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Adamantinoma: About 4 Cases

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Abstract
Adamantinoma is a rare primary malignant bone tumor of the tibia in young adults. Histologically, it comprises malignant epithelial cells within a fibrous or osteofibrous stroma. Adamantinoma poses a problem of differential diagnosis with osteofibrous dysplasia and osteofibrodysplasia. the evolution of this low-grade sarcoma is slow.
Treatment is surgical, involving resection of the tumour and reconstruction of the bone. Metastases may occur in the lungs, lymph nodes or bones.
We report 4 cases of adamantinoma

Keywords : Adamantinoma, Orthopedic, Surgery

Introduction :
Adamantinoma is one of the rarest primary malignant bone tumours. It accounts for 0.4% of all primary bone tumours, and is mainly located in the tibial diaphysis [15,16].
It is a low-grade malignancy.
The first case was described by MAIER in 1900 (ulnar location) [10].
In 1913, Fischer described a tumour with histological similarities in the long bones [3].
This tumor poses numerous diagnostic, therapeutic and prognostic problems[16,18,19].

Material and methods
We report 4 cases of adamantinoma, localized in the tibia Fig.1 (the most frequent site) in 02 cases, in the femur in one case and in the pelvis in the last case, which is exceptional. All our patients were male, with an average age of 31. Pain and swelling were the main reasons for consultation; radiologically, all cases showed a multi-geodic osteolytic image. Anatomopathological diagnosis was not always easy, and involved an immunohistochemical study. In tibial cases, treatment consisted of wide resection with bone reconstruction and stabilization using a centromedullary nail.
The patient presenting with a femoral localization consulted late with infiltration of the soft tissues, necessitating immediate amputation.
The patient with ischial adamantinoma underwent marginal resection.

Results:
With a mean follow-up of three years, all our patients underwent surgical treatment. In 02 cases, wide

resection with reconstruction was performed; in one case, an amputation was performed and a marginal resection for a pelvic location at the ischium. The immediate clinical result was satisfactory, with disappearance of symptoms. At a mean follow-up of 03 years, we had to deplore three cases of recurrence, including two in the tibia and one in the ischium at 6 months post-operatively and deces two months later [6,12].

Discussion:

The study of these 4 cases has enabled us to review the various problems that this tumour continues to raise concerning its histogenesis, which remains controversial, and in particular its relationship with osteofibrodysplasia [4, 13].

The histological study must include careful immunohistochemical analysis [5,16].

Histologically, this tumour can present as basaloid, tubular, fusiform, juvenile or differentiated and epidermoid [2,11].

Computed tomography clarifies tumour extension. Magnetic resonance imaging clarifies local extension and the tumour's relationship with periosteal tissue[7,16,19].

Diagnosis is sometimes difficult, and the prognosis, due to its malignant potential, is difficult to assess[2,13].

The evolution is marked by recurrence, KEENNEY found a percentage of 31% in 85 cases[8], the incidence of metastases varies between 10 and 30%[16],MOON reported a mortality rate of 20% in 260 cases[12].

Treatment is resolutely surgical, and consists either of a wide carcinological resection, posing problems of bone reconstruction associated with osteosynthesis, or of amputation, which is difficult to accept for young subjects [9 ,14].

This tumor is not radiosensitive [11,17]. Chemotherapy is rarely used in adamantinoma[1,5].

Conclusion

Adamantinoma is a rare malignant bone tumor, mostly located in the tibia.

Imaging can guide us towards a diagnosis of adamantinoma.

The diagnosis of certainty is histological.

This tumour poses a problem of differential diagnosis with osteofibrodysplasia.

Treatment is surgical, with carcinological resection of the tumour.

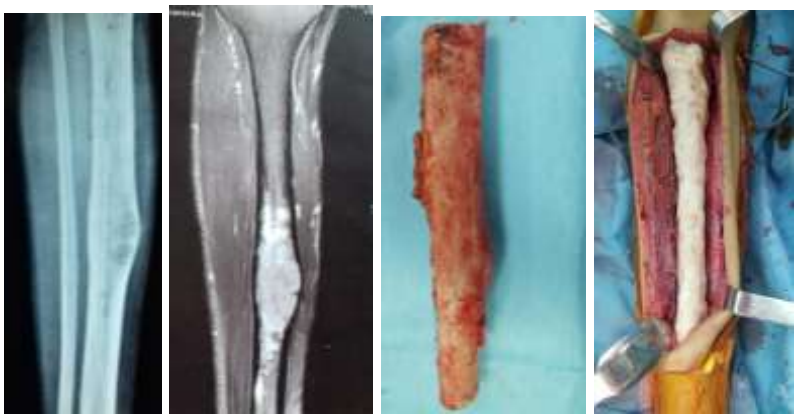
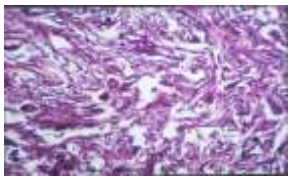


Fig.1



Adamantinoma Fibroblastic
Fig.2

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