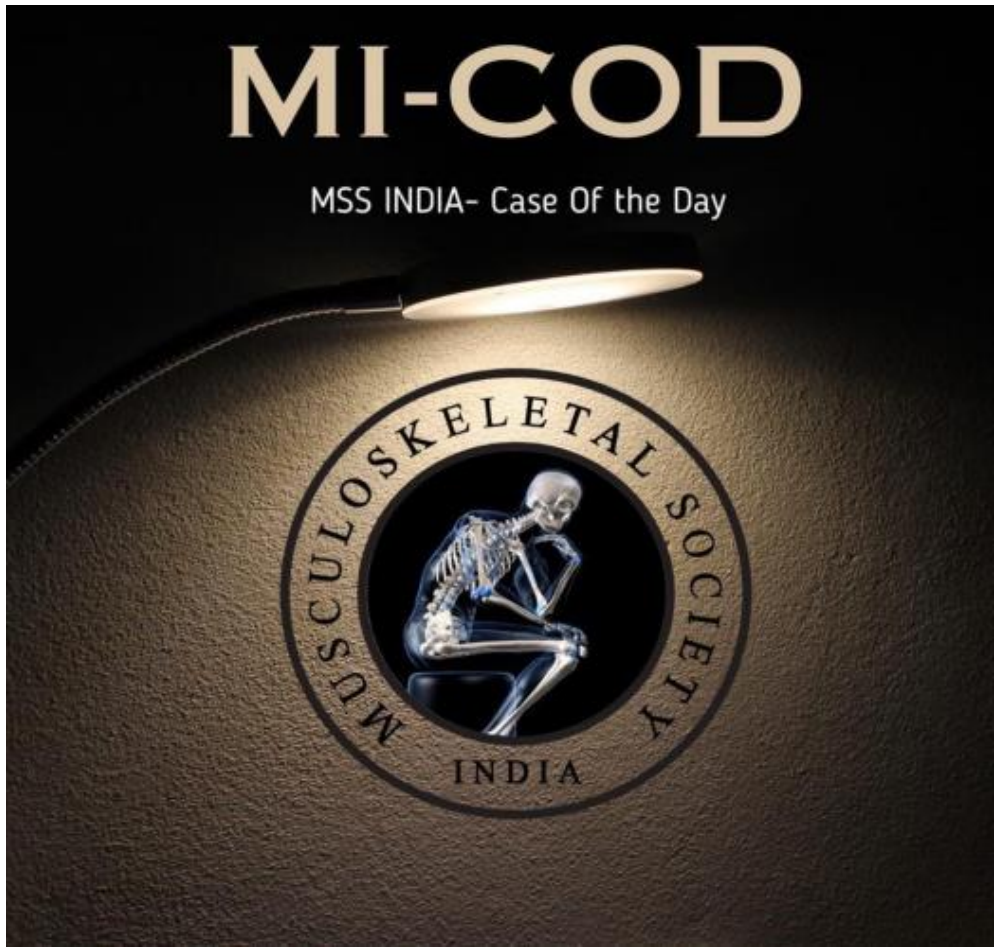
MICOD 19/09/2023

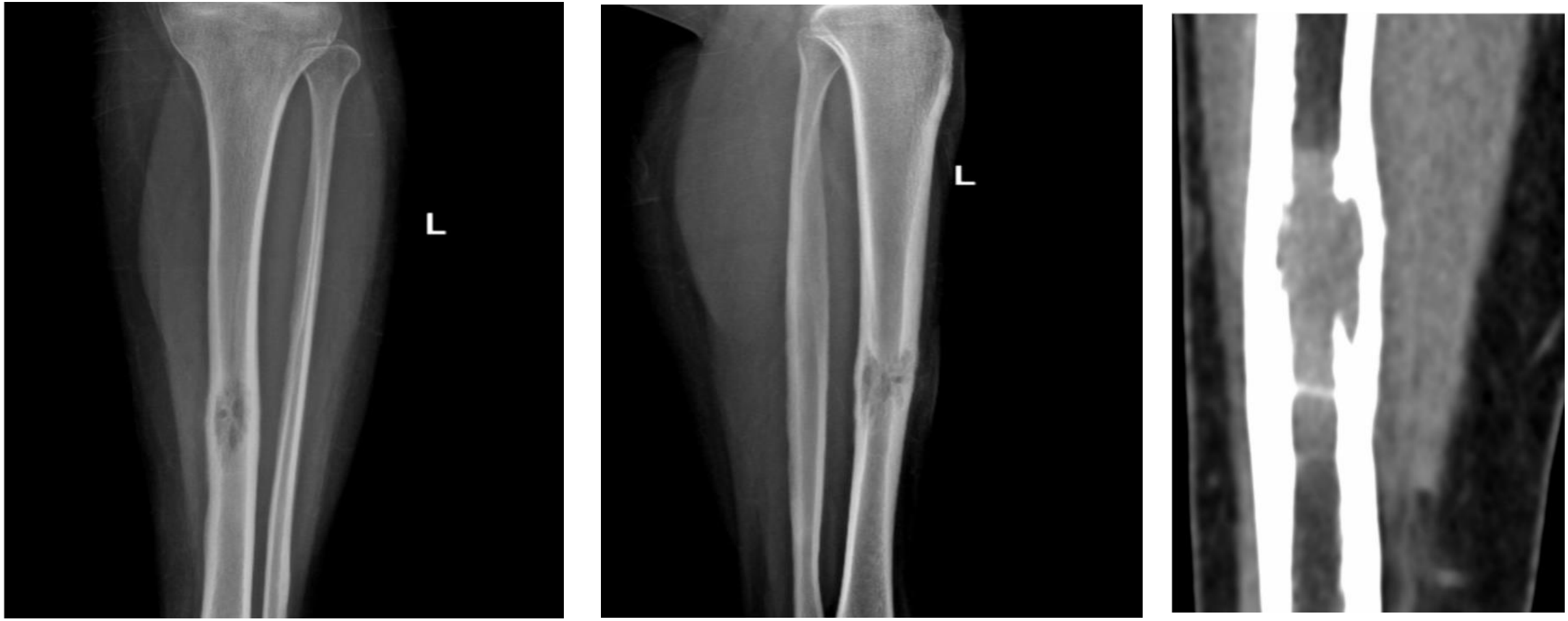
Case Courtesy: Dr. Pushpa B. T (Ganga Hospital, Coimbatore)



