

An Examination of 123 Reconstructions of Facial Bone Patients with Titanium Implants: Does Titanium Benefit the Human Body?

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1-year period (named reconstruction group). We conducted an interview survey designed to ascertain whether there was a change in the patient's physical and mental conditions after the operation (over 1 year) compared with their preoperational condition. The cancer patient group ranged in age from 43 to 82 years of age (average, 61 years) with 64 patients in total (41 men and 23 women), and in the maxillomandibular deformity group, the age ranged from 16 to 49 years of age (average, 23 years) with 59 patients (28 men and 31 women).

We compared the normal 100 people group to the reconstruction group. We examined 100 facial small operation patients (85 facial tumors and 15 facial scars) by follow-up survey over a 1-year period (named normal group). We conducted an interview survey of the same design as the reconstruction group. In operation, the age was 16 to 73 years old (an average of 46 years old) at 100 dimples, 59 men, 41 women.

RESULTS

One cancer patient removed the titanium implants after 1 year, due to infectious exposure (0.81%). This 45-year-old male patient was excluded from the interview survey. There was not a patient who complained of a change of their physical and mental conditions (good or bad) after surgery. We decided that titanium metal was safe for the human body because there were no tumor recurrences and few infections in this study. Statistically, a significant difference was not observed between the 2 groups.

DISCUSSION

Titanium metal is used in the human body as a medical material, for example, as in skin sunscreens, osteosynthesis materials, and cardiac pacemakers. It is thought to be of advantage for using in the human body, for example earring piercings because of its low density, biocompatibility, and high strength-to-weight ratio, and it induces allergy rarely because of its high corrosion resistance.¹⁻³ Furthermore, titanium necklaces and tapes have been commercialized for improving performance in sports and generally for promoting good health. One article shows that there are good effects for response of neuron, muscle, and psychological systems by in vitro, animals, and a few human studies, using the tape, wearing the necklace, or staying in the room containing titanium.⁴ If such effects actually exist, some semipermanent change should be experienced by the patients with

There are various commercial tapes and necklaces containing titanium metal that are currently being marketed as sports and health-promoting products. The metal is advertised as being a performance-enhancing accessory for a winning athlete, and one such advertisement shows a piece of therapeutic equipment used to treat stiff shoulders and headache. What is the basis for the claims that titanium benefits the human body? If titanium is beneficial to the human body, patients who have had surgery to repair facial bones using such implants should experience the positive influence of titanium.

METHODS

We examined 123 reconstructions of facial bone patients (64 cancers and 59 maxillomandibular deformities) by follow-up survey over a

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titanium implants in their bodies. However, in the present study and another,⁵ there were no patients claiming postoperative improvements, casting doubt on the benefit of titanium in changing conditions.

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DISCLOSURE

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