Hosoki M, Nishigawa K, Miyamoto Y, Ohe G, Matsuka Y. Allergic contact dermatitis caused by titanium screws and dental implants.


ABSTRACT: Patients: Titanium has been considered to be a non-allergenic material. However, several studies have reported cases of metal allergy caused by titanium-containing materials. We describe a 69-year-old male for whom significant pathologic findings around dental implants had never been observed. He exhibited allergic symptoms (eczema) after orthopedic surgery. The titanium screws used in the orthopedic surgery that he underwent were removed 1 year later, but the eczema remained. After removal of dental implants, the eczema disappeared completely.

Discussion: Titanium is used not only for medical applications such as plastic surgery and/or dental implants, but also for paints, white pigments, photocatalysts, and various types of everyday goods. Most of the usage of titanium is in the form of titanium dioxide. This rapid expansion of titanium-containing products has increased percutaneous and permucosal exposure of titanium to the population.

Conclusions: In general, allergic risk of titanium material is smaller than that of other metal materials. However, we suggest that pre-implant patients should be asked about a history of hypersensitivity reactions to metals, and patch testing should be recommended to patients who have experienced such reactions.

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