

An Unusual Case of Contact Allergy to 4-Tert-Butylphenolformaldehyde Resin

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Abstract

The case of a 49-year old man with years of asymmetric unilateral neck eczema is presented. Patch testing revealed contact allergy to 4-tert-Butylphenolformaldehyde resin which on further questioning was found relevant to his leather bag shoulder strap.

Introduction

When a patient presents with dermatitis in an unusual location it can be difficult to suspect this as being due to contact allergy. I present a case that was referred to our allergy clinic for patch testing after 6 years of continuous unilateral dermatitis at his neck. Furthermore, when a strong reaction to 4-tert-Butylphenolformaldehyde resin (PTBP-F-R) was discovered its relevance was not immediately clear.

Case Report

A 49 years old male was referred to our clinic with a skin problem of about 6 years duration. He showed eczematous pruritic dermatitis at the back of his neck, especially at its base, extending sideways and mostly to the left side. Before being referred to us he had been treated with different types of steroids creams which gave variable and temporary relief. Lately, he noted worsening of his dermatitis with diminished response to treatment. He could not relate his skin problem to anything in particular in his daily life. Detailed questioning did not reveal any possible cause. He denied ever suffering from allergic rhinitis, conjunctivitis, asthma or any skin disease besides the present problem. He worked at a computer company doing office work.

Patch tests were performed with the European baseline series, cosmetic, medicaments and steroid series (Chemotechnique Diagnostics). There was only one positive reaction (+++ at D3) to PTBP-F-R, which is present in the baseline series.

On further questioning, he explained that for years he had been using a leather bag with a shoulder strap which he especially liked. We explained to him that he is probably reacting to the glued strap of his bag reacting to the part of his body with the closest and strongest contact. He was advised to stop using it and within a couple of weeks he reported a gradual and complete disappearance of the dermatitis with no further need of any topical steroid.

Discussion

PTBP-F-R is considered an important allergen and as such is present in the European baseline series. Still, the frequency of positive results varies in different parts of the world. De Groot et al. [1] compared several different frequency studies from Europe and the USA and found that while in the USA its frequency varies between 1.3-2.0%; in Europe it is slightly lower at 0.5-1.5%. A much higher frequency was detected by Bilcha et al. [2] in Ethiopia with 7.5% reacting to PTBP-F-R from a group of 514 suspected contact dermatitis patients. They conjectured this to be due to different national and cultural practices.

The main use of PTBP-F-R is as a component of adhesives and as such cases have been described secondary to contact with all kinds of

glued products such as rubber, leather, electrocardiograph electrodes, varnishes, inks and many other sources.

Foussereau [3] considered allergy to PTBP-FR to be possibly due to para-tertiary-butyl-phenol, to the resin itself, or less frequently to formaldehyde. Later, Geldorf [4] and Kanerva [5] dismissed formaldehyde as having any roll in PTBP-FR allergy.

Contact dermatitis diagnosis requires a combination of knowledge and a thorough anamnesis which combined with the areas of the body implicated usually suggests the possible causes upon which the election of the allergens to be patch tested is based. Dermatitis in unusual areas of the body (as in this case) presents a diagnostic challenge as it is not always clear which are the possible contact allergens and even the diagnosis of the dermatitis as contact allergy is doubtful as this case showed: it took his treating physicians fully six years before he was referred to us for patch testing. Furthermore, it is not always easy to determine the clinical relevance of positive reactions to PTBP-F-R [6]. As a general rule, the more positive the test, the more probable that it is indeed relevant and efforts should be made to discover the source of exposure before deeming it irrelevant. As this case demonstrates, going back once more to the patient and conducting a renewed focused questioning can be fruitful and finally solve the case to the joy of both patient and doctor.

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