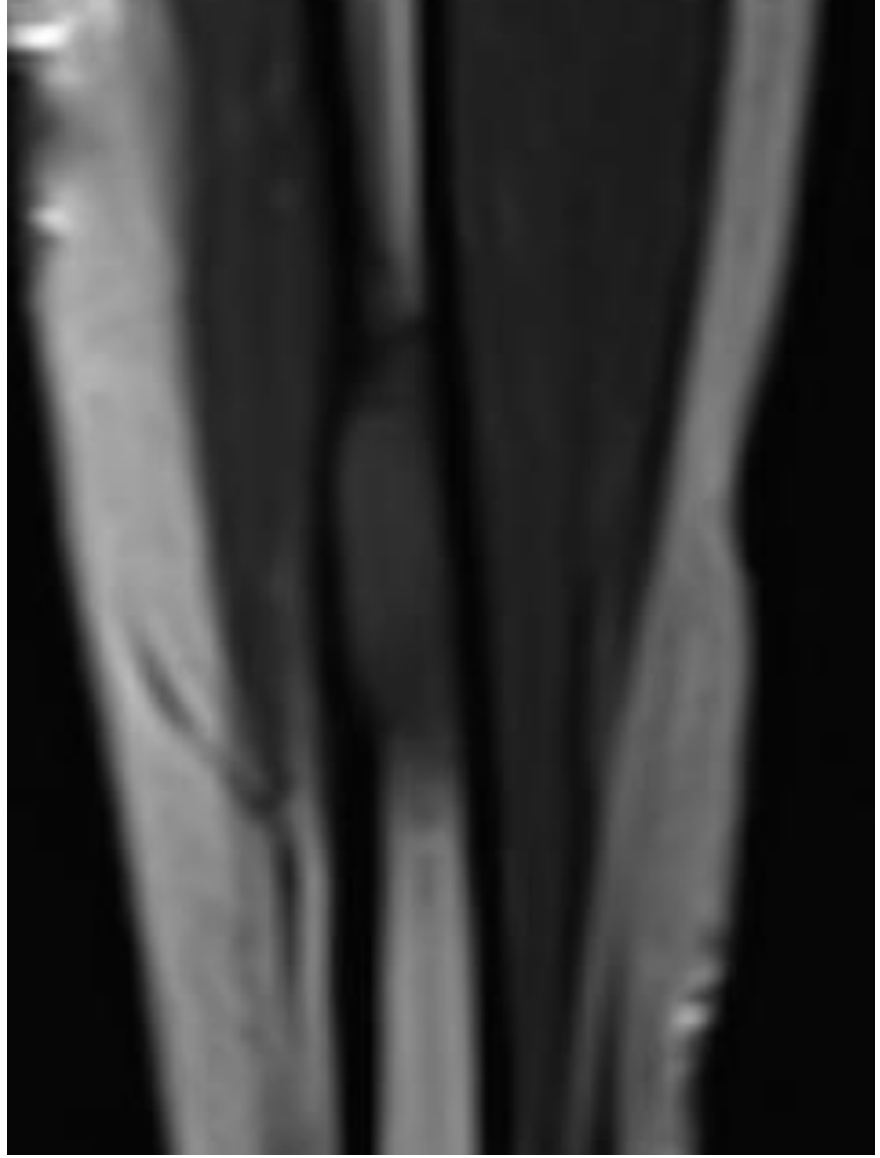
Clinical details

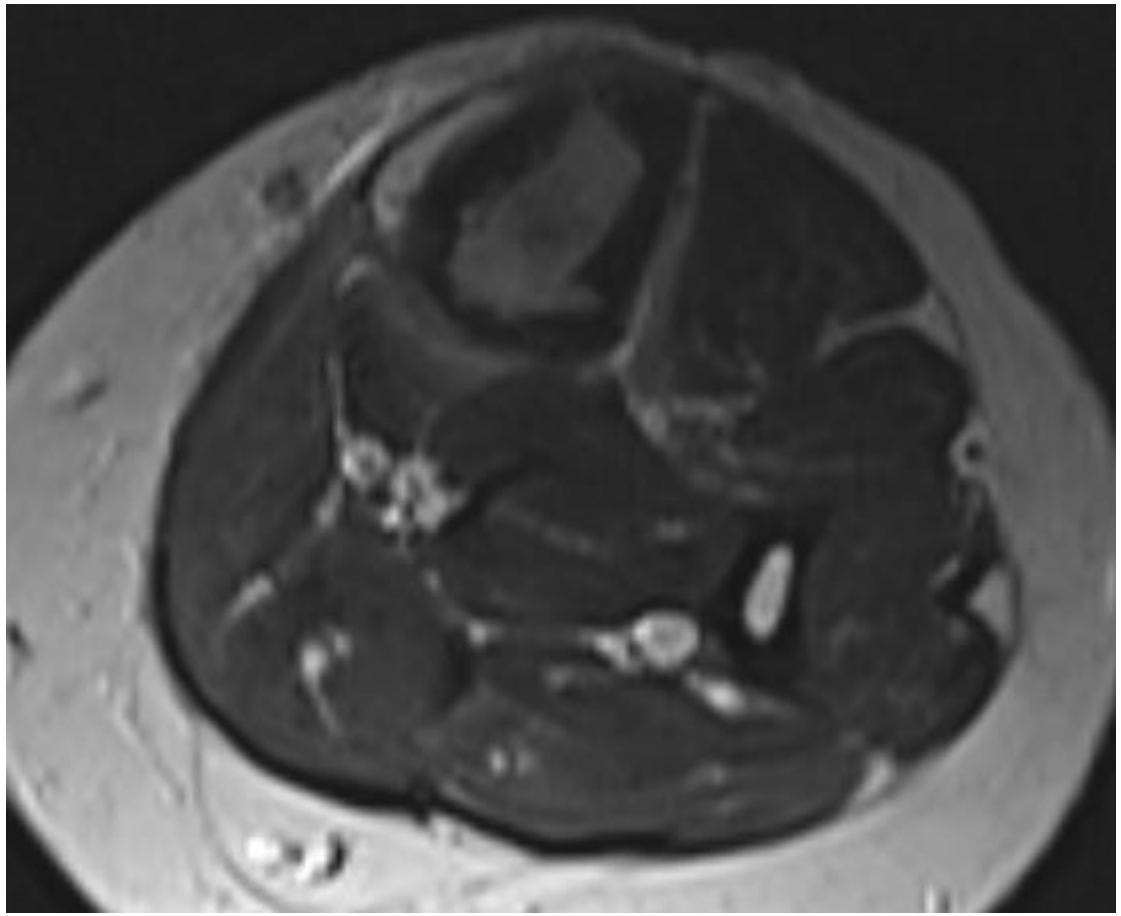
•A 24-year-old female patient presented with complaints of gradually progressive, dull aching, pain in the left leg for two months, which got aggravated on walking.

•Local examination revealed tenderness over the distal leg with no local rise of temperature. Range of movements was normal and distal pulses were felt.

