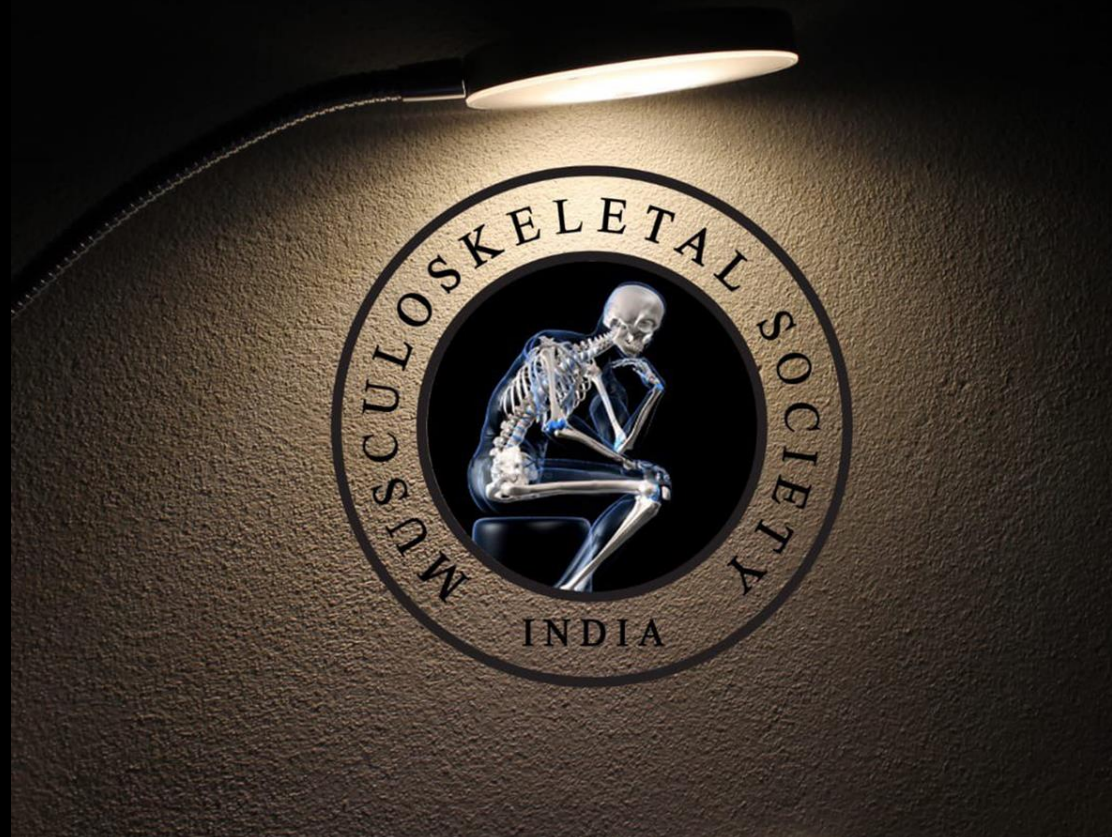


MICOD –05/06/2024

Case contributor – Dr. (Prof)Rajesh Botchu

