

Bone resection in the treatment of cancer of the mandibular region

Anna-Lisa Söderholm

Department of Oral and Maxillofacial Surgery, Helsinki University Central Hospital, Helsinki, Finland

The role and consequences of bone resection in the treatment of cancers of the mandibular region were assessed in this study. The clinical features of and treatment received by 162 patients with carcinoma of the mandibular region diagnosed between 1973 and 1985 in Finland were analyzed. The 5-year relative survival rate (RSR) was 44%. Tumor stage and treatment were major prognostic factors. When adjustments were made for age, sex and tumor stage in a log-linear multivariate analysis, no difference in 5-year RSR could be determined between surgery alone and treatment regimens including radiation therapy pre- or/and postoperatively. Preoperative radiological examination was often inadequate, mainly consisting of sparse plain radiographs. Evaluation of tumor involvement of the mandible was inadequate. In 11 cases of mandibular sarcoma radiological signs of bone involvement had also been neglected, resulting in poor prognoses.

Comparison of histological findings and bone scan uptake in resected mandibular specimens of 13 patients treated at the Department of Maxillofacial Surgery, Helsinki 1986–1988, proved that bone scanning is useful for preoperative evaluation of bone involvement.

Primary rigid plate reconstruction was studied in 13 consecutive patients with extensive mandibular cancer treated between 1985 and 1988 and proved successful for early rehabilitation of patients. In an experimental study mandibular reconstruction in sheep using classic AO plates was compared with reconstructions using the recently developed AO-THORP system. Adequate screw fixation with the latter system was achieved in 74% of instances compared with 26% for classic plates. Mainly because of the screw-plate locking principle the AO-THORP system seems to offer advantages. Fixation with only 2–3 screws, allowing preservation of even small condylar fragments and normal temporomandibular joint function, appears possible.

ISBN 952-90-3010X