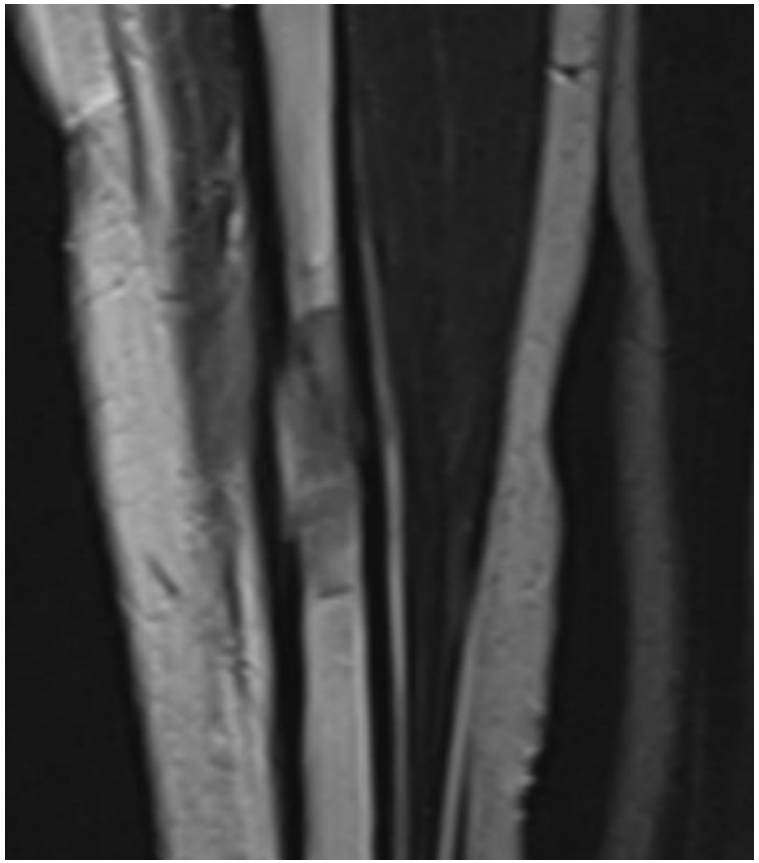


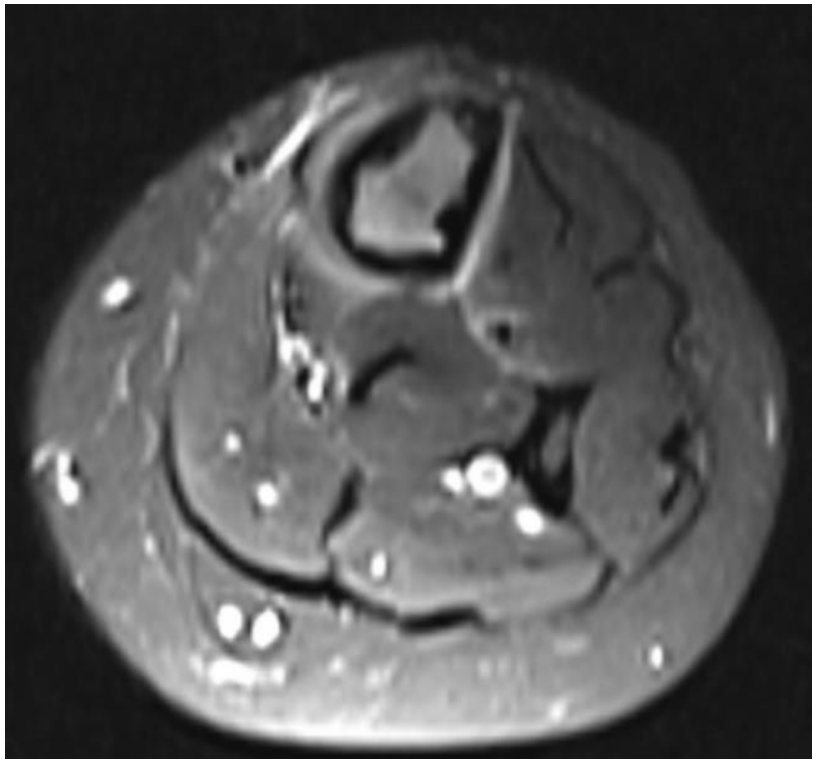
Plain antero-posterior/lateral radiography and CT scan of left leg showing solitary, expansile intramedullary, osteolytic lesion with narrow zone of transition in the mid diaphysis of left tibia. The lesion is causing endosteal scalloping and is involving anterior and posterior cortices. No obvious periosteal reaction. No cortical break. No soft tissue component.