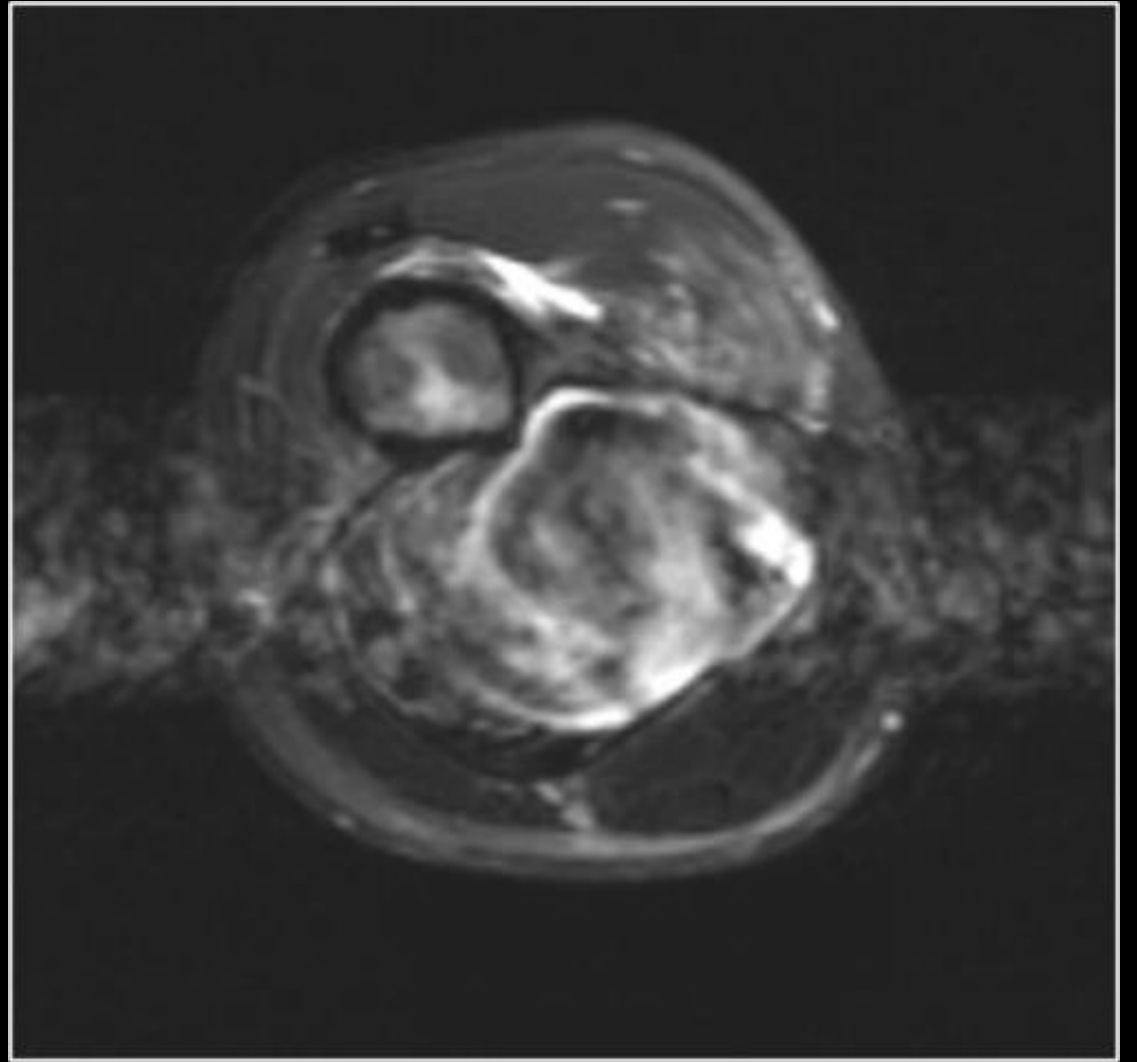
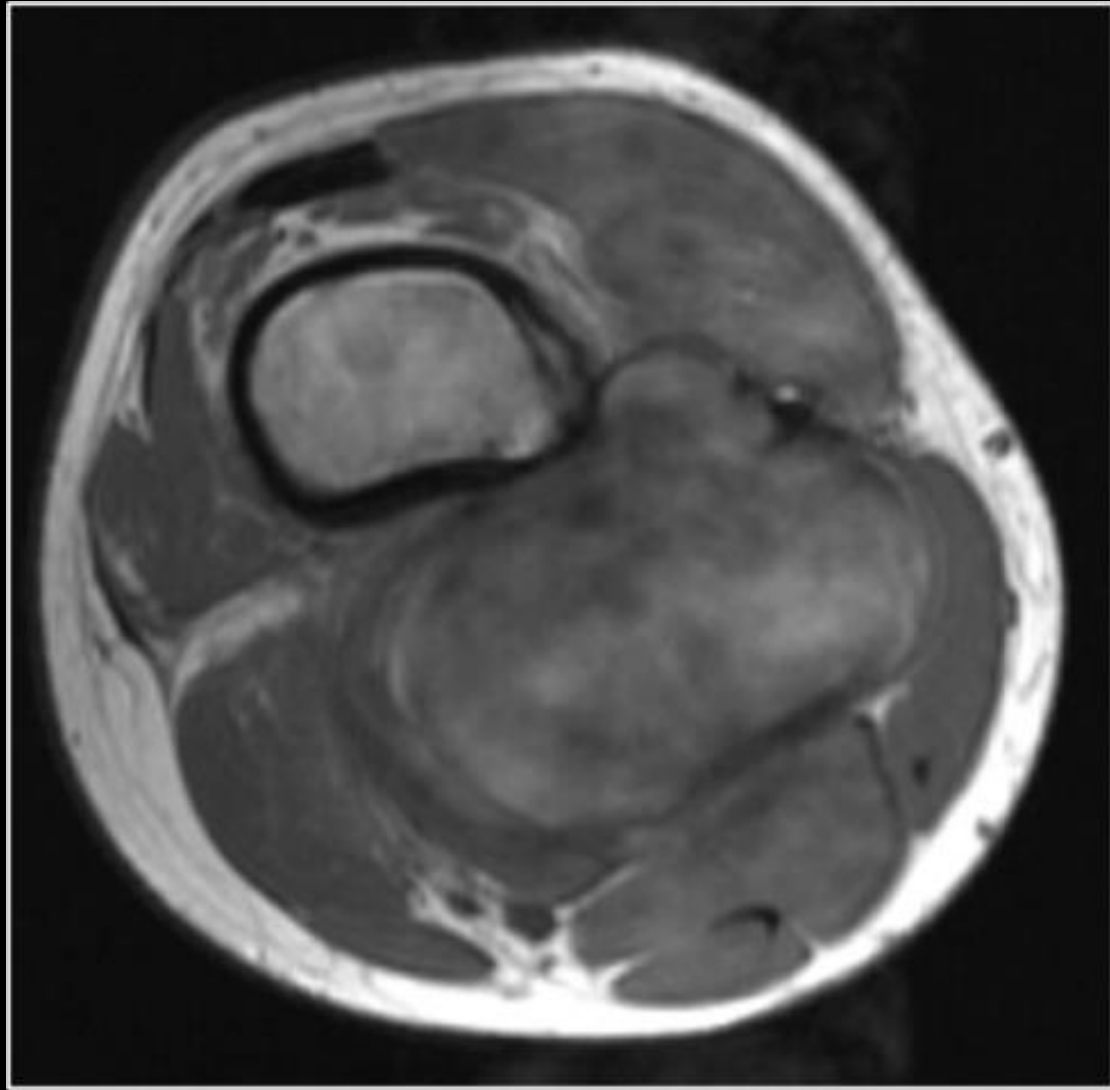
# MI-COD

