

# How Safe is It to Place Titanium Dental Implants in Patients with Autoimmune Disorders?

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Autoimmune disorders cause body's immune system to destroy its own tissues, many a times resulting in inflammation and pain. There are more than 100 types of autoimmune disorders which affect 75% more in women than in men. Dental professionals play a critical role in helping to identify undiagnosed individuals with autoimmune disorders.<sup>1</sup>

Studies had linked increased risk of failure of dental implants in patients with autoimmune disorders. But still, uncertainty remains whether autoimmune disorders can cause implant failures in all the individuals suffering from it. Prolonged use of high doses of steroids in cases of autoimmune disorders results in reduced bone density and causes bone loss and thus affects the osseointegration of the dental implants. Steroids induce an increase in osteoporosis levels by decreasing intestinal absorption of calcium and increasing renal excretion of this mineral. The impact of osteoporosis on dental implants is not very well understood in the literature.<sup>2</sup>

There was no solid evidence that titanium implants can induce an autoimmune response, but there was evidence that nickel and mercury were associated with thyroid immunity. If any patient is suffering from Graves' disease or Hashimoto's thyroiditis after placement of implant, then an autoimmune response to titanium should also be considered and diagnosed to rule out. Studies had shown that inorganic mercury, nickel, and

other metals cause increased lymphocyte reactivity in patients with autoimmune diseases. Improvement in health of almost 70% of the patients was observed in a study on replacement of amalgam in mercury-allergic subjects and also there was normalization of parameters, such as mercury-specific lymphocyte responses and anti-thyroid autoantibodies.<sup>3,4</sup>

Loyo et al<sup>5</sup> in their case report stated that patient with chin implants had developed many systemic complications 1 year after a nickel-titanium chin implant placement. The condition was not controlled by the steroids but recurred every time as the dose was reduced. Two and a half years later when the chin implant was removed, her systemic symptoms disappeared.

Almeida et al<sup>2</sup> in their systematic review studied about dental implants in Sjögren's syndrome (SS) patients. They found an average of 93.7% survival of implants in a mean period of 3.97 years of follow-up. An improvement in life quality of subjects with SS was observed and dental implant therapy in SS patients seems to present high implant survival rate, with low marginal bone loss and low biological complications.

The current evidence of titanium dental implants in autoimmune disorder patients is mainly based on a very less number of observational studies, so researchers are encouraged to conduct more prospective studies to find whether it is safe to place dental implants in such patients.

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