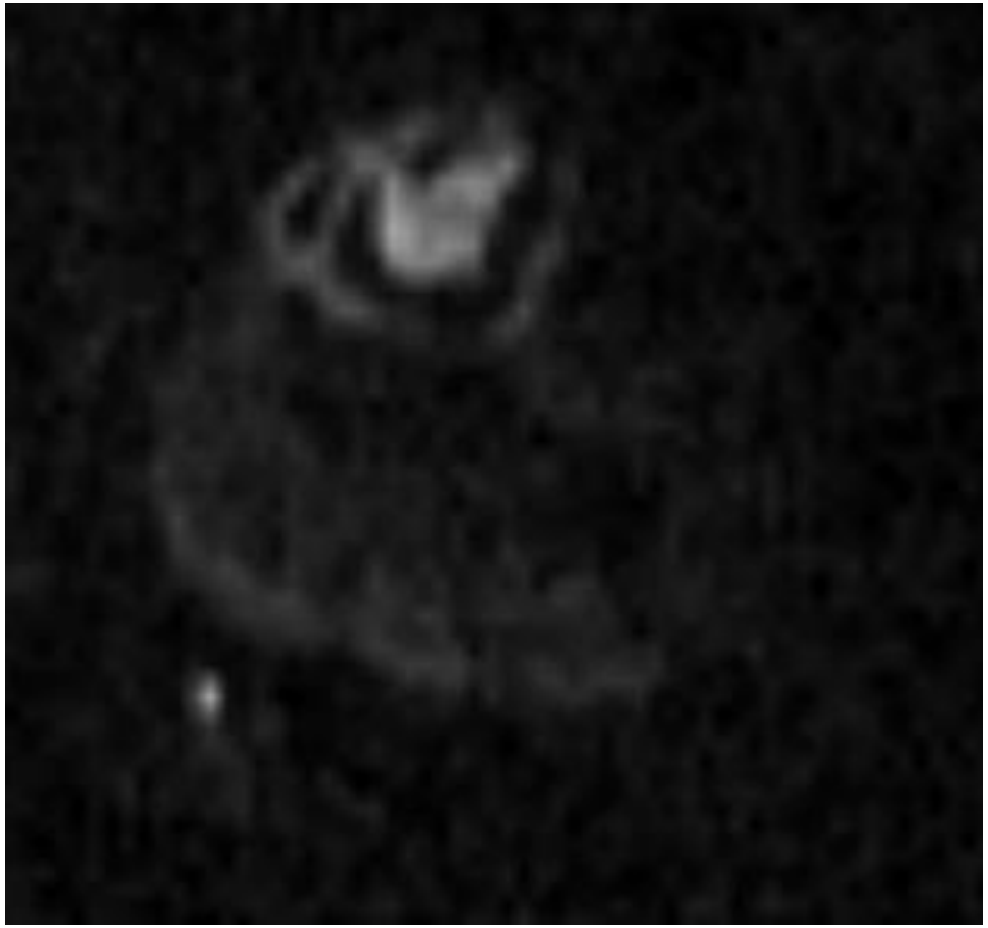


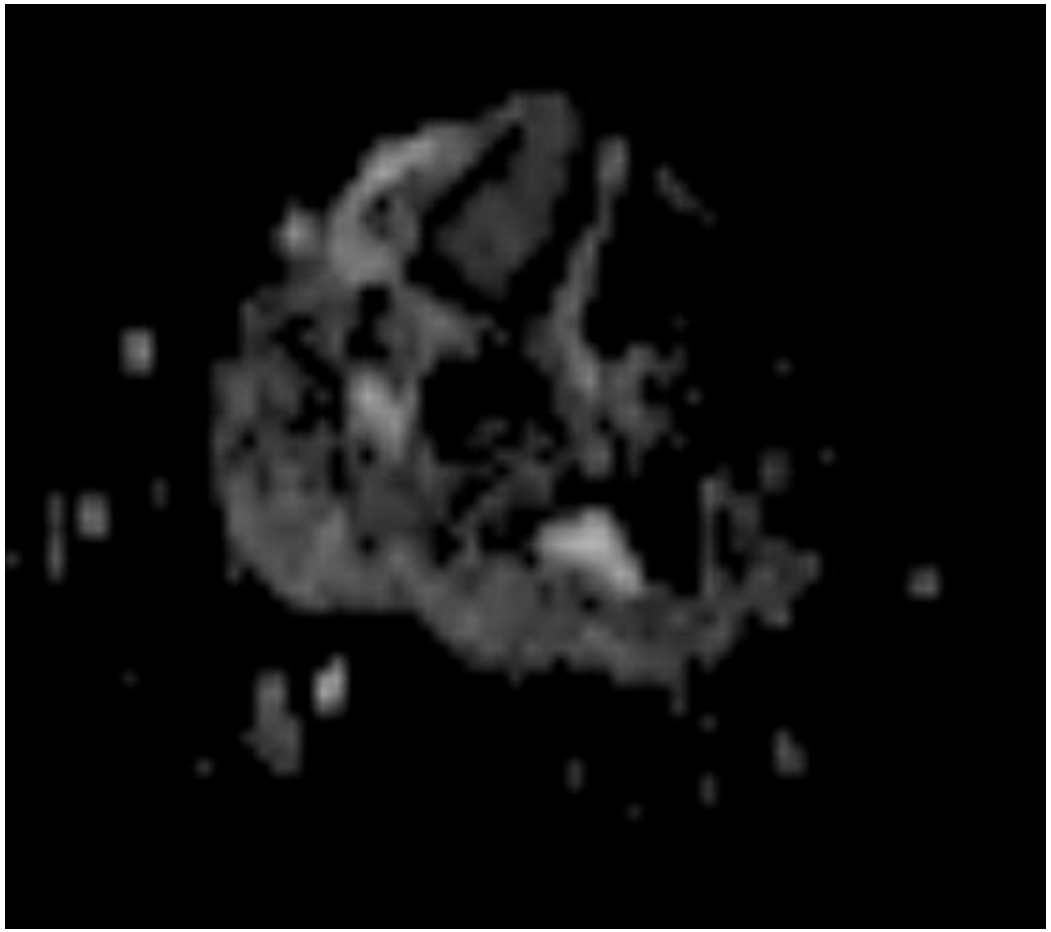
Coronal T1 and Axial T2 images showing a soft tissue lesion hypointense on T1 and hyperintense on T2.