MSS INDIA- Case Of the Day

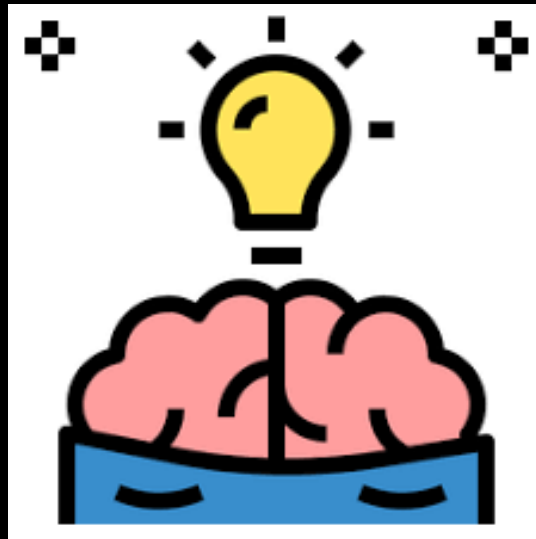


Complaint : Knee pain

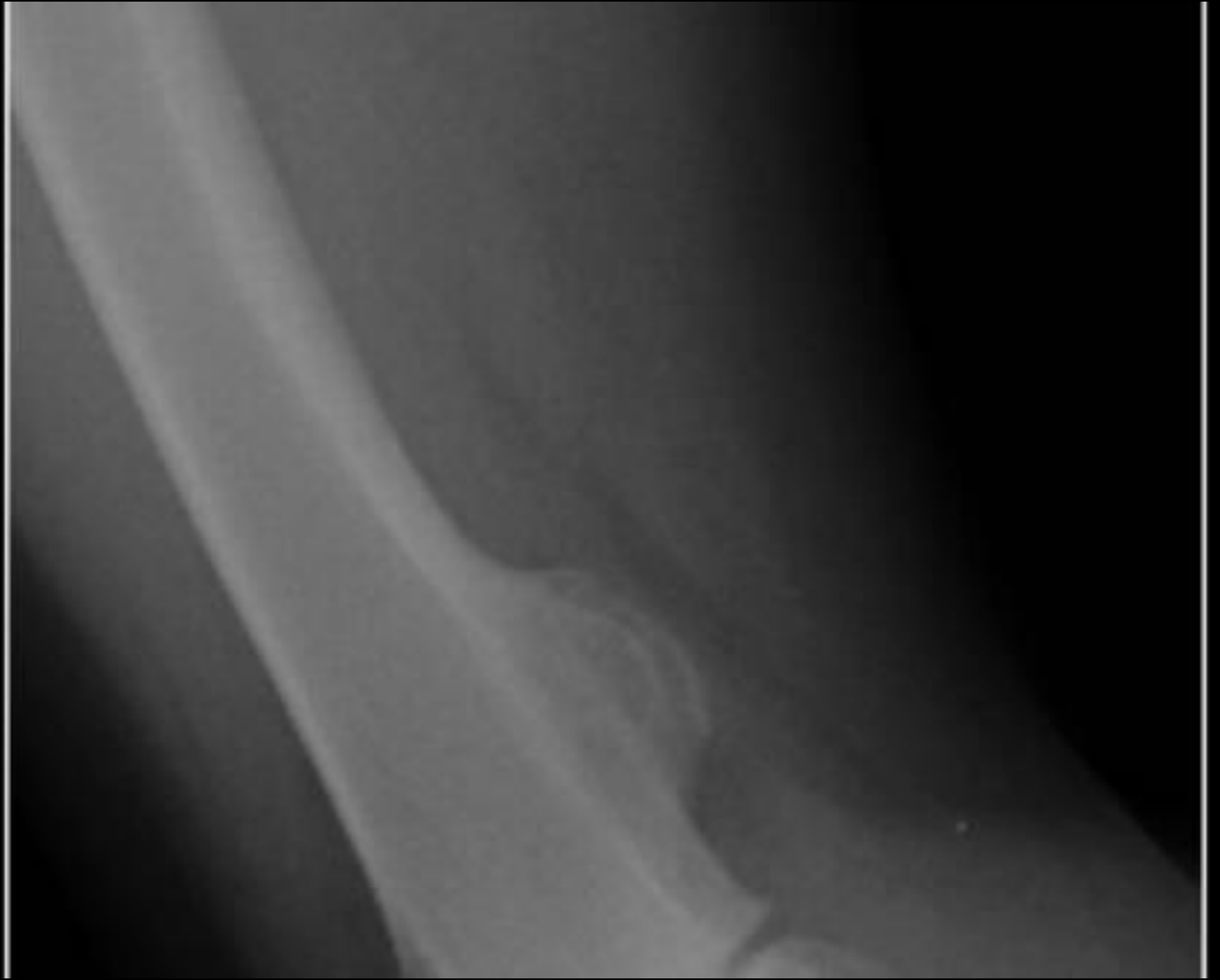




