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A 70-year-old female presented with arthralgia and a facial rash.

What is your diagnosis?

The Diagnosis:
Contact Nickel Dermatitis

FIGURE 1. Chronic molar rash.

FIGURE 2. Positive test for nickel.

The facial rash (Figure 1) corresponded to the location where the patient's glasses rested on her face. The eyeglass frames tested positive for nickel with dimethylglyoxime (Figure 2). A change to all-plastic frames and a brief course of a midstrength topical corticosteroid cream resulted in resolution of the rash. Although the patient presented initially with a complaint of arthralgia, and the referring physician suspected lupus, the joint complaints were related to osteoarthritis. Establishing the diagnosis of nickel dermatitis saved the patient a lengthy and expensive evaluation.

Nickel dermatitis may mimic other facial dermatoses. For example, a patient presented with "rosacea" that was related to occupation airborne nickel exposure.[1] The high proportion of nickel-allergic individuals is probably related to the practice of ear piercing.[2]

Nickel dermatitis is confirmed by clinical findings, a positive dimethyglyoxime test, and patch testing. Negative nickel patch testing must be interpreted cautiously because there is a marked variation in reactivity that varies from day to day. Specifically, an individual can

test negative on one day, and positive on another day.[3] If the index of suspicion is high and patch testing is negative, repeat testing should be performed.

Nickel is common in foods such as chocolate, nuts, beans, and oats. Thus, serum nickel concentration correlates with dietary intake.[4] There are some data to suggest that dietary nickel restriction can improve nickel-induced eczema.[5] Just how much nickel is acceptable in the diet of nickel-sensitive persons remains to be established. The opposite approach has also been used. Some evidence suggests that oral administration of nickel may induce tolerance.[6,7] Clearly, more study is needed. On the skin, nickel can be converted to more allergenic oxidation states by reactive oxygen species created by the inflammatory process. This may represent one mechanism for increased nickel sensitivity in inflamed skin.[8]

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