Scholars Journal of Applied Medical Sciences
Abbreviated Key Title: Sch J App Med Sci
ISSN 2347-954X (Print) | ISSN 2320-6691 (Online)
Journal homepage: https://saspublishers.com

OPEN ACCESS

Orthopedic Surgery and Traumatology

Mixed Scapular Lesion in a 19-Year-Old Adolescent: Biopsy Discordance ABC/GCT?

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DOI: https://doi.org/10.36347/sjams.2026.v14i06.005 | **Received:** 21.04.2026 | **Accepted:** 30.05.2026 | **Published:** 02.06.2026

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Clinical Image

Clinical Presentation: We present the radiological workup of a 19-year-old child reporting right shoulder pain worsening over several months, becoming very bothersome.

X-ray: Lucent lesion of the scapular body extending to the glenoid neck.

CT:

Osteolytic mass centered on the medial border of the scapula, oval-shaped, 95 mm in height and 70 mm in width. Poorly vascularized tissue portion on Doppler and multiple internal fluid-filled areas. Extensive lysis of the inferior part of the glenoid cavity. Partial discontinuous bony shell (posterior, inferior, superior). Small horizontal fracture line near the superior border of the glenoid. No involvement of the scapulohumeral joint space. Clearly delineated from the rotator cuff muscles.

MRI:

Oval mass, regular contours, well-defined margins, 67 × 50 mm in transverse plane and 87 mm in vertical plane. Tissue component with intermediate signal on T1 and T2, markedly enhanced by contrast. Fluid component consisting of multiple locules with dependent horizontal levels. The mass is centered on the medial border of the scapula and infiltrates the entire glenoid cavity but respects the cortex and does not infiltrate the scapulohumeral joint space. It displaces the infraspinatus and subscapularis muscles. Superiorly, it contacts the supraspinous fossa without infiltration. It infiltrates the base of the coracoid process and respects the acromial spine. It is separated from the axillary neurovascular pedicle and brachial plexus by a tongue of subscapularis muscle.

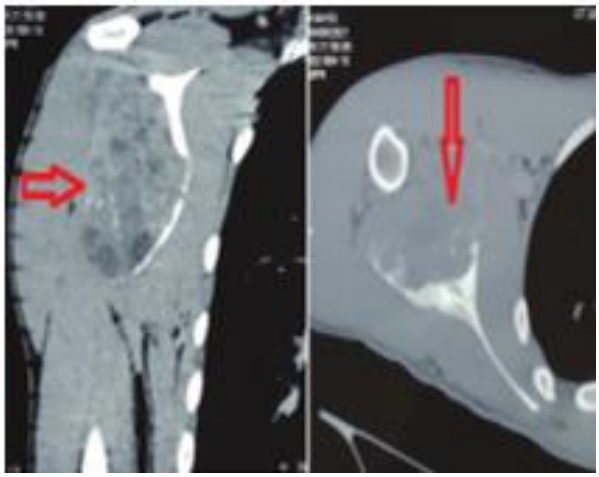
Pathology:

Two biopsies were performed. One pathological examination concluded an aneurysmal bone cyst (ABC). The other concluded a giant cell tumor (GCT). Discordance? No, it is common. Approximately 30% of ABCs are secondary to another lesion, and GCT is the most common cause. The diagnosis is therefore a GCT with aneurysmal cystic change.

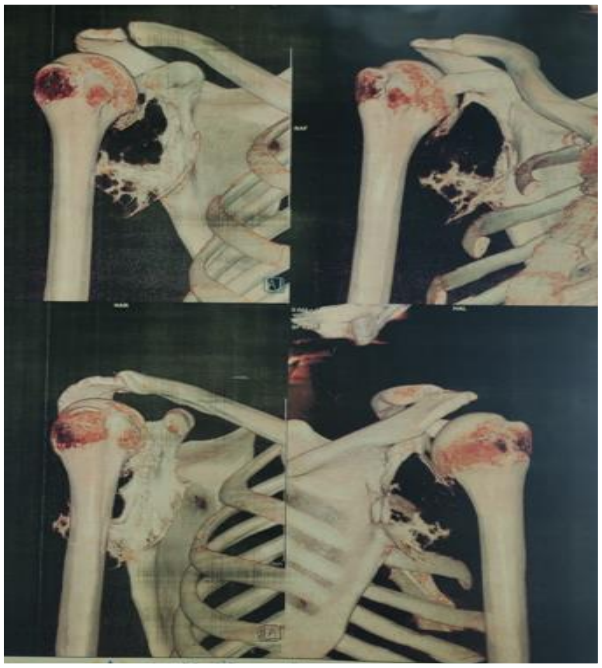
Therapeutic proposal:

Denosumab (protocol: 120 mg subcutaneously on days 1, 8, 15, 28 then every 4 weeks) to reduce the fleshy component, facilitating possible surgical intervention (wide curettage + adjuvant – phenol or cryotherapy – and bone cement filling). Regular MRI surveillance.

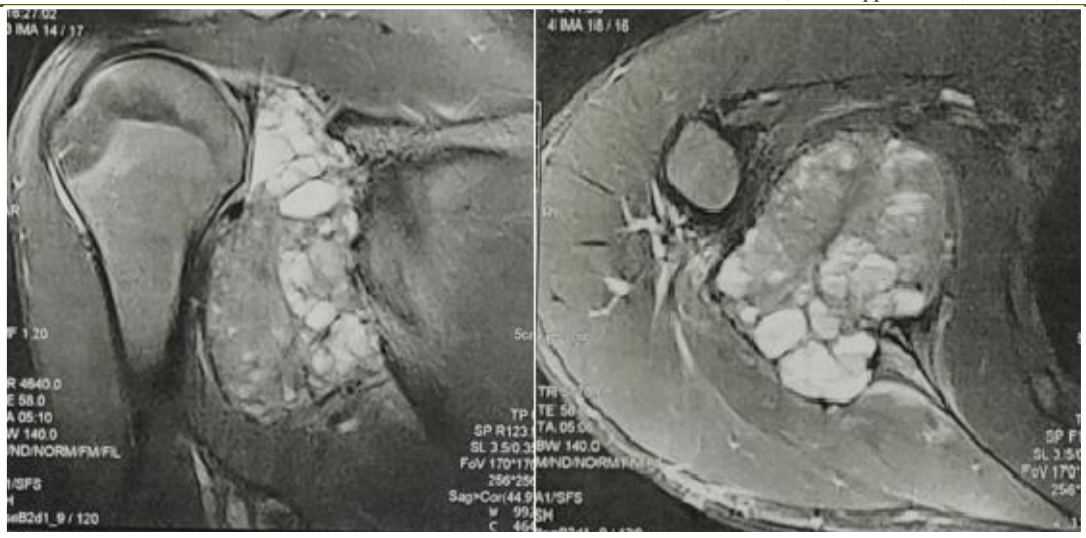
X-ray



CT



3D CT scan



MRI