

Contact allergy in relation to body sites in patients with allergic contact dermatitis in 2019–2020

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Introduction

Allergic contact dermatitis is a common inflammatory skin disease which in long-term significantly impairs quality of life [1]. The main task of disease control is to identify and eliminate the sensitiser (contact allergen). The most reliable method to determine contact allergy (CA) is a standardized allergen patch test [2]. Therefore the anatomical site of dermatitis can help suspecting the cause of CA [3].

Aim

To evaluate the prevalence of CA and its relation to body sites during the 2019–2020 year period for patients with chronic dermatitis.

Objectives

To determine the change in the frequency of CA in this study period. To evaluate the spectrum of the most common contact allergens among patients with chronic dermatitis. To determine the relation of prevalence of CA with a body site among patients with chronic dermatitis.

Materials and methods

A retrospective study was performed in accordance with European Surveillance System on Contact Allergies (ESSCA) project and its standard protocol [2]. Patch test results of European baseline series performed with 45 contact allergens in 2019 – 2020 were analysed at the Department of Skin and Venereal Diseases Kaunas Clinics in patients with chronic dermatitis. Data analysis was made with SPSS 25.0 statistical program.

Results

In 2019 women sensitized to contact allergens accounted for 37.8 % (95 % CI 32.5–43.2) of patients and men – 11.2 % (95 % CI 8.0–15.1), respectively in 2020 women – 32.7 % (95 % CI 25.7–40.4) and men – 13.1 % (95 % CI 8.4–19.2) (Fig.1). CA to nickel sulfate: among women – 21.9 % (95 % CI 17.0–27.5) in 2019 and 20.0 % (95 % CI 13.3–28.3) in 2020; among men – 2.7 % (95 % CI 0.3–9.3) in 2019 and 2.1 % (95 % CI 0.1–11.1) in 2020. CA to sodium metabisulfite among men: 8.1 % (95 % CI 2.7–17.8) in 2019 and 8.3 % (95 % CI 2.3–20.0) in 2020 (Fig. 2). Sensitization of less than 0.5 % was observed for mercaptobenzothiazole, tixocortol pivalate, bronopol, imidazolidinyl urea, lidocaine, quaternium 15, hydroxyisohexyl 3-cyclohexene carboxaldehyde (HMPCC) and parthenolide. Prevalence of hand CA in 2019 – 19.6 %, face and leg CA – 14.8 % and 4.23 %, and in 2020 – 19.1 %, 8.3 % and 10.12 % (Fig. 3). The most common contact allergens in relation to body sites were nickel sulfate, potassium dichromate, sodium metabisulfite and linalool (Fig. 4).

Conclusions

During the study period CA was found more frequently in women than men. Nickel sulfate more often sensitizes women than men, while sodium metabisulfite – men than woman. In 2019 contact sensitization was observed in the hands (95 % CI 15.5–24.3) and face (95 % CI 11.2–19.1) more often than in the legs (95 % CI 2.3–7.0). Whereas in 2020, a significant relation between CA and its anatomic sites was not found. The most prevalent contact allergen in patients with hand and face dermatitis was nickel sulfate, while in patients with leg dermatitis – sodium metabisulfite.

