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RESEARCH LETTERS

Allergic contact dermatitis to manganese in a prosthodontist with orthodontics

To the Editor:

We present the case of a 23-year-old female patient, allergic to Penicillin, presenting erythematous, fissurated and scaly itching lesions, affecting bilateral and symmetrically the dorsum of fingers and hands for the previous seven months (Figure 1). She was working as a prosthodontist a month before the lesions came out, and noticed that oral and topical corticosteroids improved them, but they reappeared after the treatment completion.

Moreover, she had been wearing orthodontics for one year, and during the last months she had started to note itching and a burning sensation in lips and oral cavity, which also improved with the cycle of oral corticosteroids.

Patch testing was performed with the Spanish standard series (TRUEtest®, ALK-Abelló, Madrid) and the metals and the acrylates series, including manganese (Trolab®). These tests only revealed positivity to manganese chloride 5% pet. (++), following the International Contact Dermatitis Research Group (ICDRG) guidelines, in which the results were checked after 48 and 96 h. All of the other products tested, including nickel sulphate, were negative. With these results our diagnostic was allergic contact dermatitis in hands and oral cavity due to manganese in a prosthodontist with orthodontics.

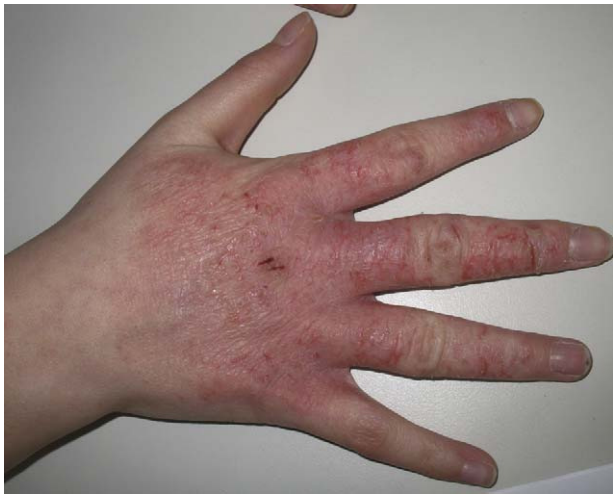

Figure 1 Erythematous, fissurated and scaly itching lesions.

Manganese is a transitional metal (group 7 of the periodic table of the elements) which seems to have a limited potential to cause allergic contact dermatitis. However, it is being increasingly used in the manufacture of dental prosthesis as a nickel substitute[1]. Consequently, there are a few clinical cases reported in literature and most of them are related to dental prosthesis[2,3], and only one to aluminium alloy[4].

Those described in oral mucosa can show stomatitis, with diffuse oedema and erythema, as well as aphthous lesions, or pain and burning sensation, with white lesions in oral cavity, clinically and histopathologically compatible with oral lichen planus.

To date, we have found only one article referring to cutaneous lesions due to allergic contact dermatitis to manganese[4]. They are described as eczematous lesions in palms and fingers, similar to our case, but in a worker making blind rails, handling aluminium.

Some authors consider that manganese is not the main causal factor of these reported cases and suggest some other theories, such as nickel impurity in patch test preparations, or concomitant reactions among transition metals of the same group of the periodic table[5]. On the other hand, other authors affirm that sensitivity to metals of the same group is frequent, but only for nickel and chrome[6,7].

In our case, we checked a negative result for nickel, so the theories of the concomitant reaction and nickel impurity in patch test are not completely feasible.

In conclusion, we present a case of allergic contact dermatitis to manganese, evidenced by eczematous lesions in the dorsum of fingers and hands, and itching lesions in lips and oral cavity, due to the management of prosthetic material and orthodontics respectively. Therefore, we suggest that a metal series containing manganese should be included in the evaluation of stomatitis in patients wearing dental prosthesis or orthodontics, or eczematous lesions in a prosthodontist.

