been stung by Hymenoptera. This agrees with observations by Charpin et al. (2), who reported rates of 61%, 75%, and 69% in three samples of adults. The rate we observed makes it conceivable that most subjects stung by Hymenoptera are first stung within the second decade of life. The prevalence of LLR was 2.4% (17/701). Only a few studies have investigated this aspect (1, 4), and the rates ranged from 2.8% (1) to 18% (4). Of the 19 systemic reactions, 12 (63.2%) were not life-threatening, including only skin and gastrointestinal symptoms, but seven (36.8%) were respiratory or cardiovascular. Further reactions were reported in about 57% of subjects who were restung. This apparently disagrees with the natural history of Hymenoptera venom allergy, which is reportedly more favorable, especially in young subjects (1, 5). However, in five of the eight conscripts with a further reaction, an LLR occurred; this reaction is known to have a clear tendency to recur (6).

In conclusion, the present results suggest that more than half the male population in Italy is stung by Hymenoptera within the first two decades of life, and that 2.4% have LLR and 2.7% systemic reactions.

Key words: Hymenoptera venom allergy; large local reactions; systemic reactions; young men.

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Accepted for publication 5 March 1997

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ALLERGY 1997;52:680-681

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Allergy and the premenstrual syndrome (PMS)

THE RELATIONSHIPS between various diseases and the premenstrual syndrome (PMS) have been studied, including allergies (1), asthma (2), eczema (3), allergic rhinitis (4), acne (4), epilepsy (5), and migraine (5). However, no studies provide comparisons with controls. In 1985, a general practice survey was carried out in Wellington, New Zealand, to describe independent PMS groupings as identified by cluster analysis (6). Some women incidentally reported that they had asthma. They were the PMS group of women characterized by feelings of bloatedness, and, to a lesser extent, the PMS group of women characterized by breast swelling. Boyle et al. have also suggested a link between allergy and premenstrual symptom type (1). This retrospective case-control study examined the relationship between allergic conditions in women in a general practice and PMS.

In general practice, women with PMS are more likely to have allergic rhinitis and eczema, but not asthma, than women without PMS.

■ The Karori medical centre was the only general practice serving a mainly European middle-class population in a suburb of Wellington. Eight general practitioners and five nurses cared for 15 989 patients. All staff had entered clinical notes and written prescriptions by computer for all problems since 1984.

■ All women registered with the general practice who had the diagnosis of PMS recorded by their general practitioner were studied. PMS women were matched by age with a random sample of women without the diagnosis obtained from the general practice age-sex register.

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