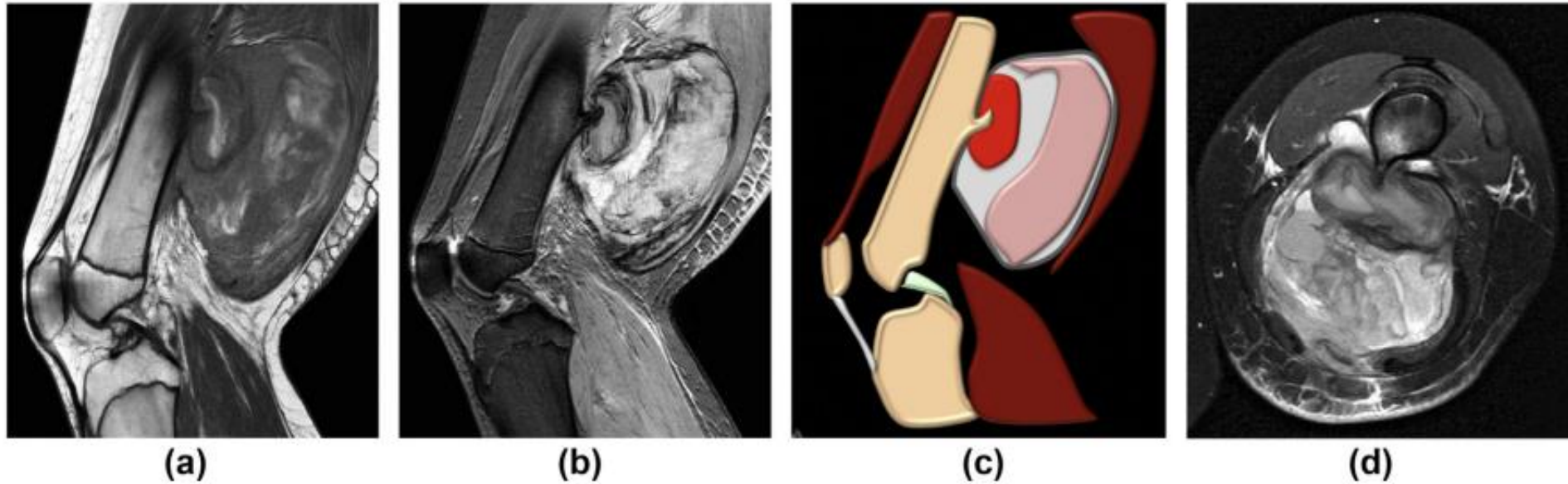
**ANSWER**



- Osteochondroma leading to Pseudo-aneurysm formation.