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Fulminant digital necrosis in a patient with prostate adenocarcinoma

To the Editor:

Association between thrombotic disorders and malignancy is rare but has been well described[1]. Digital ischaemia and neoplasia were first reported in 1884 by O'Connor.[2] After that very few case reports of digital ischaemia and neoplasia have been published. Most of the reports showed digital, bilateral and symmetric ischaemic lesions involving mainly upper extremities beginning as cyanosis or digital colour changes with cold exposure (Raynaud syndrome) and rapidly progressing to gangrene. Arteritis, hypercoagulability and hyperviscosity are postulated as mechanisms responsible for digital vasospasm and arterial obstruction in association with neoplasia.

Digital necrosis as paraneoplastic syndrome was reported in association with several neoplasias including haematological and solid tumours but not with prostate adenocarcinoma.[3]

A 73-year-old Chinese male was admitted to the hospital because of bilateral, symmetric digital ischaemia evolving to gangrene in two months (Figure 1A, B). The patient had no previous history of Raynaud, livedo, autoimmune disease, drug or toxic exposure, past or present infections, or neoplasia. He denied the use of medicinal herbs. An arteriovenous ecodoppler showed no alterations.

His blood and serum test showed severe eosinophilia (absolute count 6000/mm^3), augmented Eritrosedimentation rate and PCR, positive Rheumatoid Factor (RF), and polyclonal hypergammaglobulinaemia, HIV, HBV and HCV were negative. Bone Marrow aspiration showed no abnormal findings. Biopsy of perilesional skin showed leucocytoclasic vasculitis, fibrinoid thrombi and focal epidermic necrosis. Immunologic tests for ANA, cryoglobulins, C ANCA, P ANCA, anti-MPO, anti-PR3, lupus anticoagulant, Ig G, IgM Acls and B2 GPI were negative.

He added low extremities pain and paraesthesia with electromyographic signs of peripheral axonal neuropathy. There were no other signs or symptoms of systemic vasculitis.

Due to the rapid progression of digital lesions treatment with glucocorticoids and ciclofosfamide was started. Digital lesions became stable (Figure 2A,B) with normalisation of eosinophil counts, gammaglobulin values and negativisation of RF. Clinical examination revealed a prostatic nodule coincident with an increased PSA value. A prostate biopsy was proposed but patient refused the procedure. After discharge he continued well receiving ciclofosfamide for 20 months until he developed acute urinary obstruction and eosinophilia (absolute count 800/mm^3). A rectal examination showed prostate tumour and the PSA was 94.77 g/ml. A transrectal biopsy was done and diagnosis of adenocarcinoma (Gleason 5+4) was made. Immunosupression was discontinued and he started complete androgenic blockade with resolution of obstructive urinary symptoms and normalisation of PSA value, sustaining digital lesions improvement.

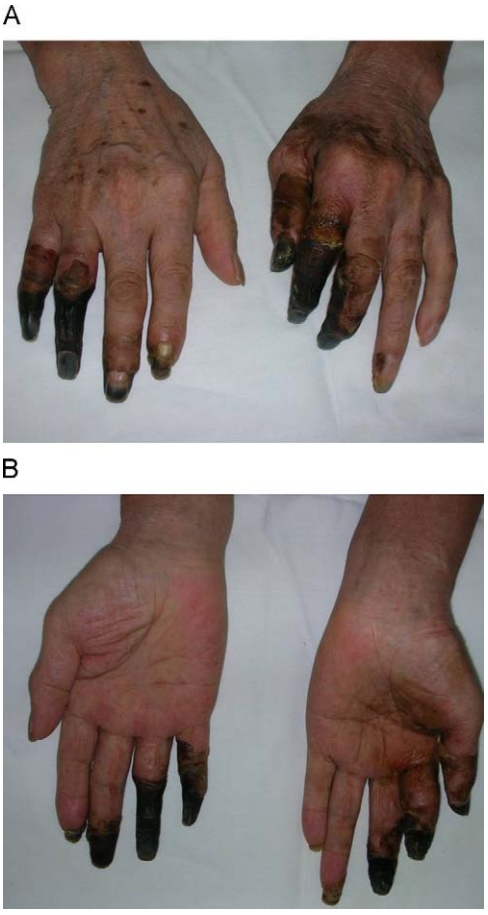

Figure 1 (A,B). Pre-treatment. An area of necrotic skin on the left palm and several necrotic fingers in both hands can be observed.