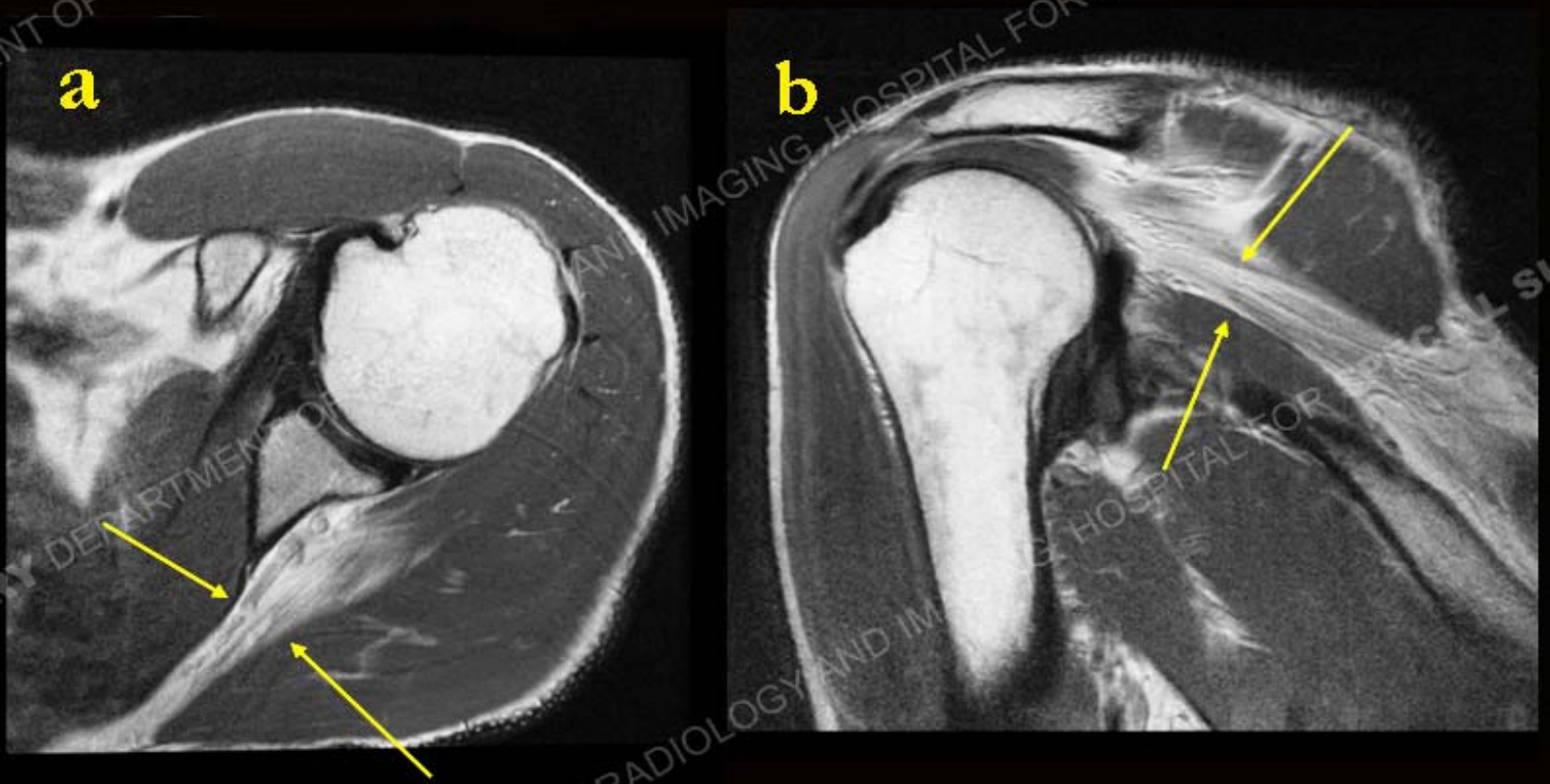
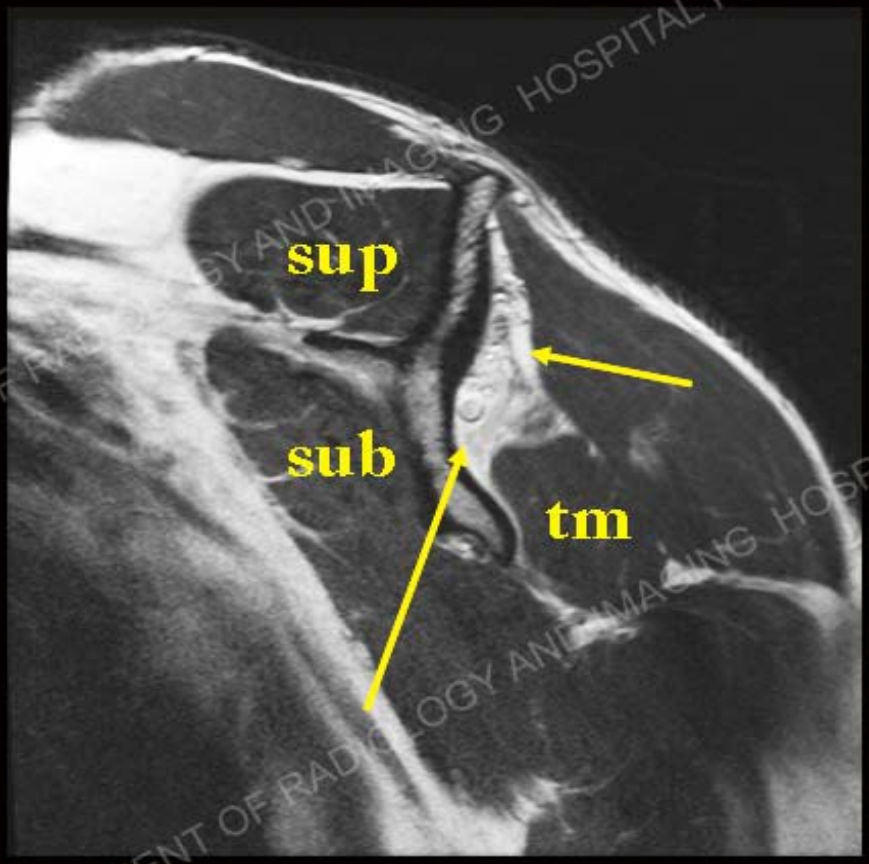
Clinical History