Coronal T2 and Axial STIR images hyperintense soft tissue lesion in the mid-diaphysis of left

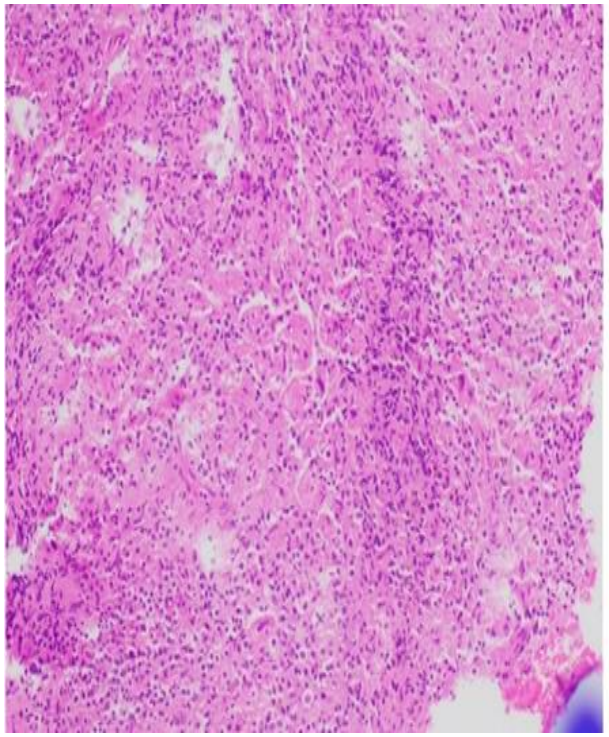
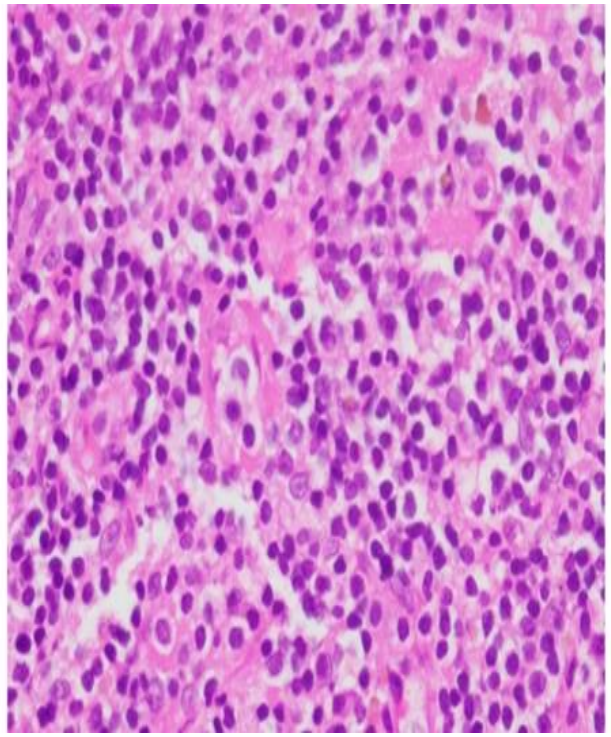
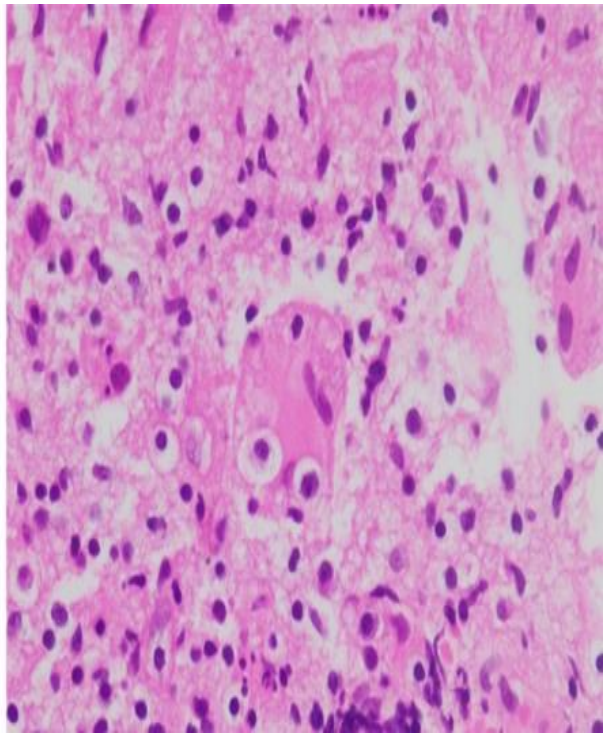




