Surgical outcome and prognostic factors after treatment of osteoradionecrosis of the jaws.

This prospective study attempts to identify prognostic factors for outcome in patients Classes 2 and 3 osteoradionecrosis (ORN) treated using individualized methods. From 2005 to 2010, patients with Classes 2 and 3 osteoradionecrosis of the jaws were treated by the same surgical team using standard protocols. The patients were evaluated prospectively and followed up for a minimum of 12 months after completion of treatment. Two examinations were performed at least six months apart. A total of 94 patients were assessed. Local debridement was performed in 33 patients (35.1%), a rim resection with the application of a reconstruction plate was performed in 35 patients (37.2%), and continuity resection in 26 patients (27.7%). Postoperative wound infections locally or at the neck were detected in 69 patients (70.2%), failure to eradicate radionecrosis occurred in 50 patients (53.2%). The location of the primary tumor ($p = 0.023$) and radiation dose ($p = 0.049$), were associated with a significant risk of development of ORN. Prognostic factors for failure of treatment were the extent of initial osteoradionecrosis ($p = 0.049$) surgical treatment ($p < 0.0001$), number of debridements ($p < 0.0001$), type of microvascular free flap with ($p < 0.0001$), and grossly infected ORN ($p < 0.0001$). Several factors affect the outcome of treatment of ORN. We confirm many of the
intuitive factors influence outcome of treatment and add evidence that complete removal of affected bone and watertight well vascularized coverage is the most useful treatment strategy.