Ind J Dermatol Venereol Leprol 1995; 61 : 380-2

CHRONIC URTICARIA TREATED WITH SOFT NASAL FILTERS

J S Pasricha, Paschal D'Souza

A 22-year-old boy having two attacks of urticaria per day for the last 5 years and intermittent attacks of sneezing and rhinorrhoea, and without any clues to the causative agent in spite of a detailed history and follow up, showed almost complete relief on wearing an ordinary cloth mask for 3 days. He was subsequently trained to use the soft nasal filters and obtained almost 80% relief in urticaria and complete relief in rhinitis during the next 1 year. Wearing the mask for 2 days again led to complete relief and further training in the proper use of the filters was helpful.

Key Words : Urticaria, Inhalants, Nasal filters, Mask test, Treatment

Introduction

One of the major approaches for treating an allergic patient is to find out the cause of the symptoms and devise means for protecting the patient from further exposures. A detailed history based on accurate observations recorded by the patient can often pin-point the causative agent and elimination and provocation tests are very useful for confirming the causal association.[1,2]

In the case of inhalants, the patient often reports occurrence of the symptoms during a particular period of the year and when repeated year after year it is almost confirmatory. Moreover, since all plants are not found at all places, the patient may have experienced improvement during a period when he visited some other place. Thus, seasonal occurrence of the symptoms and/or improvement on changing the place are two very important criteria for suspecting inhalants as the causative agent.[1,2] Sometimes however, neither of these criteria are available because(1) the inhalant antigen may be available all around the year, (2) the patient may be allergic to more than one inhalant, (3) the patient may not have travelled to any other place, or (4) the place of visit may also have the same antigen in equal abundance. We have therefore been using the mask test as an elimination procedure for confirming/detecting if the allergic symptoms are being caused by an inhalant.[2] We are reporting an instance where a patient having severe urticaria along with allergic rhinitis for several years without any clue to the causative agent, experienced quick relief on wearing a mask and was subsequently treated with the nasal filters.

From the Department of Dermatology and Venereology, All India Institute of Medical Sciences, New Delhi, India.

Address correspondence to : Dr J S Pasricha

Case Report

For the last 5 years, a 22-year-old male student from Faridkot (Punjab) had been having daily attacks of urticaria along with intermittent sneezing and rhinorrhoea. There used to be at least 2 episodes of urticaria each day in the morning and in the evening. He had noticed no relationship with exposures to heat, cold, dust, friction or drugs and there were no seasonal variations in the severity of the attacks. The patient belongs to a family of farmers and they grow wheat, cotton and mustard, but he had not noticed any change in the severity of urticaria in relation to whether he was at his fields or at home. There was no aggravation at the time of harvest. Similarly, he had not noticed any relationship of the urticaria and rhinorrhoea to dusting at home, or exposures to paper-dust, road-dust or humidity. The patient had been to Shillong,

Chandigarh, Delhi and Gwalior for varying periods of 10-30 days without noticing any change in the severity of the symptoms. He had also not found any relationship with the ingestion of various items of food and there was no evidence of focus of infection or change in the bowel habits. The sneezing and rhinorrhoea had occurred intermittently for periods of 10-14 days with symptom-free periods of 1-2 months. There was no relationship between the severity of the attacks of urticaria and rhinorrhoea. In April 1993, the patient had developed an attack of jaundice, for which he was kept on glucose and water along with 10 mg prednisolone per day till September 1993, and during this entire period of 4 months the patient was completely free from the symptoms and remained so till May 1994 though he had resumed normal diet in November 1993. In May 1994 however, the urticarial lesions as well as rhinorrhoea recurred with the same intensity. He had been treated with a variety of antihistamines with a variable response.