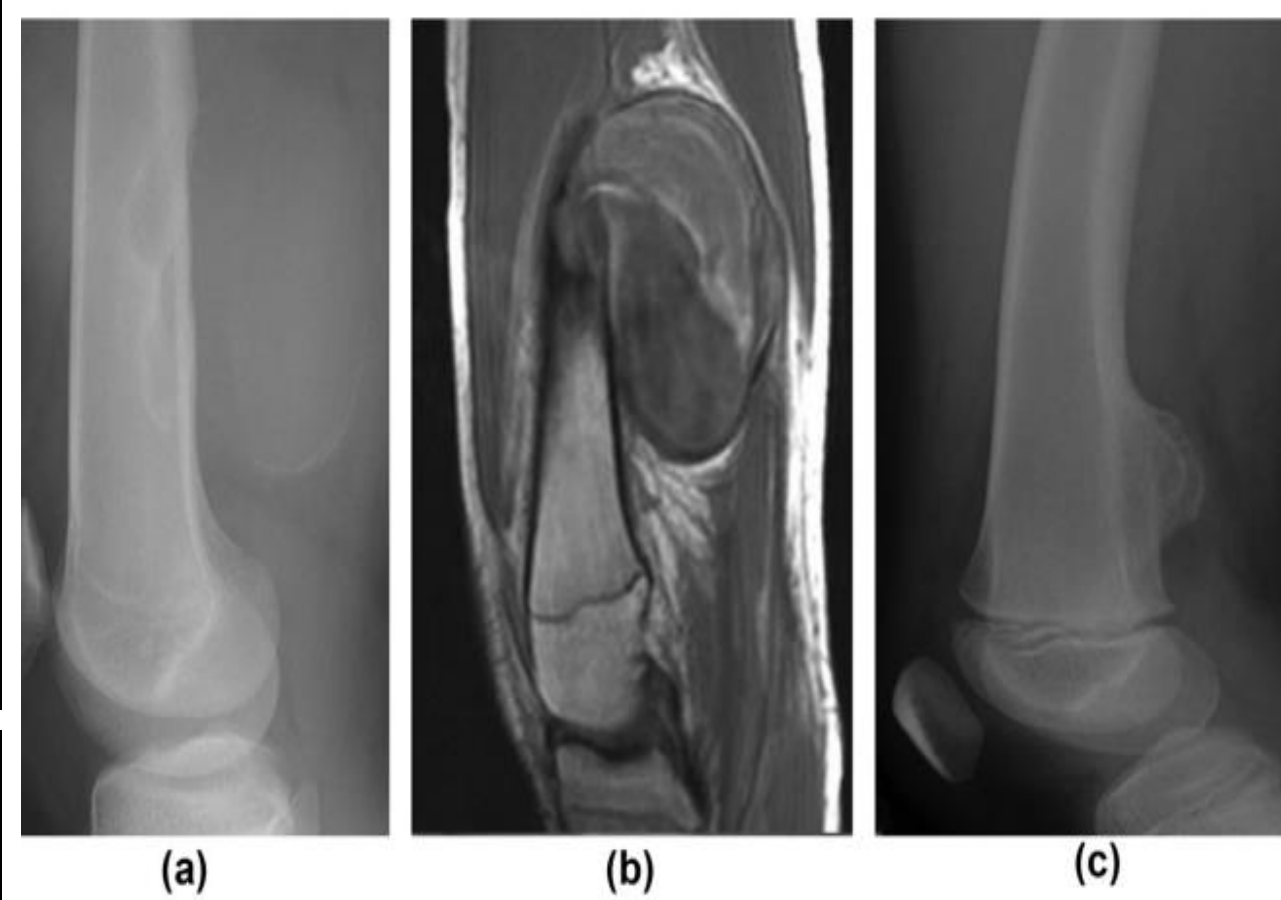