Figures and legends

Fig. 1 Comparison of patients, sensitized to at least one contact allergen

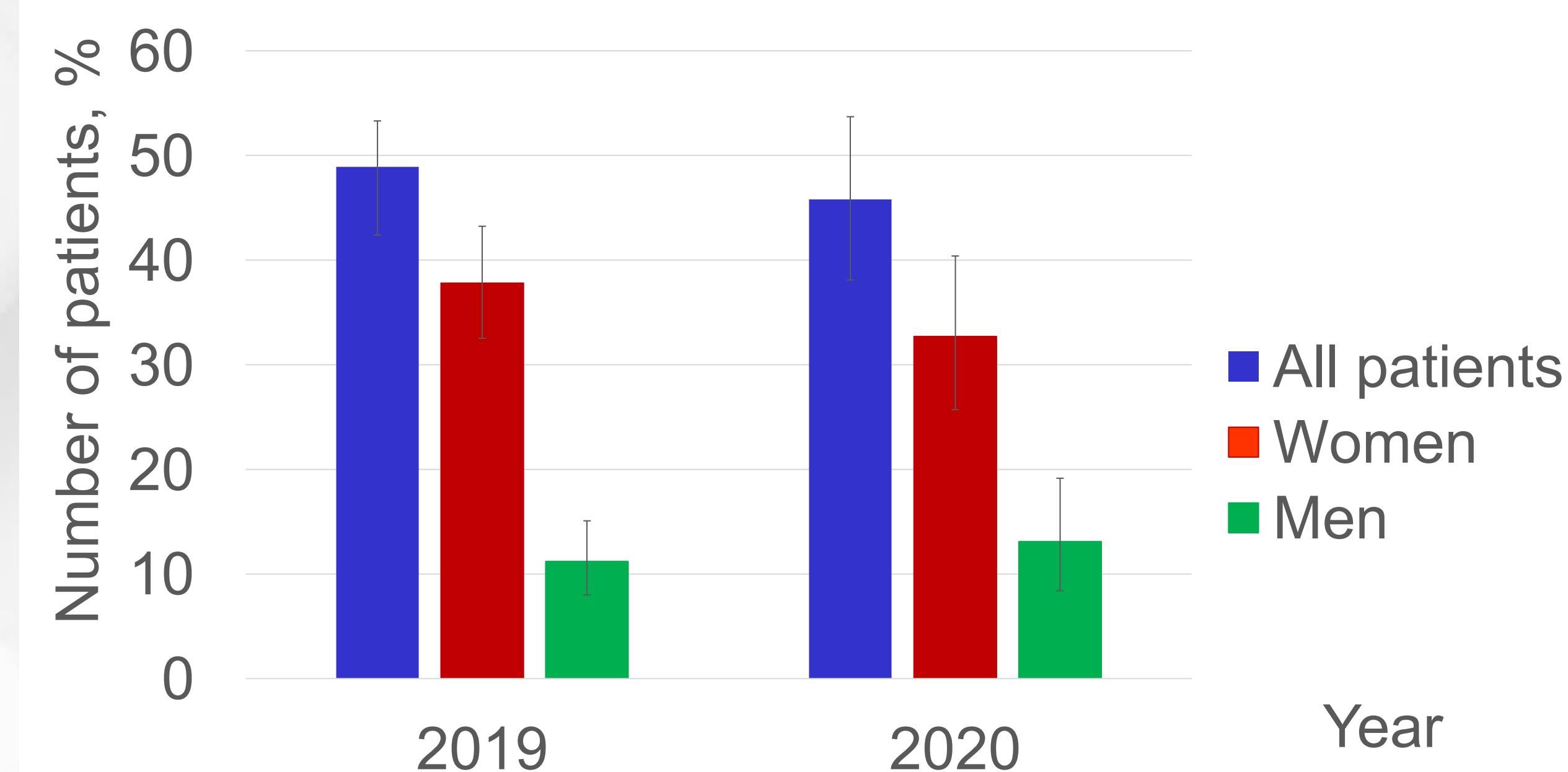


Fig. 2 Most common allergens between men and women

