

textile dye fixatives. The rate of positive results to stannous chloride in consecutive patients appears surprisingly high. The aim of the present study was to analyze the retrospective patch test results with tin, tin chloride and tin oxalate to better understand the clinical relevance of positive reactions.

Methods: Retrospective analysis of patients tested with stannous chloride 1% pet., metallic tin 50% pet., and stannous oxalate 1% pet. in IQ Ultra chambers (Chemotechnique Diagnostics, Sweden). The tests were carried out in line with ESCD recommendations with readings after 2, 4 and 7 days. Contact allergy to tin was diagnosed in case of at least one clear positive reaction to any tin compound on any reading day. Clinical relevance was assessed with the use of CODEX scale.

Results: Between 2013 and 2024, patch tests with stannous chloride were performed in 304 patients (217 women and 87 men, aged 2–77 years). Questionable reactions were noted in 45 (14.8%) patients and positive reactions in 121 (39.8%). The morphology and dynamics of the reaction indicated a true allergic reaction in most patients, but the frequency of questionable reactions, as well as positive reactions of unknown significance, required special caution. Of the 119 patients tested with metallic tin (50% pet.), positive reaction was noted in only 1 (0.8%, current relevance). Among 101 patients tested with stannous oxalate, 2 questionable and 2 positive reactions (2.0% each), 1 of current, and 1 of unknown relevance were noted.

Conclusions: Positive patch test reactions to stannous chloride are common, which may reflect the widespread exposure to tin in everyday life. However, their interpretation requires caution and a good understanding of possible sources of exposure.

P-030 | Periorbital Contact Dermatitis in Singapore: A Single-Center Retrospective Study of Patch Test Data from 2004 to 2021

Ong K¹, Lim D¹, Leow Y¹, Goon A¹, Chong T¹, **Cheng S¹**

¹National Skin Centre, Singapore

Purpose: Periorbital contact dermatitis is uncommon. We aim to identify the frequency and relevance of periorbital contact allergy among patients undergoing patch testing at the National Skin Centre, Singapore.

Methods: We retrospectively analyzed patch test results of all patients with periorbital dermatitis who underwent patch testing with one or more of eight contact allergens of the in-house periorbital series from 2004 to 2021. Readings were performed on days 3 and 7. Descriptive analysis was performed for all variables.

Results: 270 patients were included, with a mean (SD) age of 42.9 (17.5) years. 222 (82.2%) were female. Fifty-eight (21.5%) had history of atopic dermatitis. Twenty-two (8.1%) had contact allergy to one allergen and none had contact allergy to multiple allergens. Contact allergies to thimerosal (18 of 22, 81.8%), phenylmercuric acetate (2 of 22, 9.1%), and chloramphenicol or toluenesulfonamide formaldehyde resin (1 of 22, 4.5% each) were noted, with eight (66.7%), one (50.0%), one (100.0%) and zero reactions deemed relevant respectively. Six (27.3%) were late positive reactions.

Conclusions: Allergic contact sensitization in periorbital dermatitis is more common in females, possibly due to increased use of cosmetics. Specific periorbital dermatitis series is helpful

to test against clinically relevant allergens such as thimerosal, phenylmercuric acetate and chloramphenicol. Day 7 readings are essential due to significant proportion of late positive reactions.

P-031 | Pigment Composition of Permanent Make-up Products before and after REACH Restrictions

Spiewak R¹, Postawa A², Szopa J², Kalicinska J³

¹Institute of Dermatology, ²Graduate of Faculty of Pharmacy, Jagiellonian University Medical College, Poland, ³Department of Experimental Dermatology and Cosmetology, Jagiellonian University Medical College, Poland

Purpose: In January 2022, REACH restrictions on hazardous chemicals in tattoo inks and permanent make-up products (PMUP) came into force in the EU. This created an opportunity to study how regulatory measures alter consumer exposure.

Methods: We compared pigments declared in 80 PMUP available in 2017 and in 100 PMUP available in 2024.

Results: 58 pigments were mentioned in at least one of the 180 PMUP. Titanium dioxide (CI 77891) was most prevalent, but a decrease between 2017 (78.7% products) and 2024 (53.0%, $p < 0.001$), followed by iron oxides CI 77491 (56.2%, 48.0%, ns), CI 77499 (70.0%, 27.0%, $p < 0.001$), and CI 77492 (57.5%, 23.0%, $p < 0.001$). A reverse trend was observed for carbon black (CI 77266, 3.7%, 35.0%, $p < 0.001$) and chromium oxide greens (CI 77288, 6.2%, 20.0%, $p = 0.008$). Seven pigments were mentioned on ingredients lists in 2017, but not in 2024: CI 12490, CI 15985/15985:1, CI 16035, CI 73360:1, CI 74160, CI 77007, and CI 77742, of which 6 are now prohibited. On the other hand, 38 “new” pigments were mentioned only on PMUP in 2024, including 16 declared in at least 3 products: CI 12474, CI 12760, CI 200310, CI 21160, CI 21108, CI 47005, CI 561300, CI 561170, CI 74260, CI 12475, CI 75300, CI 21095, CI 12516, CI 11741, Pigment Violet 55 and Pigment Yellow 214 (no CI numbers). Two colour index numbers (CI 11787 and CI 58300) mentioned in one product of 2024 were unknown to any database.

Conclusions: The declared pigment content in permanent make-up products has changed significantly between 2017 and 2024. Titanium and iron-based pigments dominate in both “old” and “new” products, but are on significant decline, contrary to carbon and chromium-based pigments. Furthermore, a handful of “old” organic pigments have been replaced by dozens of “new” pigments, many of which have limited safety data.

P-032 | A Retrospective Study on Patch Testing in Eczema Patients with Generalized Distribution

Svetvilas P¹

¹Ramathibodi Hospital., Mahidol University, Thailand

Objectives: Generalized eczema is a challenging dermatological condition. Patch testing is a useful tool to identify relevant contact allergens and improve clinical outcome. However, data of clinical characteristics, and prevalence of contact allergens in patients with generalized eczema are still limited. This study aims to determine the prevalence of generalized eczema in