Diffusion weighted imaging with corresponding ADC images showing restricted diffusivity.

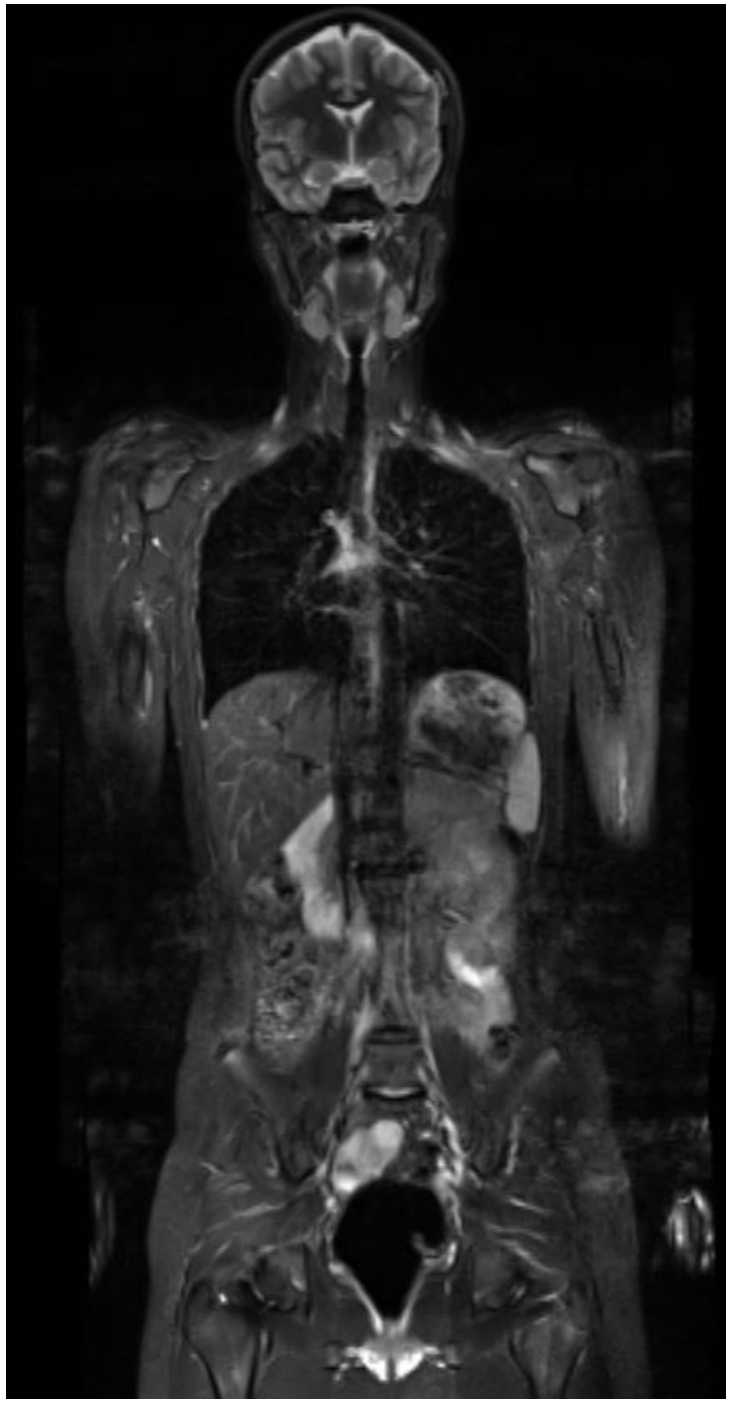
- Differential diagnoses:
  - Langerhans histiocytosis,
  - Lymphoma,
  - Ewing’s sarcoma.

