PATCH TESTING WITH FORMALDEHYDE 2%. A MULTICENTRIC STUDY IN SPAIN.

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INTRODUCTION

The prevalence of formaldehyde (FA) sensitization is different according to geographic areas. Formaldehyde concentration in the diagnostic patch test has been controversial, but the last European recommendations (1) suggest formaldehyde 2% as the optimal concentration because clinically relevant contact allergy to FA may be missed by testing with FA 1%. For this reason, the Spanish baseline series was updated by the Spanish Contact Dermatitis and Skin Allergy Research Group (GEIDAC) and concentration for the formaldehyde change to 2% aqueous solution (aq.) instead of 1% in 2016 (2).

OBJECTIVES

The aims of this prospective, descriptive one-year prospective study were to ascertain the incidence of sensitization to formaldehyde and assess the features of patients with sensitization to formaldehyde in Spain nowadays.

MATERIAL AND METHODS

We performed a prospective and descriptive study in departments of dermatology in 14 Spanish hospitals, that included 2971 patients during 2017, who were selected had undergone testing with Spanish baseline series.

Formaldehyde 2% aq. supplied by Chemotectique® (Velling, Sweden) in 7 hospitals or Allergeazer® (Calgary, Canada) in the others 7 hospitals. Readings were taken at D2 and D4, according to the recommended International Contact Dermatitis Research Group evaluation criteria (+, ++, and +++). We compared the demographic characteristics of the patients by with MOAHLFA index.

RESULTS

2971 patients were tested from January to December 2017 with formaldehyde 2% aq., 113 patients reacted positively to FA and only 4 irritant reaction were recorded.

The demographic data obtained in our study show a higher percentage of women (Male: 26,60%), younger people (Age $\geq$ 40 years : 21,23%), more atopic patients (Atopy: 27,52%), higher percentage of lesions in legs (Leg: 46,78%) in formaldehyde patients than overall study population. 12 occupational cases were observed, the most of cases are women, health workers and hairdressers and the hands were the most frequently involved areas.

DISCUSSION

In this Spanish study, the frequency of sensitization to formaldehyde was higher (3.66 %) than previous studies in Spain (2,58-1,38) (3-5). This increase may be due to the fact that FA 2% detects more contact allergies to formaldehyde as only few cases are considered irritant reactions. These data are according with previously European published studies (1,6).

The demographic data obtained in our study show that formaldehyde allergy were the same as other studies (3). Although we must remark the higher number of patients with leg dermatitis than others studies (3,6). These results could be different because previous dermatitis could be a risk factor to increase of the penetration of FA, that could be released in topical medicaments or cosmetic products.

CONCLUSIONS

The present study with formaldehyde 2% shows a higher frequency of sensitization to formaldehyde in Spain than previous epidemiologic with formaldehyde 1%. We conclude that formaldehyde 2% is the optimal concentration patch test in Spanish baseline series.

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