The surgical treatment of the Ewing sarcoma of the spine: long-term follow-up

INTRODUCTION: Ewing sarcoma is the second most common primary malignant bone cancer in children and adolescents, after osteosarcoma. The most common primary sites of involvement are the pelvis, femur, and tibia. Primary spinal involvement is rare (5% of all cases). The introduction of the new multiagent chemotherapy has consistently changed prognosis, nevertheless no evident consensus is present about the best local treatment between radiotherapy and surgical treatment. Our intent was to value the results at long-term follow-up of 15 patients surgically treated.

PATIENTS AND METHODS: all patients undergone surgical operation for Ewing sarcoma of the spine were reviewed. Our cohort was composed by 15 patients (average age 24 years, min 3 – max 65 year); the lesions were located from C4 until S2. In 12 out 15 patient wide margin was reached; in three case focal contaminations were present.

RESULTS: at 6 years of average follow-up (min 1 – max 15), nine out 15 patients are apparently free of disease, two patients present lung metastases, one with and one without local relapse, 4 patients died because of the disease (two patients because of lung metastases at one and two years of follow-up and the other two with a widespread disease). The complications were transitory incomplete paraplegia resolved at 12 and 18 months in two cases and two surgical revision whereof one because of hardware failure and one for infection.

CONCLUSIONS: the surgical treatment of Ewing sarcoma consists in wide margin resection. This is true in spine as in inferior limbs. When the tumor is located in the vertebral bodies, surgery is technically difficult, nevertheless when wide margin is reached, Ewing Sarcoma of the spine can have a survival rate similar to the patients with Ewing sarcoma of the limbs. More studies with more patients are advisable to better verify our preliminary results.

Keywords : ewing sarcoma, spine tumor, en-bloc vertebrectomy, wide surgery
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