

DIAGNOSIS OF UNCOMMON ADAMANTINOMA IN OLDER PATIENTS

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Introduction

Adamantinoma is a very rare, low-grade, primary malignant tumor of the bone, with an indolent course affecting mainly the long bones. It makes up only 0.1-0.5% of all primary bone tumors. [1]

Case presentation

A 70-year-old female patient presented to the clinic with progressive, sharp (9/10 severity), non-radiating, left mid leg pain over two weeks duration. The pain was aggravated by weight bearing and improved with rest. The patient denied other symptoms or similar episodes in the past. She had a past medical history of chronic pain syndrome and osteoarthritis.

Physical Examination

- Vital signs were within normal limits.
- She appeared in distress from pain.
- There was point tenderness on the left upper tibia with localized swelling.

Diagnostic Testing

- X-ray [Fig. 1] showed a large 5.6 cm x 3cm x 2.3 cm destructive bone lesion involving the proximal tibial diaphysis.
- MRI showed a minimally displaced pathologic fracture through the mass.
- A total body PET scan revealed intense uptake in the left tibial lytic lesion with no additional areas of abnormal uptake.
- Fine needle aspiration biopsy of the lesion was consistent with adamantinoma.

Treatment and Follow Up

- The patient underwent a successful left tibia wide excision and intramedullary rodding with left lower extremity reconstruction.
- Follow up imaging [Fig. 2] after several months revealed stable results and no further recurrence.

Discussion

- Adamantinoma presents in the long bones in about 97% of the time. Specifically, presentation in the tibia accounts for 80-85% of the cases, which is the most characteristic clinical feature of this tumor [2].
- Despite that the common age range for recurrence of adamantinoma is between 20 and 50 years old, it is always important to consider this diagnosis in older age groups, such as with our patient.
- As with our patient's presentation, we know that pain is the most common clinical presentation. Physical examinations should be followed by imaging studies starting with a simple x-ray of the affected extremities. In addition to the initial x-rays, further work ups for possible causes of lytic lesions are vital. Diagnosis of adamantinoma is confirmed with biopsy.
- As reported in literature, the prognosis of adamantinoma is excellent, with a 5- year survival rate reaching up to 85-95% [3] and around 85% 10-year survival rates being reported [4].
- Due to this promising prognosis, local wide excision with reconstruction of the defective parts is a preferred treatment of choice for our patient.

Conclusion

- Careful history taking, physical examination and appropriate imaging are vital for early diagnosis and effective treatment of uncommon diseases, such as adamantinoma.
- This case report demonstrates that in patients with preexisting chronic pain and osteoarthritis of the joint, consideration of uncommon diagnosis is very important for early detection and successful treatment.

References

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Figure 1. Initial tibio-fibular x-ray



Figure 2. Postoperative tibio-fibular x-ray