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Clinical Case

Management of a Case of Giant Cell Tumor at do Prenda Hospital, Luanda, Angola

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Abstract: Giant cell tumors are benign bone tumors that can grow aggressively and destroy bones near a joint. They usually occur near the knee, wrist, ankle or hip. Although benign (noncancerous), giant cell tumors of bone can grow quickly. They represent the second soft tissue tumor after the synovial cyst. The localized form is the most common (nodular tenosynovitis). Typically occurring after a child has reached skeletal maturity, giant cell tumors are more commonly diagnosed in girls. They are rarely seen in young children. We report a clinical case of a 21-year-old girl with no previous health history, who consulted us for a tumor in the right wrist accompanied by swelling, pain and great functional impotence. The aim of this work is to perform a total excision of the tumor and recover good functionality of the hand given that it is the dominant limb.

Keywords: TGC- Distal radius – resection and arthrodesis.

INTRODUCTION

Synovial giant cell tumor (GCT) is a benign tumor that develops at the expense of the tendon sheath, bursa or joint synovium. They are one of the most common tumors of the hand after synovial cyst [1]. GCTs are also known by other names: myeloplaxous tumors, fibrous xanthoma, myeloxanthoma [2], pigmented villonodular synovitis [3]. The localized (nodular) form is the most reported in the literature [4]. Although these GCTs are considered benign and have a good prognosis, they are marked by a high risk of recurrence [5-8]. The exact cause of giant cell tumors is not known. But in some cases, they have been linked to Paget's disease of bone. It is a chronic bone disease in which bones become enlarged and deformed [9].

Foreign body giant cells (FBGCs) form when the immune system is exposed to foreign materials or organisms that it cannot phagocytose or degrade. The surface chemistry and topology of the foreign materials contribute to the activation of cell adhesion molecules, particularly β-integrins [9].

Observation Clinique

This is a 21-year-old housewife with no previous health history who consults for large swelling of the right wrist accompanied by functional impotence loss of the digital clamp with her dominant hand.

The onset dates back to September 2023 with multiple traditional treatments without success, in addition she was seen in another medical center where she had been offered amputation.

Given this picture, she consults our center Do Prenda Hospital, Luanda Angola in September 2024 for better care.

EXAMEN GENERAL

- Patient WHO II rating, Glasgow rating 15/15, conjunctivas are normal in color, no cyanosis. Muscle strength 3/5
- Oxygen saturation is unremarkable, blood pressure, heart rate and temperature are unremarkable.

EXAMEN PHYSIQUE

- Right wrist deformation, painful, and functional impotence, loss of the digital clamp
- BAAF (Fine Needle Aspiration Biopsy) confirmed the diagnosis of TCG type 3
- TAP (Thoraco-abdomino-pelvic) scanner without particularity

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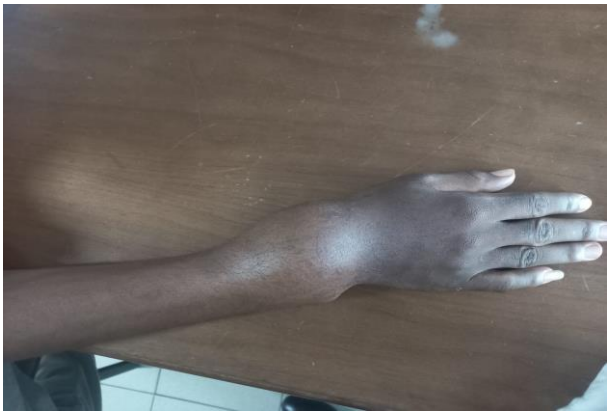
- VS (sedimentation rate): 15mm / h, PCR (C-Reactive Protein) negative

