

Prevalence of cholinergic urticaria in Indian adults

Sir,

Cholinergic urticaria is a form of urticaria characterized by small and pinpoint wheals surrounded by erythema. This is precipitated by sweating, elevation of core body temperature, intake of hot and spicy foods and mental stress. Young adults are affected most often. The most severe forms have extensive whealing associated with wheezing and shortness of breath. The prevalence of physical urticaria in adults varies from 20 to 30% amongst cases of urticaria.^[1] The exact incidence of cholinergic urticaria in the Indian population is not known. For the diagnosis of cholinergic urticaria, whealing is generally induced by an exercise such as climbing steps, running, or brisk walking in the afternoon.

We studied the prevalence of cholinergic urticaria by conducting a survey of students from colleges in western India. A total of 600 students (400 males, 200 females, age group: 18-22 years) were recruited from a medical and engineering college. In this group, eliciting factors, clinical signs, and symptoms were explained with photographs of patients with lesions of cholinergic urticaria in a five-minute presentation in the classroom. Questionnaires were distributed after the presentation to students. They were requested to answer appropriately. A physician was present to help with queries. The questionnaire included items such as age, sex and existence of cholinergic urticaria. If the history was positive, duration and appearance of wheals, parts of the body involved, eliciting factors and their frequency, severity and frequency of cutaneous and extracutaneous manifestations, and intensity

of discomfort when whealing occurred were all recorded. They were also asked about medications or consultations taken for their problem. History of urticaria, allergic asthma, or atopic dermatitis and intolerance to drugs, especially aspirin were also recorded. Students who recorded a positive history underwent 15 minutes of vigorous exercise followed by an examination for wheals and erythema.

Cholinergic urticaria was divided into three types according to severity. Mild types were those who got whealing after heavy activity. A moderate form was the frequent appearance of moderate to severe whealing after daily activities like a warm shower or a brisk walk. Severe forms had the additional occurrence of extracutaneous symptoms like wheezing and breathlessness.

The overall prevalence of cholinergic urticaria was found to be 4.16% (25 out of 600 students) in the entire group of students between 18 and 22 years of age (14 males and 11 females). Most students with cholinergic urticaria had only mild to moderate symptoms, with typically small wheals of short duration invariably associated with itching. Two students did not get whealing after exercise. The types of eliciting stimuli were climbing steps, sweating, walking in the afternoon, and traveling in crowded trains. Other eliciting factors were sports, mental stress, fever, hot and spicy food, and alcohol. A combination of intake of food and exercise, as in exercise-induced anaphylaxis, was not present in the affected students. More than 90% of the students with cholinergic urticaria stated that they had never sought medical advice for this condition. Two out of 25 students had chronic spontaneous urticaria.

Zuberbier *et al.*, in their study, found a prevalence of 11.2% of cholinergic urticaria in the young German population.^[2] A study from Thailand found that six out of 86 physical urticaria patients had cholinergic urticaria.^[3] In India, October and November months have hot and humid weather which may explain a moderate prevalence as found in this study. A higher prevalence in Germany could be explained as Europe does not have hot and humid weather throughout the year. There are not many studies in the literature on the prevalence of cholinergic urticaria.

Cholinergic urticaria, which is an inducible form of urticaria is not classified as physical urticaria because its symptoms are induced by an increase in the core temperature of the body and not by exogenous physical triggers acting on the skin.^[4] Cholinergic urticaria must be differentiated from exercise-induced urticaria/anaphylaxis which is induced by exercise but not passive warming and is more often associated with systemic symptoms than cholinergic urticaria.^[5] More population based studies are needed to determine the overall prevalence in India.

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