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CASE REPORT

LIMB SALVAGE SURGERY IN FEMORAL PAROSTAL OSTEOSARCOMA: CASE REPORT

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ABSTRACT

Male, 23 years old, military occupation, previously healthy, is presented to the emergency department for left gonalgia, with no traumatic history, with a radiographic finding of a juxtacortical mass in the right distal femur. With normal physical examination An incisional biopsy of the distal femur was performed, reporting the histopathological study of parostal osteogenic sarcoma, posteriorly performing wide tumor resection of distal femur and right proximal tibia with placement of unconventional tumor prosthesis Currently he is walking with partial support of the limb and has not presented complications in healing. Osteosarcoma is the most common malignant bone tumor in children and adolescents. Before the popularization of limb salvage surgery, amputation was the standard of care for malignant bone tumors. The primary goal of surgical treatment of bone sarcoma is to achieve complete resection of the primary tumor with negative margins.

INTRODUCTION

Osteosarcoma is a primary malignant tumor that arises in bone, in which the malignant cells pro- duce osteoid. It is the most common primary sarcoma of bone, but is still quite rare. Osteosarcomas represent fewer than 1% of cancers overall, with an incidence of 5 per 1,000,000 children age 19 and younger in the United States. Advances of local imaging and surgical reconstruction now allow the use of limb-salvage in an ever-increasing proportion of patients. While still troubled by complications, non-invasive endoprosthesis-lengthening mechanisms have led to an increased uptake of limb-salvage, even for young, skeletally immature patients.

CASE REPORT

Male, 23 years old, military occupation, previously healthy, with no family history of cancer, is presented to the emergency department for left gonalgia, with no traumatic history, with a radiographic finding of a juxtacortical mass in the right distal femur. Physical examination shows independent, plantigraphic gait, without limitations, the right pelvic limb with incipient volume increase, complete non-painful active and passive flexion and passive extension, without sensory or motor deficit, in the knee without ligament instability, distal neurovascular status without modifications. An incisional biopsy of the distal femur was performed, reporting the histopathological study of parostal osteogenic sarcoma. In the evaluation of medical oncology, he was not a candidate for chemotherapy because of the low cellular differentiation and recommended resection of the tumor, performing wide tumor resection of distal femur and right proximal tibia with placement of unconventional tumor prosthesis without immediate complications, a study was conducted transoperative histology reporting free edges of tumor, it leaves on the fourth post-surgical day without complications and with protection with mechanical brace and partial weight discharge. Currently he is walking with partial support of the limb and has not presented complications in healing.

DISCUSSION

Osteosarcoma is the most common malignant bone tumor in children and adolescents, with an incidence of 4.4 per million. The vast majority of osteosarcoma arise in patients with no known germline abnormalities. At the cytogenetic level, have highly complex karyotypes with many numerical and structural abnormalities; a consistent cytogenetic abnormality has not been identified. The treatment of osteosarcoma is multidisciplinary and depends on factors of the patient, oncological factors and treatment factors, in the latter, the possibility of integrating a surgical team specialized in osseous tumors. Before the popularization of limb salvage surgery, amputation was the standard of care for malignant bone tumors. Additional advancements in endoprosthetic design, musculoskeletal imaging, and surgical technique have all contributed to the success of limb salvage syrgery in most cases. The primary goal of surgical treatment of bone sarcoma is to achieve complete resection of the primary tumor with negative margins, with a secondary goal being preservation of as functional limb as possible.

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Figure 1. Images of Magnetic Resonance in axial section and coronal reconstruction showing osteosarcoma in right distal femur

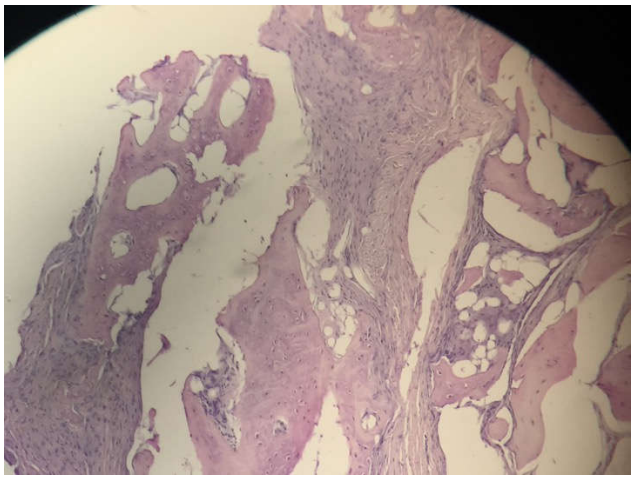

Figure 2. Microphotography showing the histopathological diagnosis of parostal osteosarcoma

Figure 3. X-rays showing extensive tumor resection of the right distal femur and immediate reconstruction with unconventional tumor prosthesis

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