

Abstract N°: 35**Oral Iron in the management of Nickel systemic contact dermatitis: an easier alternative**Ashimav Sharma¹¹DERMACARE Clinic, Bongaigaon, Assam, Dermatology, Bongaigaon, India**Introduction & Objectives:**

Patients allergic to Nickel, present clinically with Allergic contact dermatitis as a rule, although cases of Nickel Systemic Contact Dermatitis (NSCD) due to oral exposure have been documented. Cases of Vesicular hand eczema, Baboon Syndrome, Urticaria like skin rashes, erythema multiforme and vasculitis have been reported following nickel ingestion. Outcome of treatment with immunosuppressives of such NSCD is mostly unsatisfactory as the relapse rate is high. This is because nickel is present in most of the dietary items of humans. Alternative treatment modalities like Low Nickel diet(LND), oral Disulfiram, Nickel desensitization etc. have their own merits and weakness. Recently oral Iron Therapy has been found to be an easy, safe, and effective method for the treatment of NSCD.

Materials & Methods:

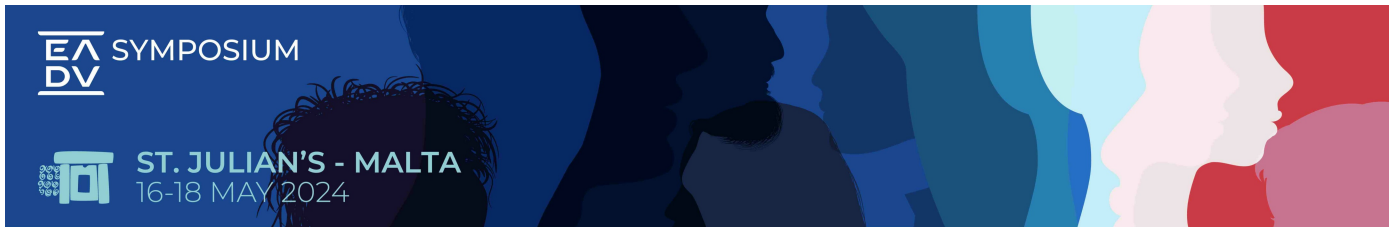
This was a clinic-based study. A total of 21 adult patients with confirmed NSCD were included in this study after taking valid consent. All patients who presented with severe attack of systemic contact dermatitis were first treated with Immunosuppressants, topical and oral steroids, according to requirements, before starting the trial. Patients were divided into 2 groups: first group(n=10) received LND only, second group(n=11) received Oral Iron (10mg of elemental iron just before lunch and dinner, total 20 mg per day) with LND. Study period was 6 weeks for each group. Every patient was evaluated clinically at 2 weeks' interval.

Results:

Faster improvement in clinical symptoms and complete clearance of skin lesions were noted in those patients who received Oral Iron and LND. The treatment was well tolerated by the patients; only 2 patients experienced mild constipation with Iron. Patients receiving only LND had moderate improvement in the skin lesions.

Conclusion:

Nickel allergy tend to persist lifelong. Good options to control NSCD are either by lowering the dietary intake of Nickel, or by inhibiting the absorption of Nickel from the human gut. Oral Iron can inhibit the absorption of Nickel from diet. This study showed that Oral Iron when combined with LND, can induce faster remission of symptoms in NSCD than LND alone. This is an easy method of treatment of NSCD and do not require monitoring of blood parameters during treatment period.



Abstract N°: 464

Gel nail polish - beauty or a beast?

Ana Sanader Vučemilović^{1, 2}, Ana Bubić²

¹Clinical Hospital Centre Split, Croatia, Dermatovenerology Department, ²Clinical Hospital centre Split, Croatia, Dermatovenerology Department

Introduction & Objectives:

Gel nail polish has become an indispensable part of manicure in recent decades due to its attractive cosmetic effects (1). Procedure of applying gel nail polish consists of 2 steps. First step is applying nail polish, the second step is using UV lamp by which process results in polymerization (1). Apart from the fact that gel nail polish manicure is available in beauty salons, it is also very easily available for home use (1). Previous research on the side effects of this cosmetic procedure is rare and focuses mainly on allergic contact dermatitis caused by methacrylates, which are the main compound in the gel (2, 3, 4).

The aim of this study was to present side-effects associated with use of gel nail polish and associated skin diseases.

Materials & Methods:

We present the case of a 52-year-old woman who visited our outpatient clinic with a 1-month history of various nail changes of the fingernails and changes on the skin of both of her hands (erythematous dermatitis of the dorsum of the hands, palms and fissures and crusts on the fingertips). She had artificial nails for the last 10 months because her nails were more prone to splitting, so she thought that application of artificial nails will protect nails from further splitting and destruction.

We performed patch test to baseline series, acrylate series, and the patient's own material.

