The role of tumor invasion into the mandible of oral squamous cell carcinoma.

Abstract:

The aim of this study was to determine the prognostic impact of the extent of bone invasion in patients undergoing mandibulectomy for oral squamous cell carcinoma (OSCC), and to evaluate the relation between clinicopathologic parameters and outcome. Nine hundred and eighty-two patients presented with OSCC and 334 were treated surgically by some form of mandibular excision. Treatment included marginal, rim, or segmental mandibulectomy depending on the clinical and radiological observation of the mandible and suspected bone invasion. Kaplan-Meier plots and univariate log-rank test and multivariate Cox proportional hazards regression models were used to determine the association between possible predictor variables and survival time. After controlling for age, tumor and nodal stage, UICC stage, type of reconstruction, which were independent predictors of survival, type of mandibulectomy was significantly associated with survival in the univariate analysis (P = 0.038), whereas bone invasion was not in both univariate and multivariate analysis. The rate of bone invasion detected after marginal mandibulectomy was 15.5%, in rim resections 50%, and segmental mandibulectomy at 84.7%. Recurrence of OSCC was found to be associated with overall survival (P = 0.039). If bone invasion is identified histologically in a resected specimen, the prognosis is not worsened and...
additional surgery need not be undertaken in adequately resected margins. Although the mandible should be preserved if feasible, the choice of treatment should always provide safe resection margin. The high rates of unsuspected bone invasion found in this study should be kept in mind in patients with OSCC close to the mandible.