

## Cervical en-block spondilectomy: planning, results and failures (15 cases)

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### Introduction

Cervical localization of spinal primitive tumors is relatively rare. The choice of the best surgical strategy for the treatment of these lesions, in order to obtain an acceptable radicality, is very difficult in these sites. Cervical pain is the most common symptom. The early diagnosis of these tumors is not easy because frequently patients present non-specific symptoms and because radiological examinations are usually negative. Only after performing more detailed examinations, such as CT-scan and MRI it is possible to undergo a diagnostic biopsy, which is mandatory in these patients.

### Material and methods

The authors report the experience of a small group of patients (15) affected by cervical primitive malignant tumors: 4 osteosarcomas, 1 aggressive osteoblastoma, 5 chordomas, 3 chondrosarcomas, 2 synovial cell sarcomas. The mean age was 42 years (ranged from 11 to 61 years), the mean follow-up was 21 months (ranged from 8 to 42 months). The levels of resection were: 1 level of vertebrectomy in 4 patients, 2 levels of vertebrectomy in 4 patients, 3 levels of vertebrectomy in 5 patients, 4 levels of vertebrectomy in 2 patients. In every patient we performed a double approach, in two patients the second approach was performed 48 hours after the first one to minimize the surgical stress. In two cases we performed a trans-mandibular approach because of the rostral localization of the tumor. In all patients we performed a long fixation (occipito-cervico-thoracic fixation) associated with cages filled with anterior autogenous cortico-spongiosus bone chips.

### Results

Three patients had a local recurrence, respectively at 20, 25 and 34 months after surgery and they died due to pulmonary involvement after about 12-15 months from the local recurrence (only one patient underwent local surgery). One patient died 23 months after surgery for general progression without signs of local recurrence. One patient died within one week from surgery for vascular complications. The other patients are alive, with no signs of local disease (locally free-disease) and no signs of systemic disease (NED: no evidence disease).

### Discussion and conclusions

En bloc resection for primary cervical tumor of the spine is a challenge for the surgeons due to the complexity of the anatomy of this region: the presence of the vertebral artery (both resected in two cases without neurological damage), the contiguity of the aero-digestive tract and of the main encephalic vessels, the presence of medulla oblongata and spinal cord. Three patients had under-lesional damage after surgery, in partial remission after some months. All other patients hadn't neurological damages. Our high percentage of local recurrences and of major complications (5 deaths) is probably due to anatomical complexity of the region, where sometimes it is very difficult, or even impossible, to obtain acceptable resection margins.