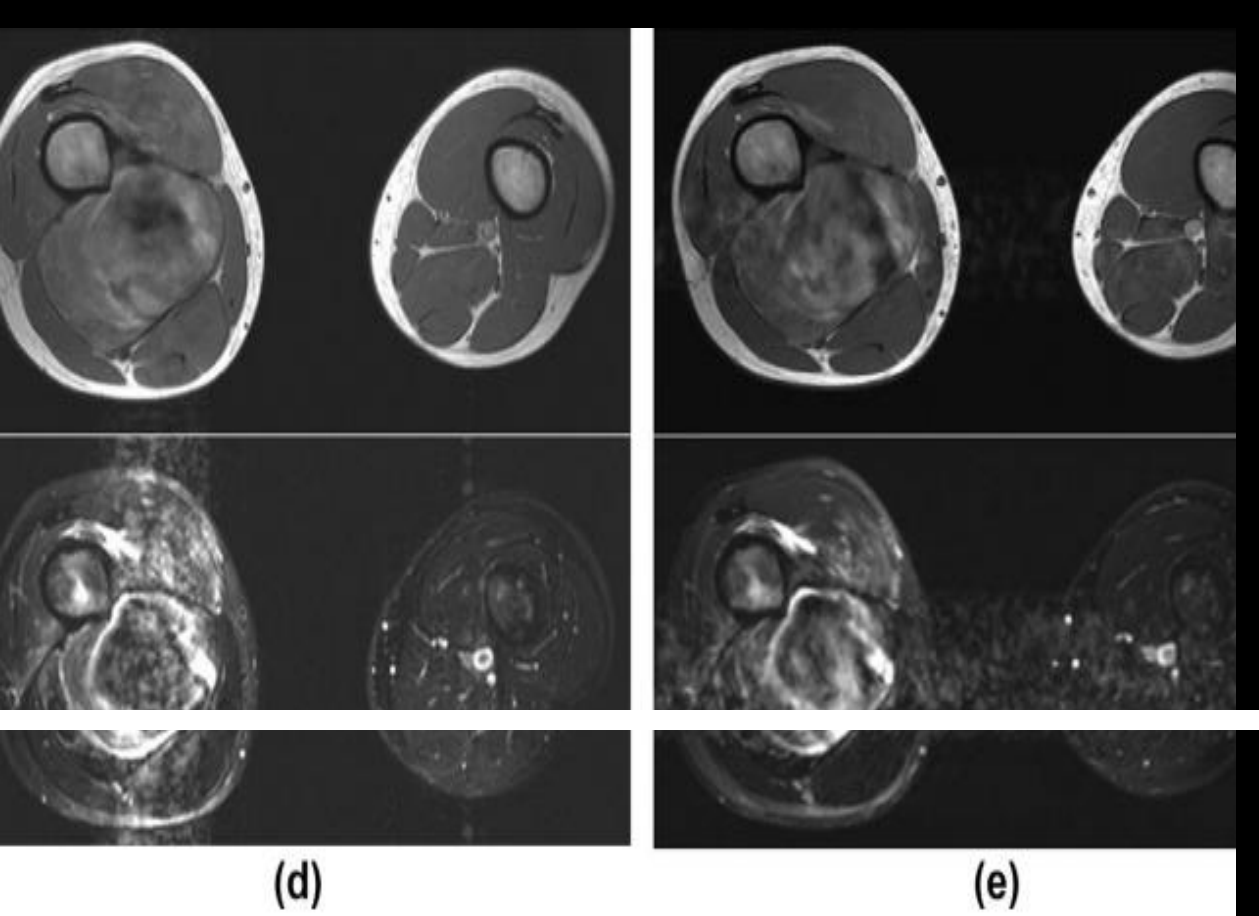