Results:

In the baseline series, the patient had positive reactions to nickel (II) sulfate and carba mix, 2-hydroxyethyl methacrylate (2-HEMA), ethylene glycol dimethylacrylate (EGDMA), hydroxyethyl acrylate (HEA), and methyl methacrylate (MMA).

The allergic contact dermatitis on the hands of the patient resolved following removal of the artificial nails and application of systemic corticosteroid and local corticosteroid and antibiotic therapy, although nail dystrophy persisted for several months.

Conclusion:

Our case report shows that exposure to acrylates in gel nails can induce a wide variety of clinical manifestations including nail dystrophy and allergic contact dermatitis.

This case is reflection of a growing trend of allergic contact dermatitis and nail changes associated with artificial nails. Therefore it is important that dermatologist are aware of the potential adverse effects of gel polish and should recommend the patients to be aware of adverse effects of gel polish and to stop using it or use as infrequently as possible.

References:

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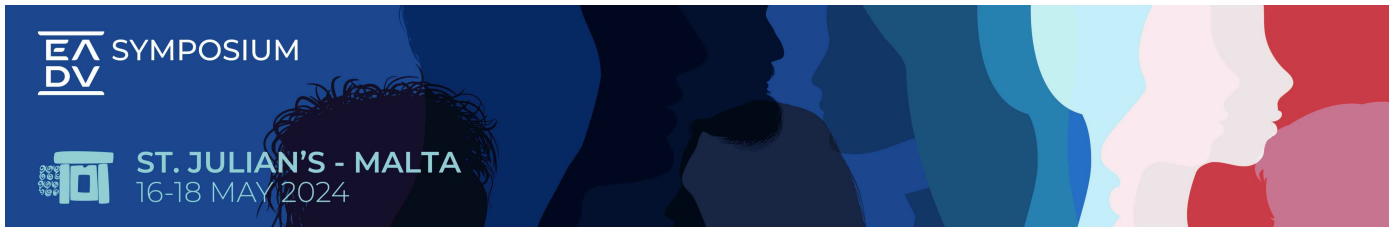
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Abstract N°: 820

Cluster Analysis of Patch Testing and Treatment Outcomes in Patients with Allergic Contact Dermatitis: A 11- Year Retrospective Study at a Korean Tertiary Medical Center

Eung Ho Choi¹, Jae Joon Jeon¹, You Hyun Kim¹, Seung-Won Jung¹, Solam Lee¹

¹Yonsei University Wonju College of Medicine, Dermatology, Wonju-si, Korea, Rep. of South

Introduction & Objectives:

Allergic contact dermatitis is a common inflammatory skin disorder with various allergens acting as causative agents. However, research on the patterns of antigens showing positive reactions in contact allergy patients is insufficient. To investigate the patterns of positive antigens and systemic treatment in patients who underwent patch testing at a single tertiary medical center in Korea from 2012 to 2022.

Materials & Methods:

Patients who visited the dermatology outpatient clinic and underwent patch testing from 2012 to 2022 were included in the study. The antigens used for patch testing comprised 25 standard antigens. Their atopy history, systemic treatment, follow-up duration, etc., were obtained through an electronic medical record (EMR) review. Cluster analysis of patients' patch test results was conducted using the k-means method.

Results:

A total of 3,069 patients underwent patch testing, with a higher proportion of females (1,923, 62.7%) than males (1,146, 37.3%), and the mean age was 44.5 years. The cluster analysis identified six groups: metal (n=286), fragrance dominant (n=219), non-dominant (n=1862), metal-dye (n=100), metal dominant (n=539), and preservative (n=63). Among these groups, the preservative group (positivity for Methylchloroisothiazolinone/Isothiazolinone) showed a significantly higher rate of poor steroid response compared to other groups (11.1%, p=0.003). Even when analyzing 1,518 patients with a follow-up duration of more than 90 days, the preservative group (n=30) exhibited a significantly higher rate of poor steroid response compared to other groups (20.0%, p<0.001). There was no significant difference in atopy disease history among the groups.

Conclusion:

This study highlights that preservatives-induced contact allergy necessitates a more prolonged use of systemic immunomodulators compared to other contact allergies. The reevaluation of regulatory policies concerning the use of MCI/MI components in personal care products is warranted.



Abstract N°: 1307

Allergic contact dermatitis to medical adhesives used in sensors measuring blood sugar levels

Mariya Razlozhka¹, Kristina Mitkova¹, Emil Stoimenov¹, Jana Kazandjieva¹

¹Medical University- Sofia, Department of Dermatology, Sofia, Bulgaria

Introduction & Objectives:

Blood sugar measuring sensors are relatively new addition to the antidiabetic therapy. Along with their introduction were discovered some allergic reactions that could appear in patients threw out their use. These allergic reactions could be towards acrylates, glues that are used etc.

