Original Research Paper

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Radiology

A CASE REPORT ON RUPTURED CHONDROSARCOMA OF 11TH RIB

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ABSTRACT Sarcoma is a rare malignant neoplasm of mesenchymal origin, accounting for less than 1% of all adult malignancies. Chondrosarcoma is a primary malignant bone tumor characterized by cartilage matrix production and typically affects adults. Rib chondrosarcomas are uncommon and their rupture with invasion into adjacent viscera is exceedingly rare. We report a case of a 25-year-old male presenting with a long-standing ulceroproliferative chest wall mass arising from the right 11th rib with extensive local invasion and complications. Imaging findings on radiography and contrast-enhanced CT, along with histopathological confirmation, are described to highlight the aggressive behavior and diagnostic features of this rare presentation.

KEYWORDS : Chondrosarcoma, Rib tumor, Chest wall mass, CT imaging, Case report

INTRODUCTION

Chondrosarcoma is a malignant cartilage-forming tumor that commonly affects adults and most frequently involves the pelvis, femur, and shoulder girdle. Involvement of the ribs is rare. These tumors demonstrate characteristic imaging features including ring-and-arc calcifications and aggressive local behavior. Rupture with infiltration into abdominal and thoracic organs is an unusual presentation and poses diagnostic and therapeutic challenges.

CASE PRESENTATION

A 25-year-old male presented with a long-standing ulceroproliferative growth on the right side of the chest and abdomen, associated with severe pain and recent onset of foul-smelling fecal discharge.

Imaging Findings

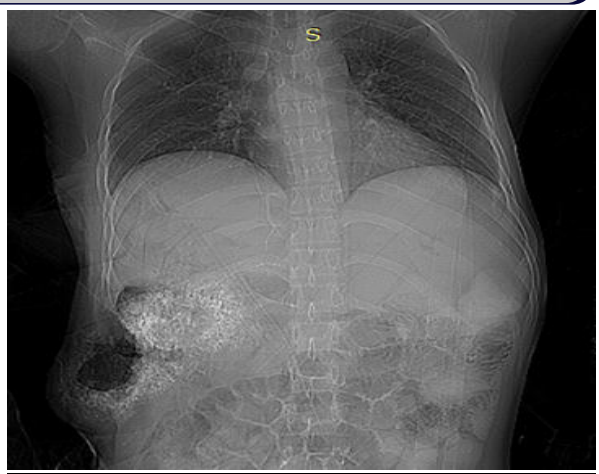
- **Plain Radiography:** A large mass with popcorn-like calcifications arising from the lateral aspect of the right 11th rib with invasion of surrounding soft tissues.
- **Plain CT:** A large expansile destructive lesion arising from the right 11th rib measuring approximately 12 × 8 × 8 cm, showing rings-and-arcs calcification and an extraosseous soft tissue component involving chest and abdominal wall muscles.
- **CECT (Venous Phase):** Superior infiltration into segments V and VI of the liver, medial invasion of the superior pole of the right kidney and proximity to the pancreatic head, involvement of the ascending colon, and lateral extension into subcutaneous tissue with skin ulceration. Associated infrarenal IVC and common iliac vein thrombosis was noted.

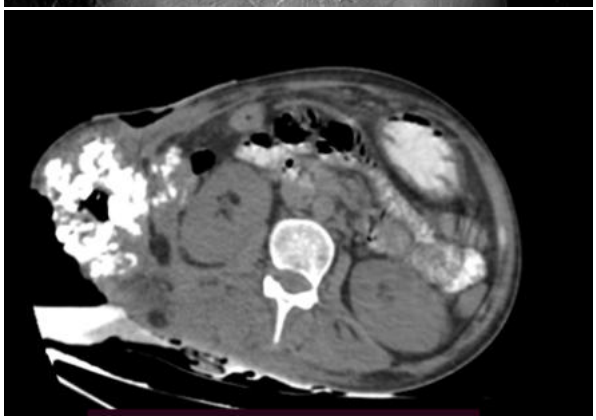
Histopathology

Histopathological examination was consistent with low-grade chondrosarcoma.

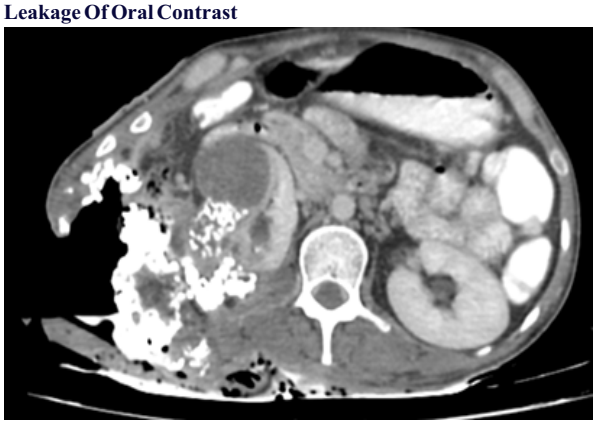
DISCUSSION

Chondrosarcomas may be primary or secondary and are graded based on cellularity, nuclear atypia, and matrix composition. Imaging plays a crucial role in diagnosis, with characteristic chondroid matrix mineralization and aggressive features such as cortical destruction and soft tissue extension. Rib chondrosarcomas tend to present late due to slow growth and may reach large sizes before diagnosis. This case highlights an unusually aggressive local spread with rupture and multiorgan infiltration.





Leakage Of Oral Contrast



CONCLUSION

Rib chondrosarcoma, though rare, should be considered in the differential diagnosis of calcified chest wall masses. Cross-sectional imaging is essential for accurate assessment of tumor extent and complications. Early diagnosis and complete surgical excision remain key determinants of prognosis.