He was first seen by us in Spetember 1994. The complete diet elimination test for 2 days[1-3] brought about no improvement. A routine examination of blood, urine and stools also revealed no abrnormality. Seven-day courses of pefloxacin and cotrimoxazole each also were unsuccessful in modifying the course of the disease.[4] He was then treated with 12 mg dexchlorpheniramine and 10 mg cetirizine a day, but there was only 20% relief in the symptoms. An increase in the dose of cetirizine to 20 mg a day and addition of 120 mg terfenadine a day led to only 40-50% reflief. The patient was then admitted to the hospital and other investigations like X-ray chest, sputum examination and urine culture were performed which revealed no abnormality. The patient was then asked to try the mask test for 48 hours.[1,2,5] Within 24 hours there was 50% relief and during the next 24 hours there was 90% relief. The antihistamines were then stopped completely and wearing the mask for a further period of 24 hours led to more than 95% relief. He was then advised to wear a nasal filter after proper training and instructions.[5-7] After returning to Punjab, he continued to wear the filters and over the next 1 year he experienced nearly 80% relief in urticaria and complete relief from rhinorrhoea. The residual symptoms of urticaria were relieved by chlorpheniramine maleate. The major problem with the nasal filter in his case was the frequent blockage of the nasal filter net due to the dust so that he had to clean the filters three times a day, and incomplete relief of urticaria. Wearing the cloth mask for two days again produced 100% relief without antihistamines, and inspection of the nasal filters revealed a small area of damage to the net. He was advised to change to a fresh pair of filters and given further instructions for proper usage of the filters.

Comments

There are five options available for treating an allergic patient, namely, (1) removal of the antigen from the environment of the patient, or the patient from the environment, (2) interposing a barrier between the patient and the antigen, (3) continuous treatment with the drugs to suppress the symptoms of the allergic reaction, (4) immunotherapy to generate the blocking antibodies, and (5) modifying the immune system so that it stops reacting to the antigen.

The nasal filters belong to the category of barriers. These were designed by one of us (JSP) almost 20 years ago and have been used by patients having asthma, allergic rhinitis,[6] atopic dermatitis,[7] urticaria and other diseases caused by inhalants. The success depends upon two factors, (1) proper selection of the

patient, and (2) appropriate use by the patient. It is obvious that the filters can be useful to only those patients whose symptoms are being caused by an inhalant. It is therefore necessary to ensure that the causal agent is indeed an inhalant and nothing else. We as a rule depend upon an accurate and detailed history rather than the laboratory tests, because the clinical criteria as outline previously are far more reliable to correlate the symptoms with the causative antigen while the laboratory tests merely indicate that the patient can react to the antigen giving a positive test, and in a few cases the cause of the symptoms occurring at that time may be quite different. The mask test is quite useful to determine that the symptoms are indeed being caused by an inhalant and filtering the air is going to prevent the symptoms.

Secondly, it is important to bear in mind that in spite of selecting the correct type of a patient, if the patient does not use the filters properly, the benefit is likely to be incomplete or none at all. The filters belong to the category of artificial devices and therefore it requires a certain amount of patience on the part of the patient and appropriate training to be able to use this device properly. It generally takes a week or so to make the patient understand the purpose of wearing the filters, select the correct size, teach the method of inserting and removing the filters from the nostrils, cleaning the net to keep the pores open and to decide the period when the use of the filters is absolutely mandatory and when the filters may not be used. The patient can derive similar benefit also by wearing an ordinary cloth mask on the nose and the mouth and wearing the mask has the advantage of covering the mouth as well, so that the filtration of the air is more thorough. Cosmetically however, the mask is less acceptable and somewhat uncomfortable during summer.

Our experience during the last 20 years or so has been that the patients who could be selected properly and trained in the appropriate use of the filters have derived the maximum benefit and have been continuing to use the filters ever since without any problems, while others in whom the filters were prescribed indiscriminately or those who did not have the benefit of proper training failed miserably.

References

1. Pasricha JS. In: Treatment of Skin Diseases. 4th ed, New Delhi: Oxford & IBH Publishers 1991.
2. Pasricha JS. In: Allergic Diseases of Skin. 1st ed, New Delhi: Oxford & IBH Publishers 1981.
3. Pasricha JS, Minocha Y. Value of intradermal tests compared to diet elimination and provocation test in the diagnosis of food urticaria. Ind J Dermatol Venereol Leprol 1978; 44: 331-3.
4. Pasricha JS. Therapeutic effect of antibacterial agents in urticaria. Ind J Dermatol Venereol Leprol 1979; 45: 344-7.
5. Pasricha JS, Abrol BM. Relief of inhalant allergy by a mechanical nasal filter. Ann Allergy 1974; 32:331-3.
6. Pasricha JS. Use of nasal filters in naso-bronchial allergy. Indian J Paediat 1981; 48:47-50.
7. Pasricha JS, Thanzama J, Reddy RS. Nasal filters for relief from atopic dermatitis caused by inhalants. Ind J Dermatol Venereol Leprol 1989; 55:131-4.