**Figure 1** (a) Sagittal T1-weighted, (b) gradient echo, (c) illustrative image, and (d) axial PD fat-saturated MRI images of a 15-year-old male patient showing an osteochondroma arising from the posterior femoral cortex. It protrudes into the anterior aspect of the pseudoaneurysm that is surrounded by areas of repeated haemorrhage (EW sign). The haemosiderin lining the pseudoaneurysm and the overlying haemorrhage is seen as curvilinear low signal intensity on the gradient-echo image.





**Figure 2** A 16-year-old male patient. (a) Lateral radiograph at presentation shows an oval soft-tissue mass with peripheral curvilinear calcification and erosion of the underlying bone. (b) Sagittal T1-weighted MRI image showing an EW sign with evidence of subacute haemorrhage. (c) Lateral radiograph obtained 6-years earlier shows a sessile osteochondroma arising from the distal femur. This originally caused the pseudoaneurysm that in turn secondarily eroded away the exostosis. (d,e) Paired axial T1-and T2-weighted fat-saturated images showing the pseudoaneurysm with floric pulsation artefact that rotates  $90^\circ$  as the phase- and frequency-encoding direction is altered.



## CLUE

## MATRIPHAGY

- Osteochondroma gave birth to Pseudo-aneurysm.
- And pseudoaneurysm ate the Osteochondroma.

