

Short Communication

Chronic urticaria from a dental bridge

V. FERNÁNDEZ-REDONDO, P. GÓMEZ-CENTENO AND J. TORIBIO

Servicio Dermatología, Hospital Gral. Galicia- Gil Casares, Complejo Hospitalario Universitario, Santiago de Compostela (La Coruña), Spain

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Case Report

A 47-year-old supermarket cashier, who was intolerant of imitation jewellery, was diagnosed as having chronic urticaria-angioedema (left side of upper lip), which was partially controlled with oral cetirizine. The clinical manifestations had started 1 month after odontological treatment had been initiated: she had been having implants of ceramic and Au-Pd alloy (ceramic prosthesis AV 30) since 1995. Investigations included blood test, hepatitis serology, protein analysis, globulin quantification, determination of inhibitor C1 and total IgE. None of them gave any positive data. A biopsy of a lesion within 24 h did not show any signs of vasculitis.

Patch tests with the GEIDC standard series showed positivity to Ni and Co at D4. A dental series (Chemotechnique 1996) confirmed sensitization to Ni, Pd and Co. Open test and patch test as is with odontologic material (Alceram 100; Au/Pt) were made, both being negative. After informing the patient and with her consent, the implants were extracted and replaced with 4 similar ones of an alloy consisting mainly of gold-platinum (Au 878/00; Pt 121/00). The Spanish Society of Precious Metals certified the absence of Ni, Cd and Be in the replacement alloy. She has since remained asymptomatic for 18 months.

Discussion

Nickel, a frequent cause of allergic dermatitis, is also involved in other manifestations of sensitivity such as dyshidrosis, occupational asthma, anaphylactic reaction or chronic urticaria (1–3). Buccal pathology related to materials used in dental restoration has been thoroughly reviewed and, according to various authors (4, 5), erythema, oral lichen planus and burning mouth syndrome are the most frequent clinical diagnoses. España et al. (6) reported the 1st case of chronic urticaria due to the presence of Ni in a dental prosthesis, without symptoms in the mouth. De Felipe et al. (7) report a similar case with a positive oral challenge test.

Palladium is used as a substitute for platinum in dental alloys, due to its lower cost. Prostheses are a frequent source of non-occupational exposure. Its rôle is well-

known in oral pathology (8, 9) and most patients sensitized to Pd also show positivity to Ni and Co. Van Joost & Roesyanto-Mahadi (10) reported a further case of a woman with chronic urticaria related to a dental implant (Pd/Ni), without involvement of the oral mucosa.

Our patient presented with sensitization to Ni, Pd and Co, all elements of similar structure as they belong to the same group of the periodic table. However, oral challenge test with 2.5 mg Ni was negative and the patient showed subsequent tolerance to other materials used in prostheses, which led us to implicate palladium as the possible cause of her hypersensitivity reaction. In vitro studies suggest, though, the possibility of cross-reaction rather than concomitant sensitization, particularly in those cases where it is not possible to find any relevance (12).

Release of metallic salts and subsequent activation of lymphocytes could explain such systemic manifestations (13). Although this condition is rare (4, 6, 7, 10, 11), we, as well as other authors (14, 15), consider that the dermatologist should be adept in diagnosing pathologic processes related to dental restoration materials.

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