

Xanthomatous Reaction following Allergic Contact Dermatitis from Nickel

To the Editor:

A 53-year-old woman presented with a 2-year history of yellow plaques on her cheeks. The lesions appeared after a severe reaction with bilateral redness, swelling, and pruritus on her cheeks following the use of a pair of spectacles with metal frames. She wore a new plastic-framed pair of spectacles and received treatment with a topical corticosteroid, with improvement of the eczematous reaction. After the dermatitis cleared, she observed the presence of yellow lesions at the same locations. She had a history of sensitivity to metal items.

On examination, there were yellow well-defined soft plaques on her cheeks. These lesions were bilateral and symmetrical and were limited to the areas contacted by the frames.

No other similar lesion was observed on the eyelids. Light microscopy showed aggregates of foamy histiocytes in the dermis. Blood chemistry showed mild hypercholesterolemia (cholesterol, 236 mg/dL).

The patient was patch-tested with the Spanish standard series and a metal series and showed a strongly positive reaction to the nickel sulfate, colophonium, and quinoline mix in True Test (Mekos Laboratories A/S, Hillerød, Denmark) and to palladium chloride 1% in petrolatum.

Our patient developed xanthomatous changes confined to the cheeks, in areas of skin previously affected by an allergic contact dermatitis. We suspected that she reacted to nickel-containing spectacle frames, but she came to our department wearing another pair of spectacles. The palladium chloride sensitization was probably a cross-reaction. She had a history of reaction to adhesive bandages, related to a positive patch-test reaction to colophonium.

Causes of eyeglass allergic dermatitis include metals, plastics, and dyes.¹⁻³

Xanthomatous reactions have been observed following erythroderma and inflammatory skin disorders.^{4,5} A case of xanthelasma palpebrarum following allergic contact dermatitis from para-phenylenediamine has been reported.⁶

To our knowledge, this is the first report of a xanthomatous reaction due to contact dermatitis from nickel. The mechanism of accumulation of cholesterol in macrophages and formation of foam cells is not understood. The mild hypercholesterolemia, periocular localization of the lesions, and previous inflammatory skin disorder may play a role in this case.

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