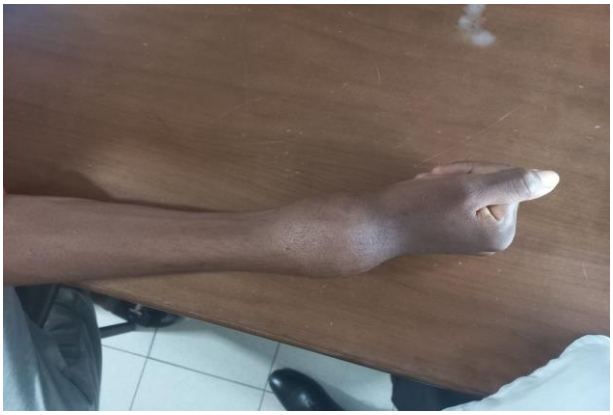
GESTE CHIRURGICAL

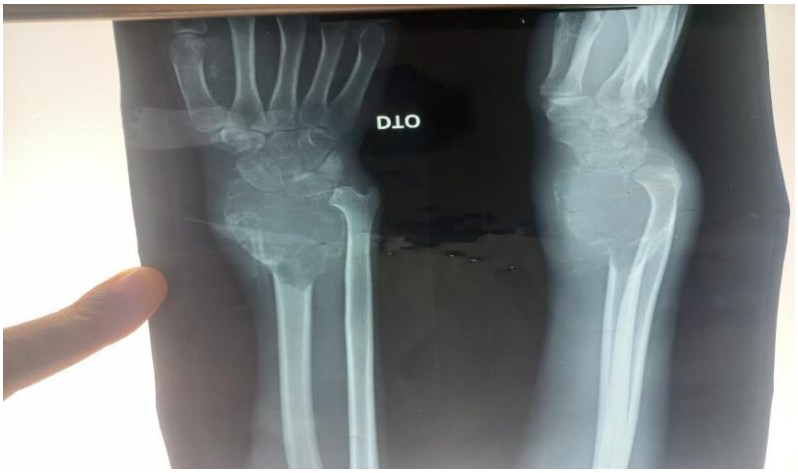
On a regular table, patient in supine position, under general anesthesia, no tourniquet, asepsis measurement, champage, yellow Betadine whitewash.

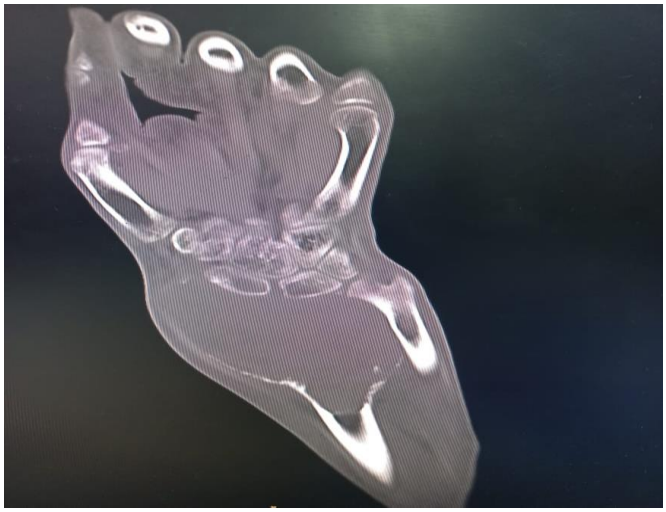
Through a posterior approach to the wrist, dissection of the muscles and separation of the tendons on either side up to the tumor site.

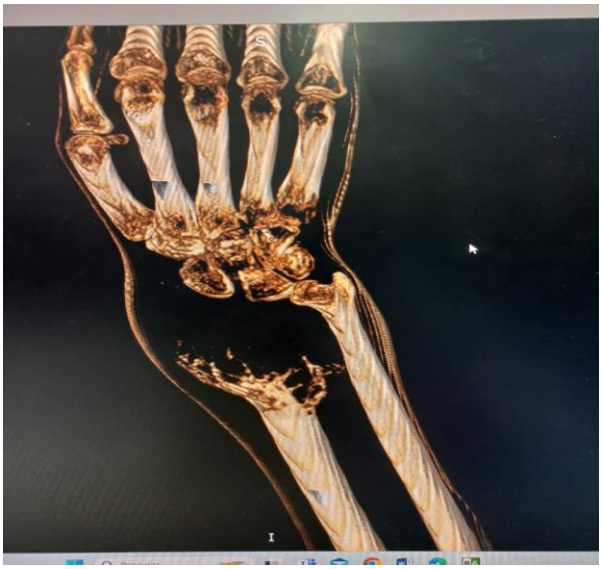
We performed the tumor excision with the safety margins, cauterization of the edges of the lesion, abundant washing with saline, provision of the fibula graft then arthrodesis with two 3.5mm AO plates and immobilization with a BABP in a splint for 45 days. After the 06 weeks of immobilization, it is the rehabilitation period. At three months we note good mobility of the hand and the realization of the digital clamp.

