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Titel des Beitrags:  
Prevention of bisphosphonate-related osteonecrosis of the jaws in patients with prostate cancer treated with zoledronic acid - A prospective study over 6 years.

Abstract:  
To explore the preventive effect of a prophylactic oral and maxillofacial treatment to reduce bisphosphonate associated necrosis of the jaws (BRONJ) in metastatic prostate cancer (PC) patients treated with zoledronic acid (4.0 mg i.v./months). 253 PC patients with bone metastases were prospectively randomized. All patients received baseline assessments including a dental panoramic tomogram. Group A was monitored and treated where deemed necessary by the patient’s dentist and were re-evaluated once a year. In group B patients were monitored and treated where necessary by the authors at 12 week intervals. We compared the incidence rate per year (IR) and incidence proportion (IP) in both cohorts and assessed independent risk factors for BRONJ. Patients in group A were evaluated 3.2 (range 2-4) vs. 6.8 times (range 4-24) in group B. A significantly higher proportion of dental extractions was performed in group B vs. A (26.7% vs. 22.7%, p = 0.006). A BRONJ was detected with an IP of 23.3% vs. 2.2% in group A vs. B, revealing a 2.59 fold higher relative risk for group A (p = 0.01, 95% CI 0.01-0.56). The IR in group A was 0.073 cases/year while the IR in group B was significantly decreased by 82% to 0.0131 (p< 0.001). Extraction therapy was the
only independent risk factor for BRONJ (p< 0.0001; 95% CI 21.22-189.06). Preventive oral and maxillofacial treatment before bisphosphonate application combined with 3-monthly dental follow-ups significantly reduces the occurrence and risk of BRONJ in PC patients. Therefore this approach should be implemented in the specific treatment algorithms.