

The Geyser Sign: A Pathognomonic MRI Indicator of Massive Rotator Cuff Tear and AC Joint Communication.

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Introduction

- **Definition:** The "Geyser Sign" is a pathognomonic MRI finding where joint fluid leaks superiorly into the acromioclavicular (AC) joint.
- **Clinical Presentation:** 73-year-old patient with chronic shoulder pain and a visible, palpable mass over the AC joint area, often misdiagnosed as soft tissue mass.
- **Pathophysiology:** Occurs due to a massive, chronic rotator cuff tear. The humeral head migrates superiorly, eroding the inferior AC joint capsule. Synovial fluid is "pumped" under pressure from the glenohumeral joint into the AC joint (The Geyser effect).
- **Surgical Significance:** This sign indicates a long-standing, likely irreparable tear. Aspiration of the cyst alone leads to high recurrence.

Figure 1 : X-ray right shoulder AP view showing well defined lesion/opacity (**red arrow**) is noted superior to acromioclavicular joint.

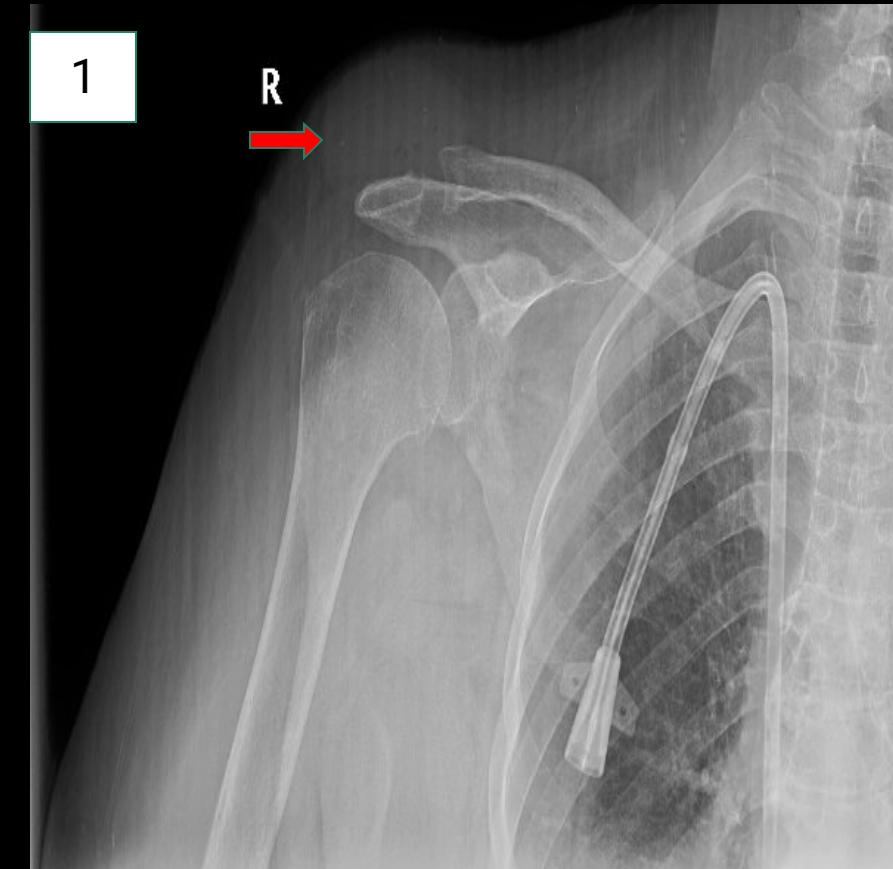
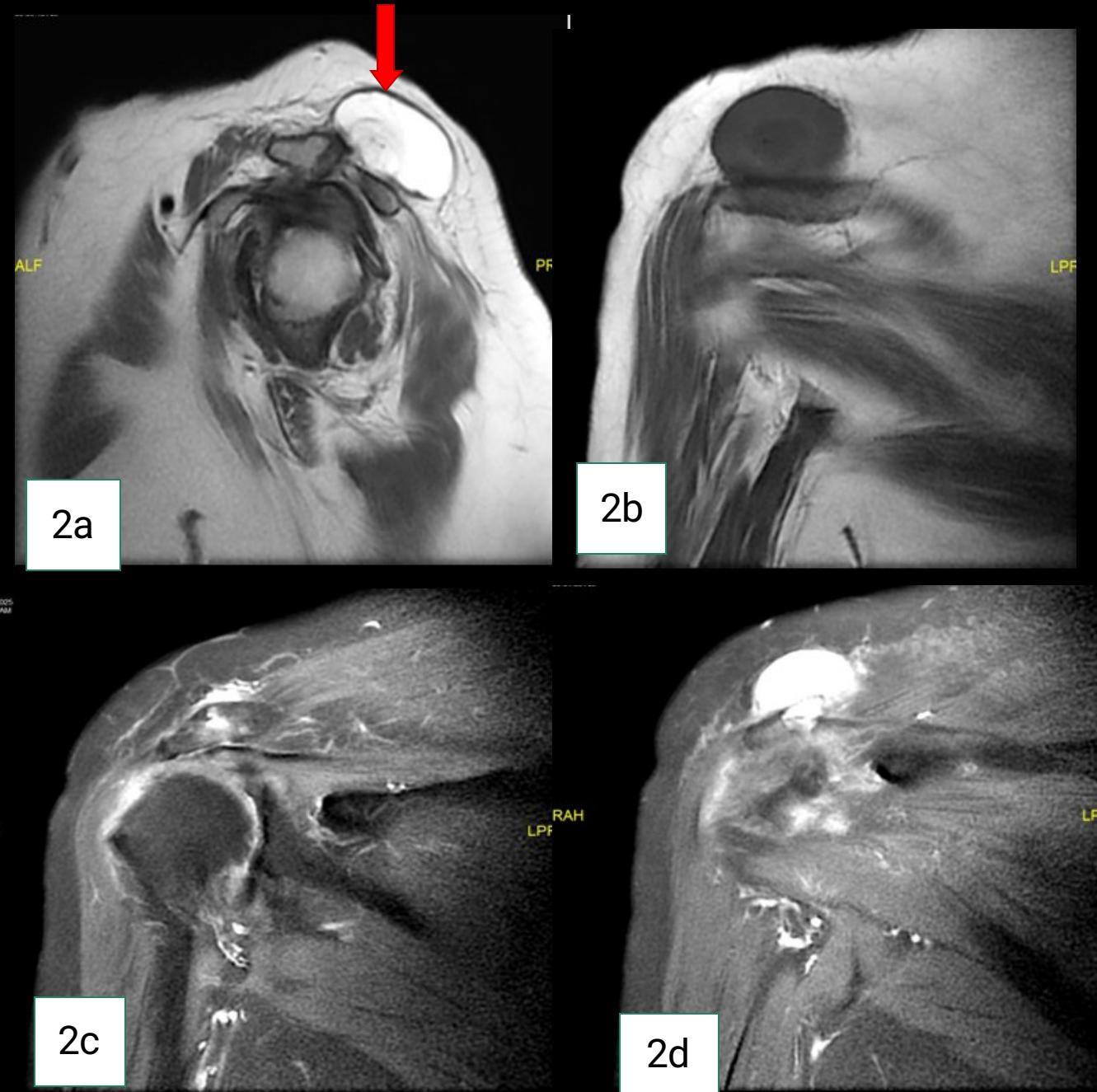


Figure 2: (a ,b) T2 sagittal / T1 coronal sequences revealed well-defined subcutaneous cystic lesion (red arrow) is noted overlying the acromioclavicular joint. (c ,d) showing complete tear of supraspinatus and infraspinatus tendons with tendon retraction and superior migration of the humeral head.



References

- 1-Groheux D, et al. The geyser sign: a rare manifestation of a rotator cuff tear. *J Shoulder Elbow Surg.* 2006;15(6):e20-e22.
- 2-Beall DP, et al. The geyser sign: a finding of superior extension of joint fluid into the acromioclavicular joint. *AJR Am J Roentgenol.* 2003;180(4):1140.