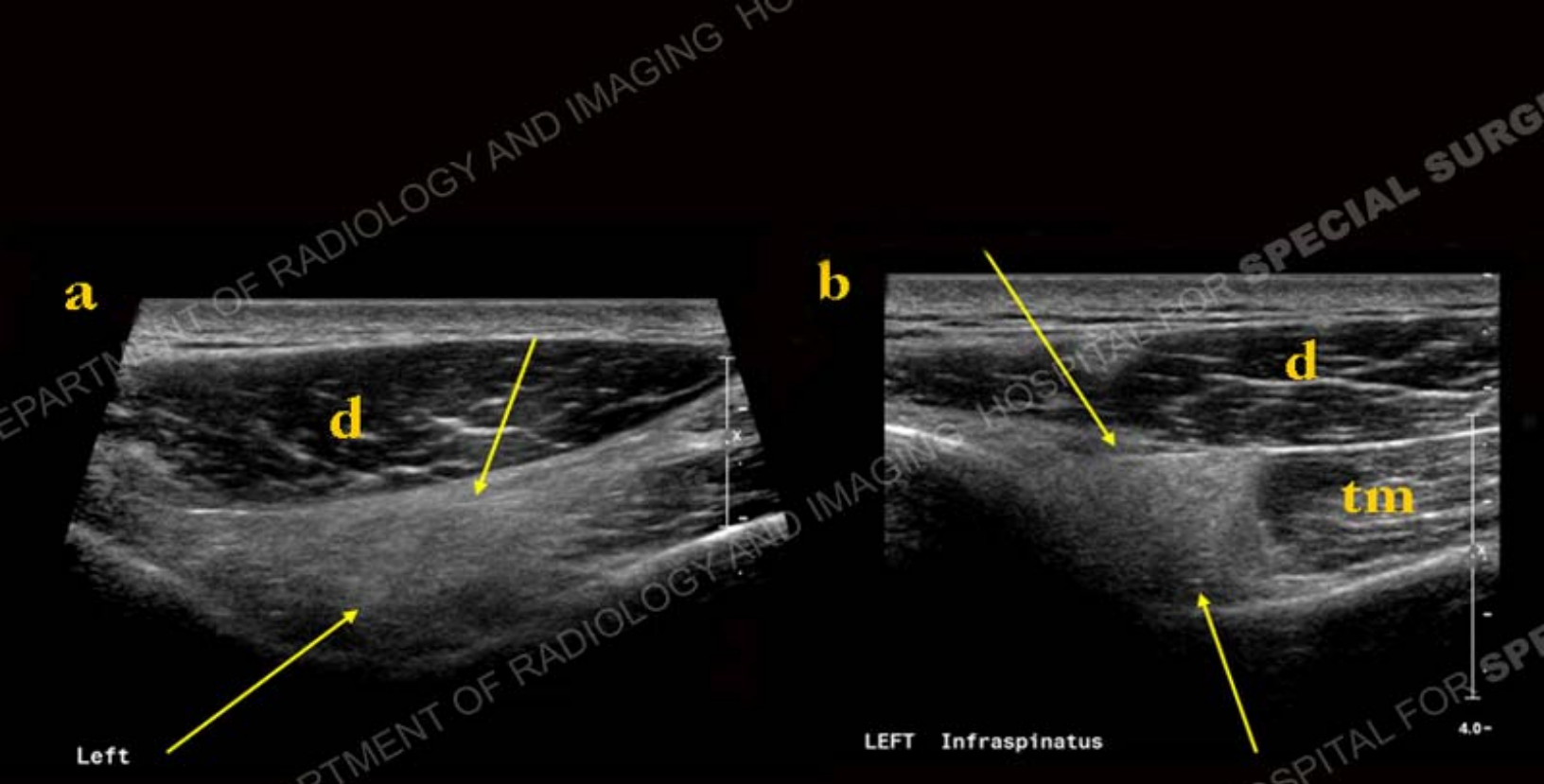
53 year old male presents with shoulder pain and upper extremity weakness, greatest with external rotation