Materials & Methods:

We present the case of a 22 years old patient with a history of therapeutically controlled insulin-dependent type 1 diabetes for 13 years. The patient decided to start using a sensor for measuring her blood sugar levels. She visits us regarding erythema and pruritus that appeared in the area of the left arm 10 days after the first placement of such sensor. The sensor is placed on the arm using a few types of medical adhesives that should be changed every 10 days. She used a corticosteroid local therapy on the affected area 3 days after the first sensor and medical adhesives were detached.

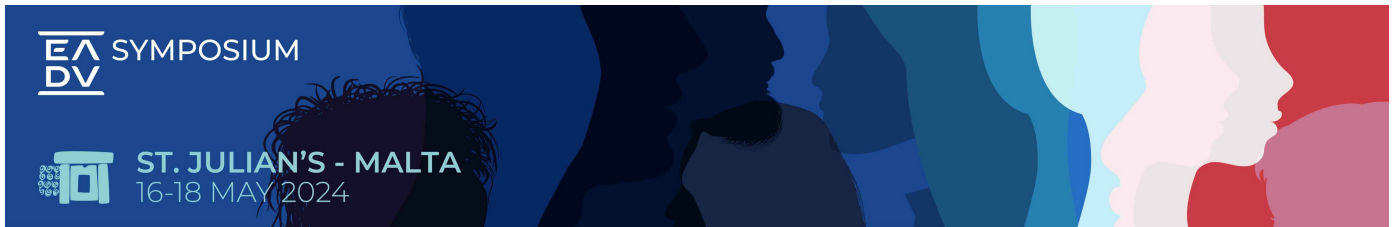
Results:

The contact dermatitis was thought to be due to one of the few medical adhesives used to attach the sensor to the arm, rather than the sensor itself, because of the shape and extent of the marked erythema. Epicutaneous testing "as is" was performed with all 4 types of medical adhesives used by the patient up to date, as well as with the following allergens: 2-hydroxyethyl methacrylate 2.0 %, Budesonide 0.01%, Tixocortol – 21 – pirvalate, all from the Standard European series.

A positive reaction to one of the medical adhesives used to attach the sensor was observed. The reactions to 2-hydroxyethyl methacrylate 2.0 %, Budesonide 0.01%, Tixocortol – 21 – pirvalate were all negative, which made us rule out the possibility that the allergic contact dermatitis is caused by the sensor itself or its plastic and paint. Hypoallergenic medical adhesives did not give a positive reaction so they will be the alternative used by the patient in the future.

Conclusion:

Keeping in mind that blood sugar measuring sensors are new and promising devices that are becoming more and more commonly used by patients, it is normal to start seeing the side effects that they might cause in some patients such as allergic contact dermatitis. It is really important to define the exact cause of the allergic reaction so that it could be removed. Our case was a lucky one, because it turned out that the patient is allergic to the original medical adhesive, which is easily exchanged for a hypoallergenic one and not the sensor itself. This way she can continue using the device and monitor her health condition.



Abstract N°: 1558

Cutaneous reactions and patch test results in patients undergoing the Nuss procedure for pectus excavatum

Hajeong Kim¹

¹South Korea, Department of Dermatology, Seoul, Korea, Rep. of South

Introduction & Objectives:

The Nuss procedure, also known as minimally invasive repair of pectus excavatum, is a surgical method in which a metal alloy bar is implanted into the thorax. Several cutaneous complications following the Nuss procedure have been reported, with 'metal allergy' being noted in 2.9% of patients.

The objective of this study was to classify the cutaneous reactions of patients with metal allergy, and investigate a possible correlation with results of patch testing.

Materials & Methods:

We retrospectively reviewed patients who underwent the Nuss procedure and later referred to our clinic for skin lesions at the implantation site since 2023. We gathered data from electronic records and patient recall.

Results:

We present a case series of 13 patients who underwent the Nuss procedure and later referred to our clinic for skin lesions at the implantation site. Most patients developed symptoms within a year, with 62% experiencing them within the first 6 months. However, three patients had symptoms appear 13, 15, and 19 months after implantation, respectively. Erythematous patches were the most common feature of the skin lesions (8 of 13 patients), followed by protuberant granuloma (4 of 13 patients) and erosion (1 of 9 patients). 11 patients underwent patch test, and among them, 5 patients (45%) showed positive reactions to various metal substances, while 2 (18%) exhibited questionable reactions to nickel and potassium dichromate at 48 hours. 3 patients who were confirmed to have metal allergy through patch testing exhibited skin reactions in the form of granulomas. These were the most refractory to conservative treatment, with all of these patients undergoing early bar removal.

Conclusion:

This is the first retrospective study of cutaneous reactions and patch test results in patients after undergoing the Nuss procedure in Korea.