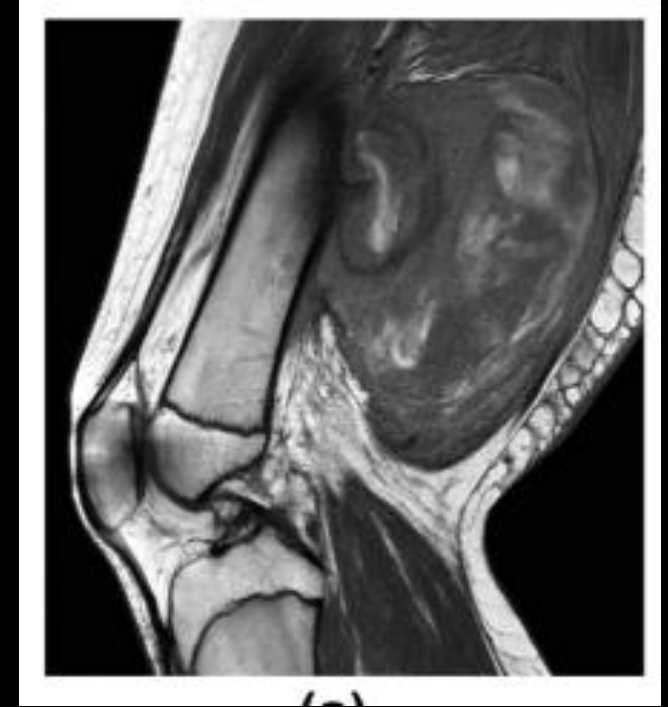
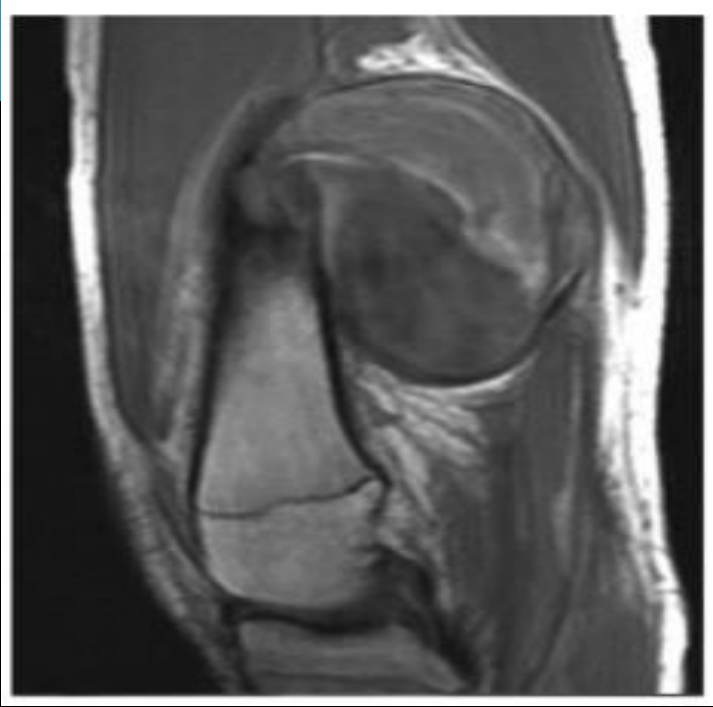
BABY EATING MOTHER

# Osteochondroma-induced pseudoaneurysms of the extremities mimicking sarcoma: a report of seven contemporary and one historical case

A. Iqbal, E. McLoughlin, A. Patel, S.L. James, R. Botchu\*, A.M. Davies

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- Osteochondroma accounts for 10-15% of all skeletal tumours.
- They most commonly affect the appendicular skeleton with the metaphysis of the long bones around the knee joints involved in 40% of cases.
- The majority are asymptomatic and incidentally identified on imaging performed for unrelated symptoms.
- A number of complications may occur, which include osseous deformity, fracture, neurological sequelae from compression from central or peripheral lesions, bursae formation, and malignant transformation.
- Vascular complications are rare and include vessel displacement, stenosis, occlusion, pseudoaneurysm formation and arterial or venous compression.



- A thin low signal intensity outer rim, presumed to be due to haemosiderin deposition, was present in all cases accentuated in those studies that included a gradient echo sequence.
- The composite appearance of a deep smaller pseudoaneurysm with overlying layers of haemorrhage was termed the “eccentric-whorl sign” (EW sign) reflecting the spiral/circular pattern .



- The most convincing theory for pseudoaneurysm formation can be explained by the anatomy of the popliteal artery, which is the commonest site for pseudoaneurysm formation.
- The distal femoral artery is relatively fixed within the adductor canal whereas the popliteal artery is comparatively more mobile predisposing it to increased abrasion over the posterior distal femoral osteochondroma.
- It is likely that repeated microtrauma eventually results in pseudoaneurysm formation
- Subsequently, the enlarging pseudoaneurysm causes pressure necrosis of the osteochondroma giving an appearance of regression on subsequent radiographs.

THANK  
YOU

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