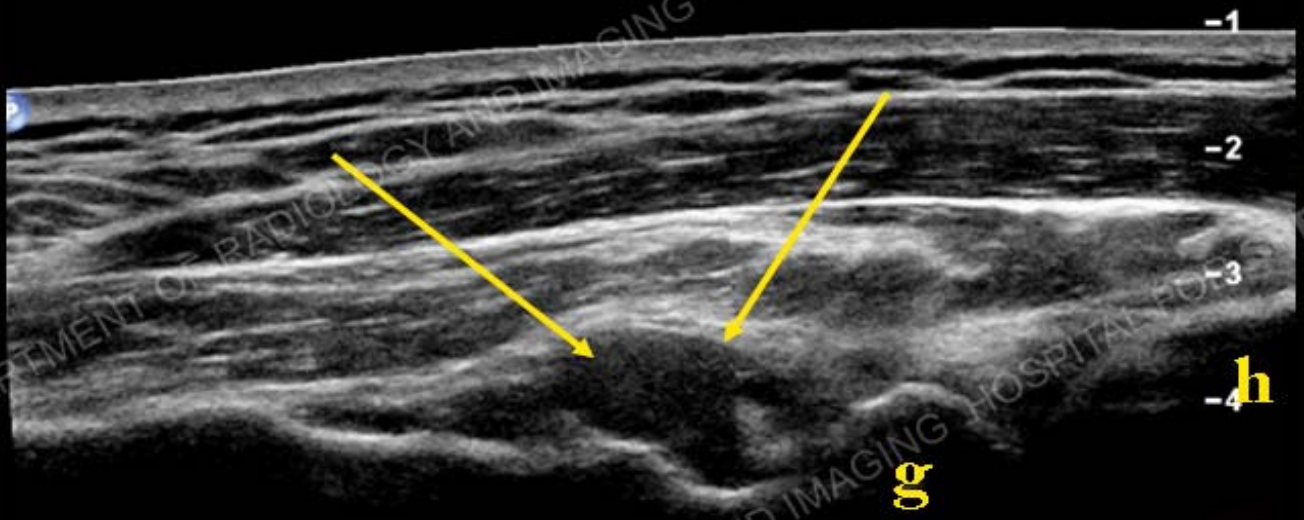
Axial (a) and coronal (b) MRI imaging demonstrates fatty infiltration of the infraspinatus muscle (arrows) consistent with denervation.



Sagittal MRI demonstrating the infraspinatus muscle (arrows) and normal appearance of the teres minor (tm), supraspinatus (sup), and subscapularis (sub) musculature.

