

OSTEOFIBROUS DYSPLASIA LIKE ADAMANTINOMA: A CASE REPORT

AUTHORS: DR. ASIM SAMANT, DR. ANKUSH KUMAR, DR. NITIN KUMAR

PRESENTING AUTHOR: DR. NITIN KUMAR (PG ORTHOPAEDICS)

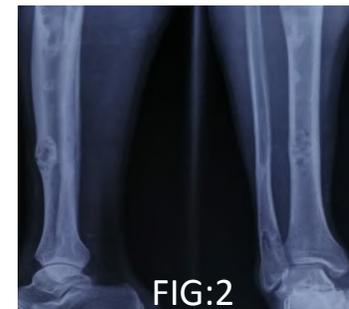
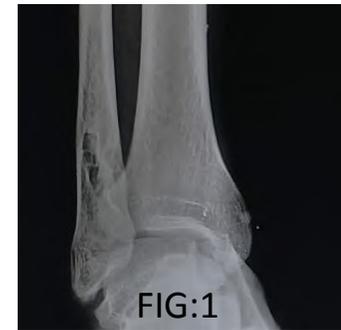
INSTITUTION: LADY HARDINGE MEDICAL COLLEGE AND ASSOCIATED
HOSPITALS, NEW DELHI

INTRODUCTION

- Adamantinomas are extremely rare malignant bone tumors of epithelial origin, mostly found in the tibia.
- Radiographic features of Adamantinoma can mimic bone lesions like fibrous dysplasia or osteofibrous dysplasia, which are benign tumors of mesothelial origin.
- They are differentiated on the basis of cytokeratin markers on immunohistology; according to which Adamantinoma is described into three forms: **Osteofibrous dysplasia like Adamantinoma**, **Differentiated Adamantinoma** and **Classic Adamantinoma**.

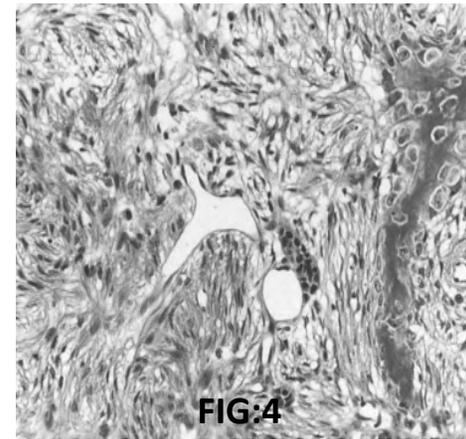
CASE HISTORY

- A 26yr old male presented with pain in the right leg of 10 months duration.
- He had previous history of pain in the same leg at the age of 10 years, which on investigations had revealed an osteolytic lesion of distal right fibula (fig:1) and was diagnosed as fibrous dysplasia.
- For his current symptoms he was also provisionally diagnosed elsewhere as having an osteolytic lesion in rt tibia suggestive of Enchondroma.
- On MRI he was found to have multiple lesions in the right tibia and one lesion in the right fibula (fig:2&3) and he was planned for diagnostic biopsy and curettage.



Diagnosis and Inference

- Biopsy of one of the tibial lesions suggested the possibility of fibrous dysplasia without ruling out other pathologies. A note was also made of the presence of **spindle cells** in the lesion.
- **Pan-Cytokeratin immunostaining** was performed which revealed scattered cytokeratin positive cells, with specific staining of the spindle cells (fig:4), which was suggestive of **osteofibrous dysplasia like adamantinoma**.
- Since OFD like Adamantinoma is not known to be an aggressive tumour the patient is currently under conservative management and observation.



DISCUSSION

- Osteolytic lesions of the leg bones may fall into a spectrum of diseases, from Fibrous dysplasia, OFD to Adamantinoma.
- They need to be differentiated on the basis of histology and Immunohistochemistry.
- Fibrous dysplasia never stains positive for epithelial markers like Cytokeratin.
- In CK positive staining tumors: **OFD like Adamantinoma** has scattered positive cells in fibrous tissue while in **Differentiated Adamantinoma** the neoplastic nature of the CK-positive cells is more apparent. **Classic Adamantinoma** shows strong positivity and very florid staining with CK markers with obvious features of malignancy.