

0.02% aq., MI 0.2% aq., MCI/MI 0.215% aq. and MI 0.2% pet. (all Chemotechnique), read on day (D)2 and D4, or D3 and D5, with late D7 targeted readings.

**Results:** Of 572 patients, 128 (22.4%) were positive (+/++/+++ to one or more preparation(s): 16 (2.8%) to MCI/MI 0.02% aq., 70 (12.2%) to MCI/MI 0.215% aq., 30 (5.2%) to MI 0.2% aq. and 95 (16.6%) to MI 0.2% pet.

Of 128 positive patients, MI 0.2% pet. and MCI/MI mix 0.215% aq. identified 122 (95.3%). Omitting MI 0.2% pet. would have missed 42 (32.8%), omitting MCI/MI 0.215% aq. 20 (15.6%).

Of 572 patients, MCI/MI 0.02% aq. identified 3 (0.5%) and MI 0.2% aq. 4 (0.70%) patients with +/++/+++ reactions undetected by MI 0.2% pet. or MCI/MI 0.215% aq., in total, and combined 6 (1.05%). Individual positive rates fall below the 1% threshold for baseline series inclusion.

Current relevance was noted in 70.3%, past relevance in 14.1% – similar figures for individual haptens.

**Discussion:** Our results suggest that MCI/MI 0.215% aq. and MI 0.2% pet. should be considered in baseline series to detect relevant contact allergy, replacing MCI/MI 0.02% aq. and, probably 0.2% MI aq.

## P-027 | Isothiazolinone Sensitization in Gran Canaria (Spain). A Follow up of Ten Years

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**Background:** The island of Gran Canaria has consistently reported one of the highest sensitization rates to isothiazolinones (IT) in Europe. During 2005–2015, sensitization to methylchloroisothiazolinone/methylisothiazolinone (MCI/MI) reached 12.6%. The objective of this study was to update IT sensitization data and to analyze temporal trends and associated demographic and occupational factors.

**Methods:** A retrospective cross-sectional study was performed in patch-tested patients from a tertiary referral centre. Sensitization to MCI/MI was analysed from 2005 to 2025 ( $n = 2,672$ ). Sensitization to methylisothiazolinone (MIT;  $n = 1,031$ ), benzisothiazolinone (BIT;  $n = 944$ ), and octylisothiazolinone (OIT;  $n = 940$ ) were assessed from 2018 to 2025. Annual sensitization rates were calculated. Associations with sex, age, year of testing, and occupation were evaluated

**Results:** IT sensitization was associated with older age and with occupations involving cleaning and hairdressing. Overall sensitization to MCI/MI during the study period was 11.1%, decreasing to 5.2% in 2024–2025. MCI/MI sensitization showed distinct peak during 2010–2020 years, followed by a decline. MIT sensitization was 11.7% overall and 7.0% in 2024–2025. MIT-positive patients were significantly older. Higher sensitization rates were observed in earlier years and among cleaning workers, but these associations were not statistically significant. BIT sensitization was 7.8% overall and 7.3% in 2024–2025. Marked interannual variability was observed without a defined pattern. Only 8 of 940 patients tested positive for OIT.

**Conclusions:** Sensitization to isothiazolinones in Gran Canaria remains high compared with national and European data. Although MCI/MI sensitization has declined in recent years,

occupational exposure (particularly among cleaning workers and hairdressers) continues to be relevant in IT sensitization patterns of our referral area. OIT sensitization has not clinical relevance.

## P-028 | “The Cure is Worse than the Disease”: Iatrogenic Allergic Contact Dermatitis Caused by Ethylenediamine Dihydrochloride

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**Background:** Although ethylenediamine dihydrochloride was a prevalent allergen in the past, changes in pharmaceutical formulations have led to a decrease in its use and consequently reduce the utility of its systematic testing in the standard batteries (SB) of allergens.

Therefore, its removal from the SB was proposed in some European countries, while it has been retained in others. Spain is one of the countries that decided to eliminate it from its SB; however, it remains included in True test and in extended SB.

**Methods:** A 23 yer-old woman was referred to our clinic after developing acute facial dermatitis. She had been prescribed Positon cream for seborrheic dermatitis. Positon cream contains 2.5 mg of neomycin, 1.0 mg of triamcinolone, and 100,000 international units of nystatin.

Two to three days after starting the topical treatment, she developed pruritic, erythematous, desquamative lesions involving her facial region.

Patch testing was performed using the TRUE Test, the GEIDAC extended series, and Positon cream.

**Results:** Patch test results were positive for the following allergens: Ethylenediamine dihydrochloride, 2-hydroxyethyl methacrylate (HEMA) and Positon. Review of the composition of Positon confirmed the presence of ethylenediamine dihydrochloride among its excipients. Clinical improvement was observed after discontinuing the offending product. The patient had no occupational or recreational exposure to acrylates. In the absence of relevant exposure, the positive reaction to HEMA was considered not clinically relevant.

**Conclusions:** We present a case of clinically relevant sensitization to ethylenediamine dihydrochloride. This case demonstrates that ethylenediamine dihydrochloride, despite having been excluded from the Spanish SB, may remain a clinically relevant allergen, as it persists in the formulation of some topical treatments. Allergic contact dermatitis caused by the treatment itself highlights the importance of individualizing patch testing and always including patient's own products.

## P-029 | Tin Contact Allergy: A Summary of 12 Years of Patch Testing

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**Purpose:** Among many industrial and everyday applications, tin compounds are widely used as cosmetic ingredients and

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

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**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

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**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

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**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