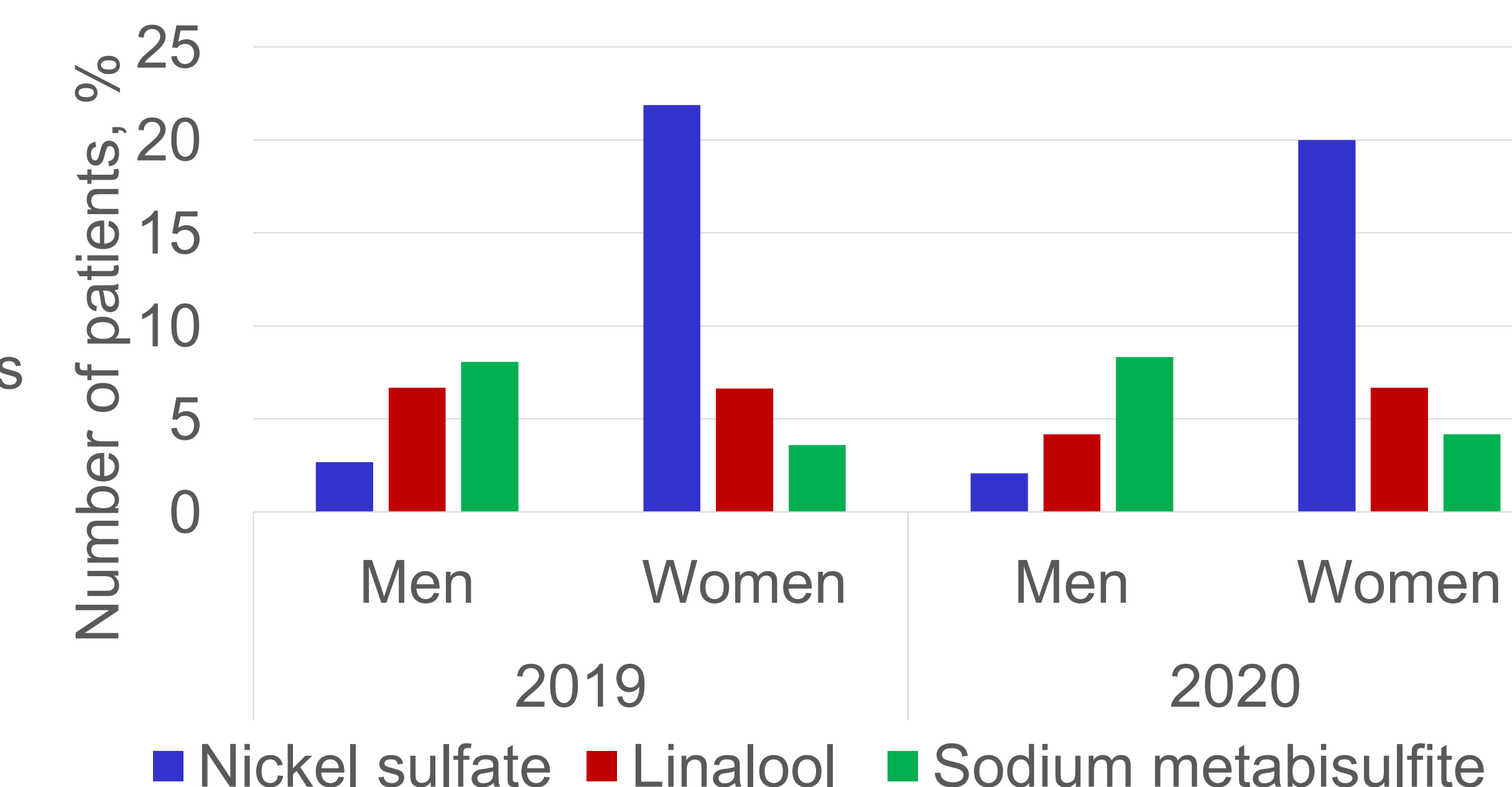


Fig. 3 Relation between contact allergy and its anatomic site

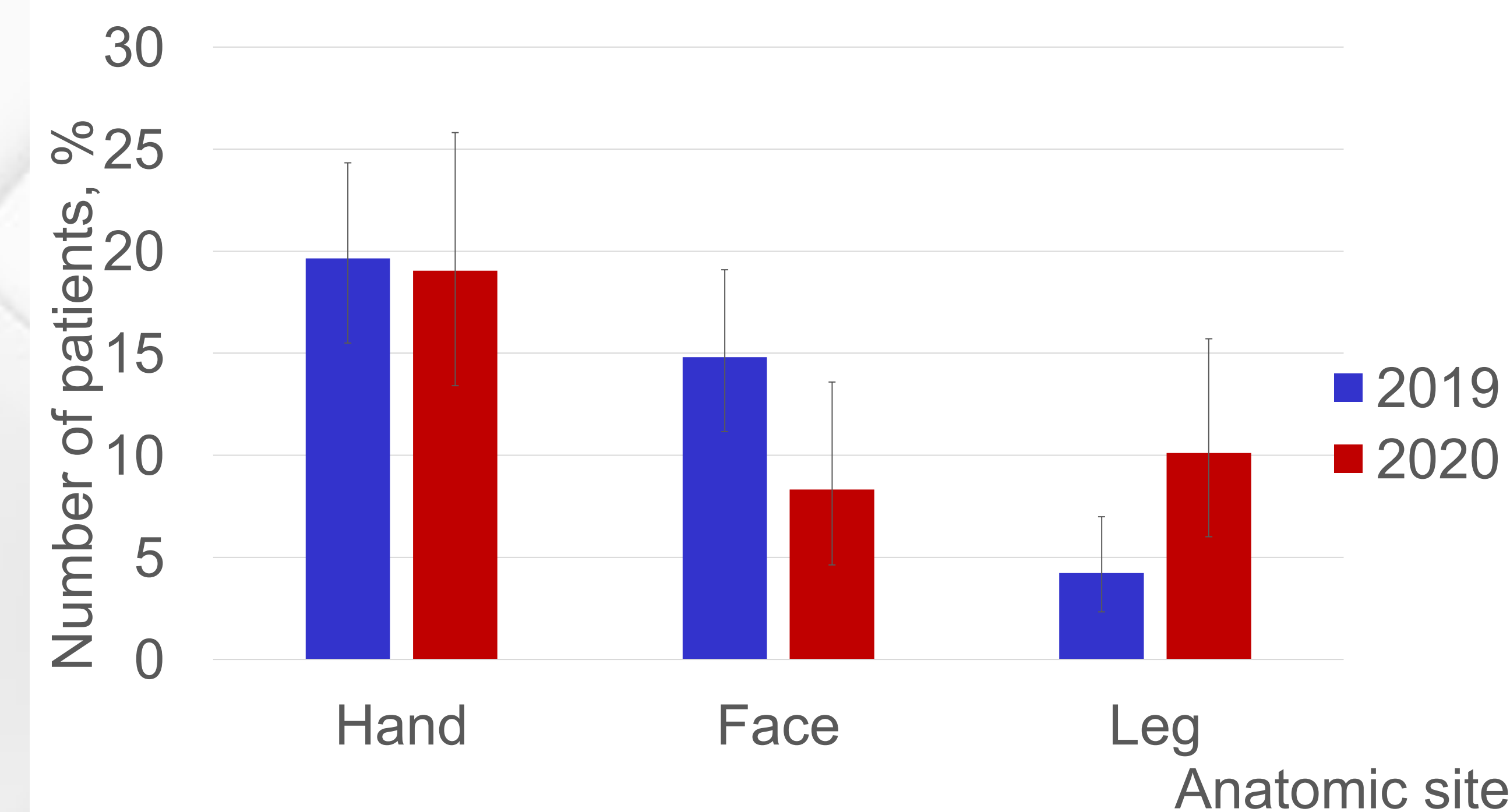
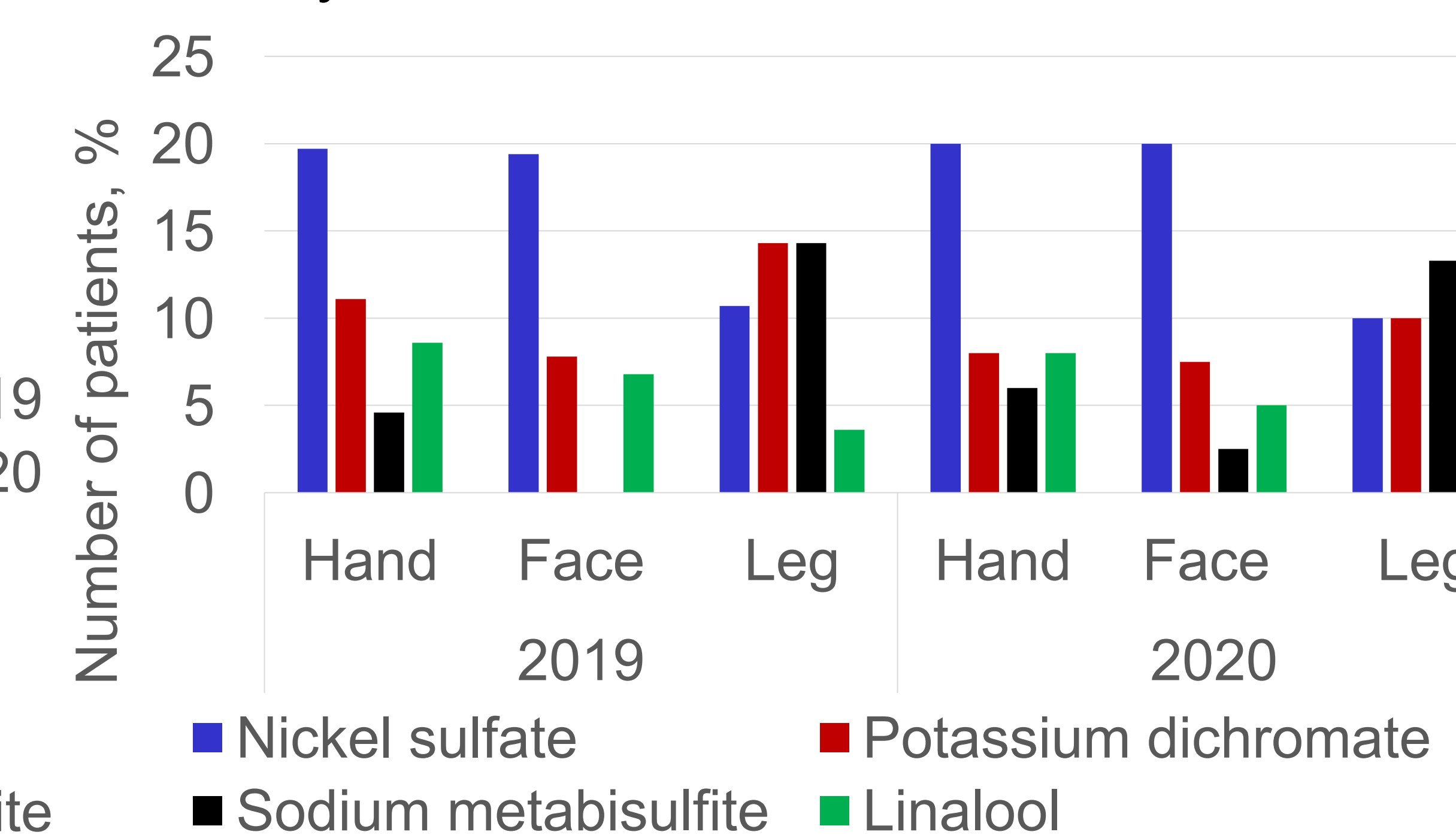


Fig. 4 Most prevalent contact allergens in relation to body sites



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Key words

Allergic contact dermatitis; contact allergy; European baseline series