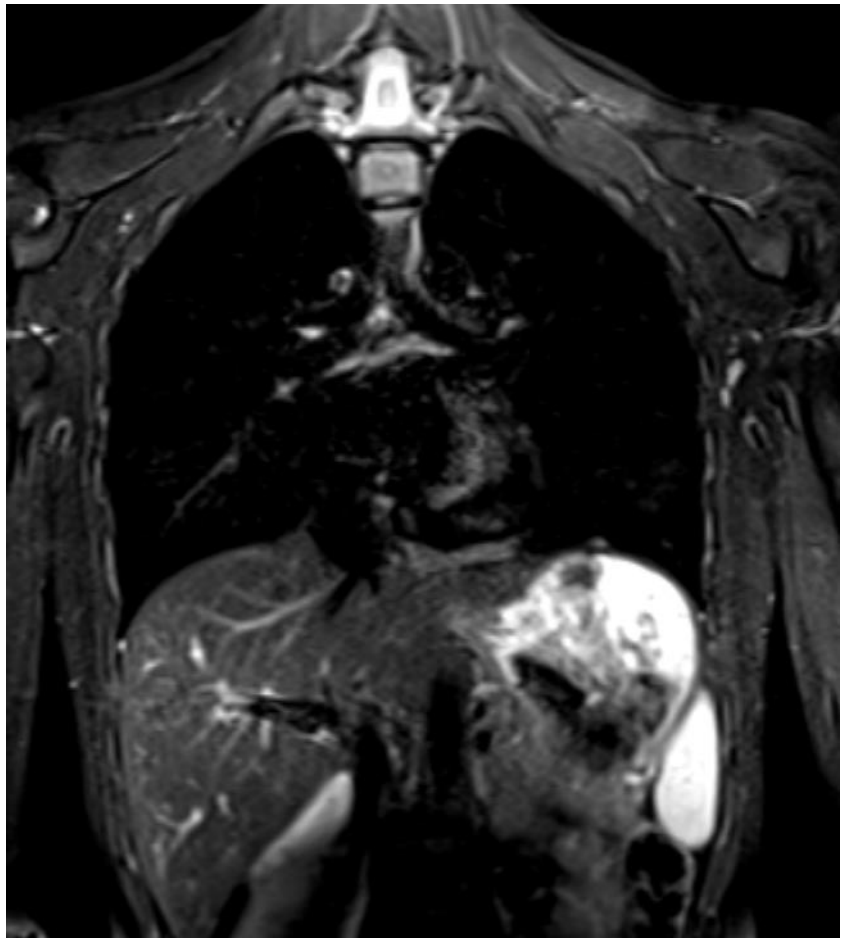
The patient was planned for biopsy under C-arm guidance.

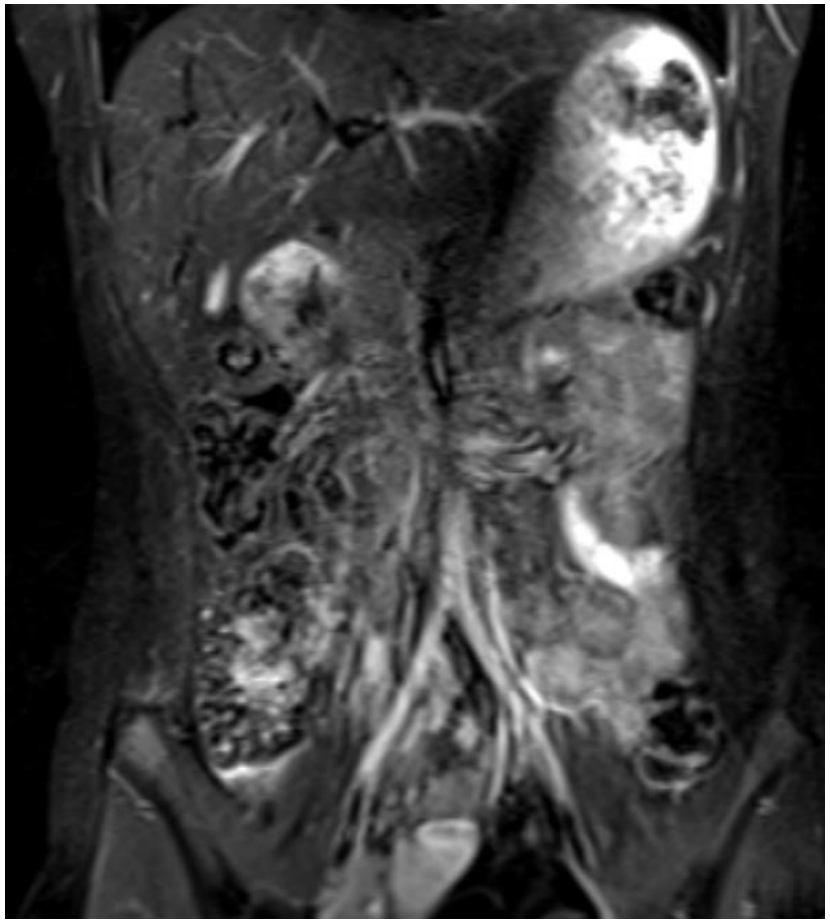




Histopathological examination of the curetted tissue revealed a heterogeneous infiltrate of histiocytes, plasma cells, lymphocytes, and neutrophils. There were few histiocytes with features suspicious of emperipolesis. No granulomas or any other atypical cells were seen. The histiocytes exhibit positivity for CD163 and patchy positivity for S100. CD1a was negative.