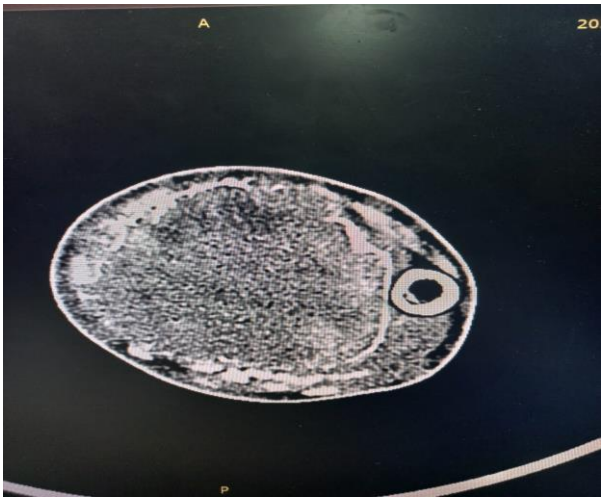








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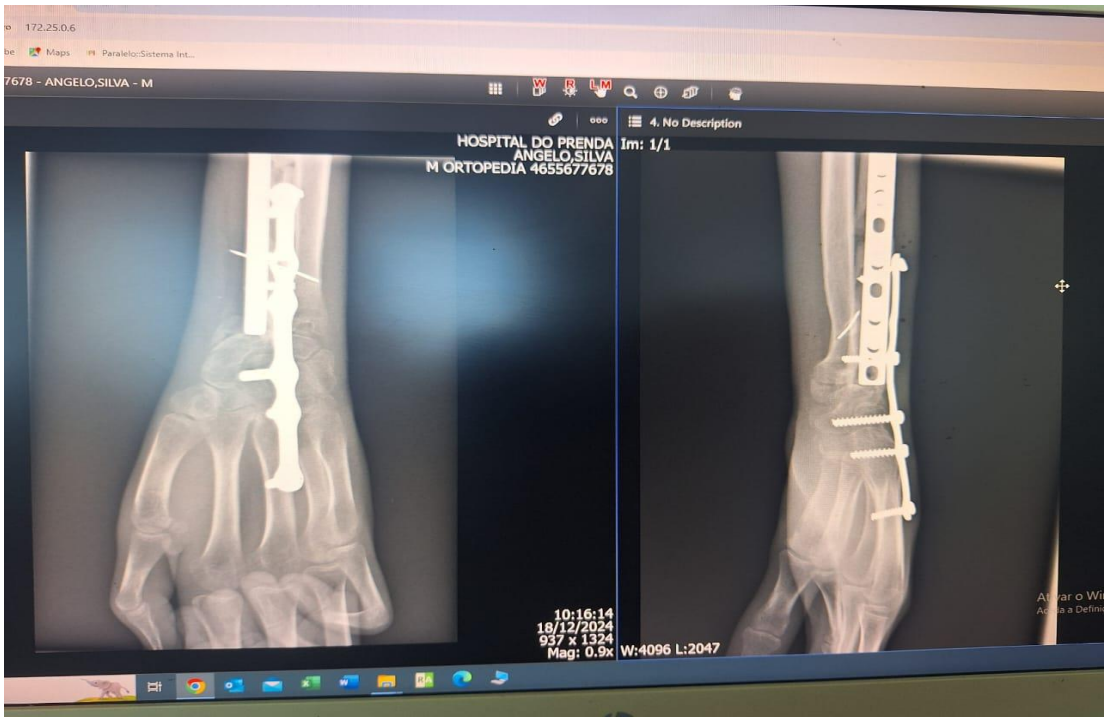
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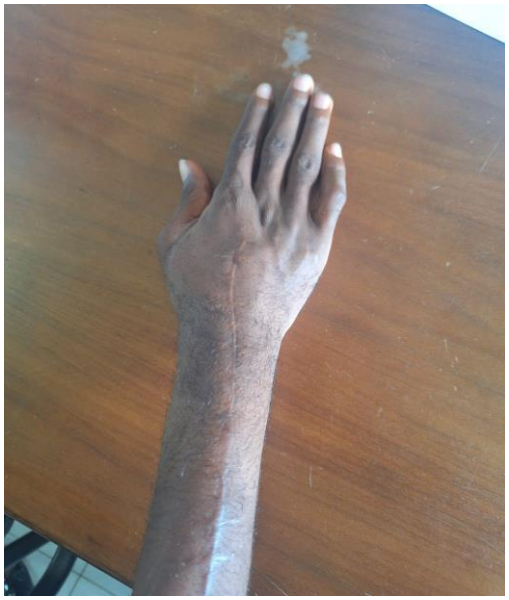


DISCUSSION

Nélaton described in 1856, the term giant cell tumor refers to osteoclastoma, myeloid sarcoma, myeloplaxous tumor and giant cell sarcoma. Moreover, if for some practitioners the surgical treatment of this benign tumor must be as conservative as possible in young subjects, unlike our case we believe the opposite, that it is necessary to adopt a more radical surgical treatment from the outset, by tumorectomy coupled with a resection of the adjacent bone table, En bloc resection of a GCT gives a lower rate of recurrence especially when the margins are healthy [10], this makes it possible to avoid evolutionary revisions and to have a functional limb. It should be remembered that although the giant cell tumor is benign, it is also an aggressive tumor with risk of recurrence and destruction of surrounding tissues, which seems to be already the case. It is therefore necessary to intervene surgically within a short period of time. Giant cell tumor is a rare tumor, its frequency is 5 to 10% of primary bone tumors [11] and 15% of benign bone tumors [12] it is located at the level of the epiphyseal region of the long bones with extension to the metaphysis [13, 14]. The wrist represents the second location after the knee. GCTs are often recurrent and often concern young adults. 80% of cases affect adults between 20 and 40 years old with a slight female predominance and which is similar to our clinical case.

CONCLUSION

Giant cell tumor is one of the benign tumors with strictly local malignancy with an aggressive tendency. Being considered a histologically benign lesion, the evolution remains pejorative with its location near a joint with the possibility of involvement of the subchondral bone and a tendency to local recurrence that is all the more aggressive. The diagnosis, although late, must be considered in the event of any swelling, persistent pain, functional impotence, evolving for a long time. The evolutionary prognosis is dominated by the risk of recurrence after surgical excision. Their management involves surgery, which currently remains the ideal indication, which must be planned and correctly performed to avoid recurrences.

Declaration of Interests: The authors declare that they have no conflicts of interest concerning this article.

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