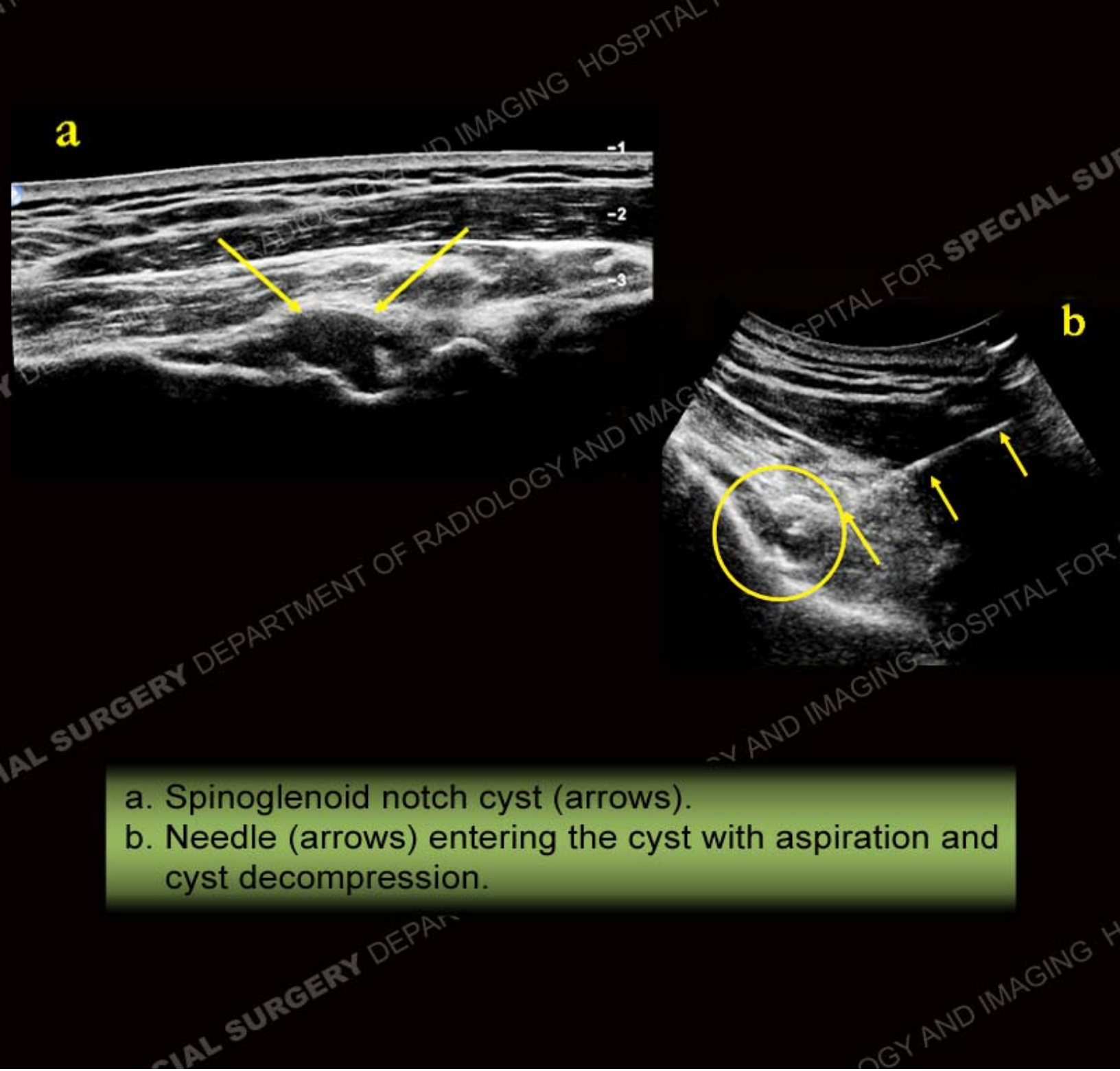


Ultrasound images in the long (a) and short (b) axis demonstrating echogenic fatty replacement of the infraspinatus muscle (arrows) with normal appearance of the deltoid (d) and teres minor (tm) muscles.



Long axis

Ultrasound imaging demonstrating a cyst (arrows) within the spinoglenoid notch. h- humerus, g- glenoid.



a. Spinoglenoid notch cyst (arrows).
b. Needle (arrows) entering the cyst with aspiration and cyst decompression.

Diagnosis:

- Spinoglenoid notch cyst causing denervation atrophy and fatty replacement of the infraspinatus muscle

Discussion

- Spinoglenoid notch cysts result in denervation of the infraspinatus muscle due to compression of the suprascapular nerve within the spinoglenoid notch

- These cysts are virtually always associated with tears of the glenoid labrum

Discussion

- Cysts within the suprascapular notch will result in denervation of both the supraspinatus and infraspinatus muscles

- Ultrasound may confirm the diagnosis of muscle atrophy and a spinoglenoid notch cyst and allow minimally invasive treatment, although these cysts are commonly recurrent without labral repair