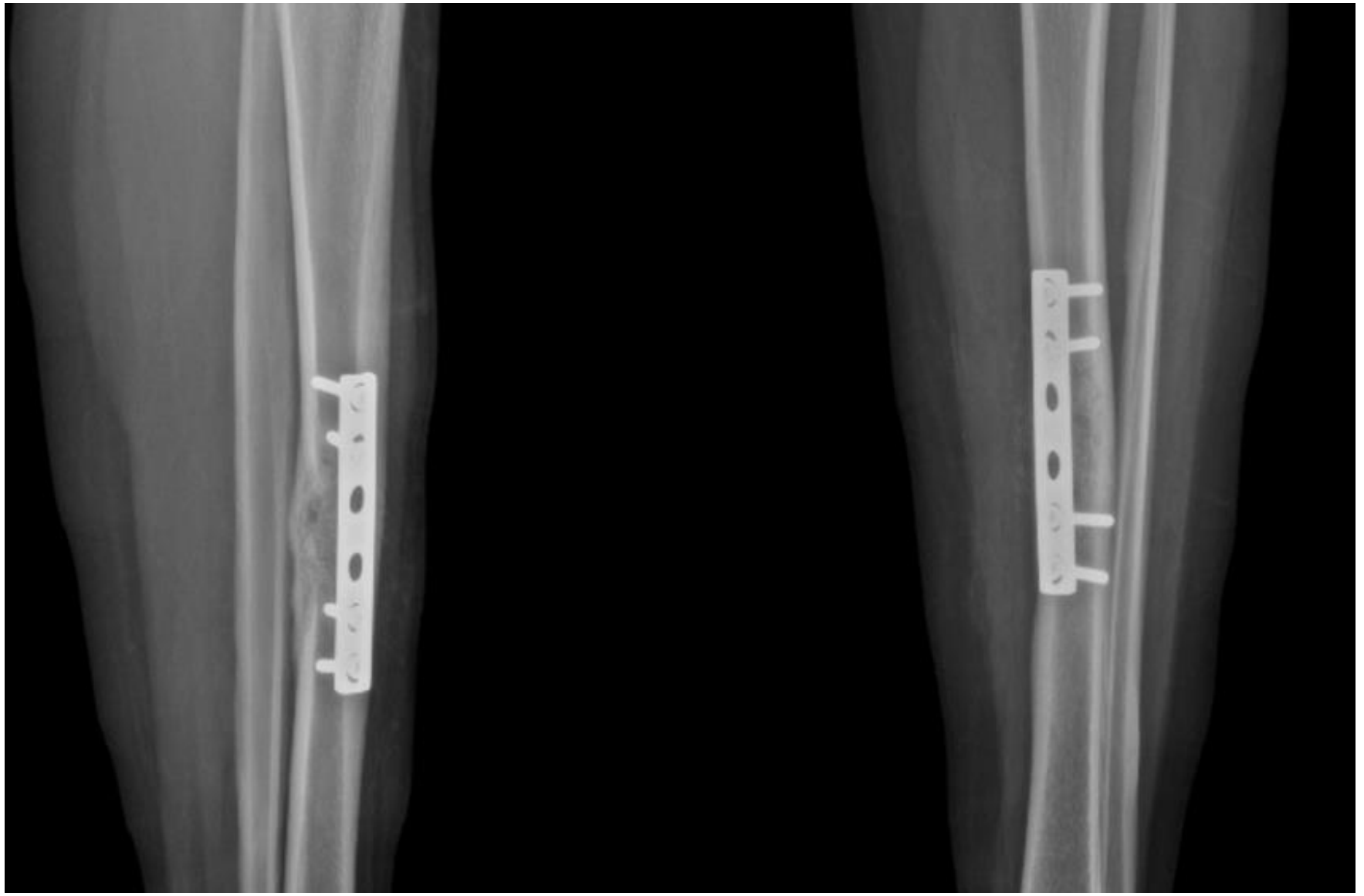
- Histopathological examination features were indicative of Rosai Dorfman’s disease(RDD).
- Considering the diagnosis of RDD, the patient was subjected to a whole-body MRI, to rule out involvement of other systems.







Whole-body MRI revealed no synchronous involvement of other systems.



Post operative radiograph showing cortical thickening with plate and screw fixation.

Discussion

- RDD is a rare, non-neoplastic, self-limiting disease of unknown origin that was first described by Rosai and Dorfman.
- Primary osseous RDD is a rare entity that manifests without synchronous involvement of lymph nodes, other systems and may be considered in the differential diagnosis of lytic or mixed lytic and sclerotic lesions in children and young adults.
- Whole-body MRI plays an important role in ruling out systemic involvement in cases of primary extranodal RDD.
- Surgical excision with bone grafting is sufficient for primary osseous RDD.