Effect Of Dental Implants On Bisphosphonate-Related Osteonecrosis Of The Jaws

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Purpose:
In the present study we analyze the time span of developing BRONJ in patients treated with bisphosphonates and receiving dental implants.

Study design:
In this metaanalysis patients with dental implants and established BRONJ were evaluated at the department of oral and maxillofacial surgery, Medical University of Vienna. In addition 11 studies from 1978 to 2012 were included in a meta-analysis. Three groups were created:

- a) implantation before bisphosphonate treatment,
- b) implantation after bisphosphonate treatment,
- c) implantation during bisphosphonate treatment. Outcomes were evaluated by linear regression analysis.

Results:
Patients who underwent dental implantation during (p<0.001) and after (p<0.001) treatment with bisphosphonates developed BRONJ more rapidly. The duration of treatment with oral bisphosphonates was significantly related to the rapidity of developing BRONJ (p=0.03).

Conclusion:
The insertion of dental implants during or after bisphosphonate treatment accelerates the development of BRONJ. BRONJ occurred less frequently when implants had been inserted before bisphosphonate therapy started.

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