

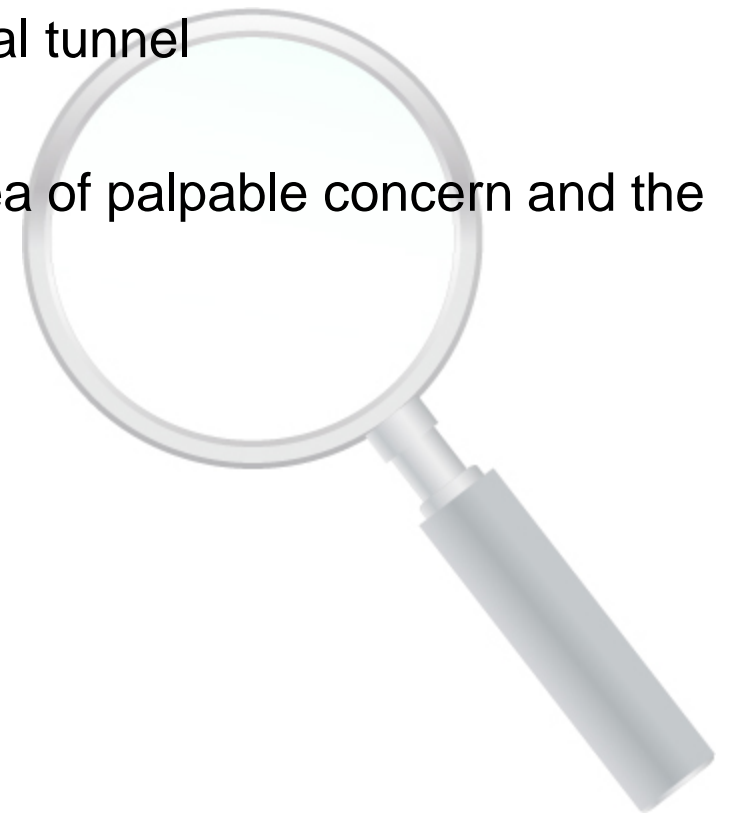
Clinical History

37 year old female with history of anterior cruciate ligament (ACL) tear in 2003 with surgical reconstruction followed by re-tear in 2005 with repeat reconstruction

The patient now presents with painful swelling over the proximal anterior tibia medially

Physical examination reveals an area of palpable fullness over the anteromedial tibia at the expected site of the tibial tunnel

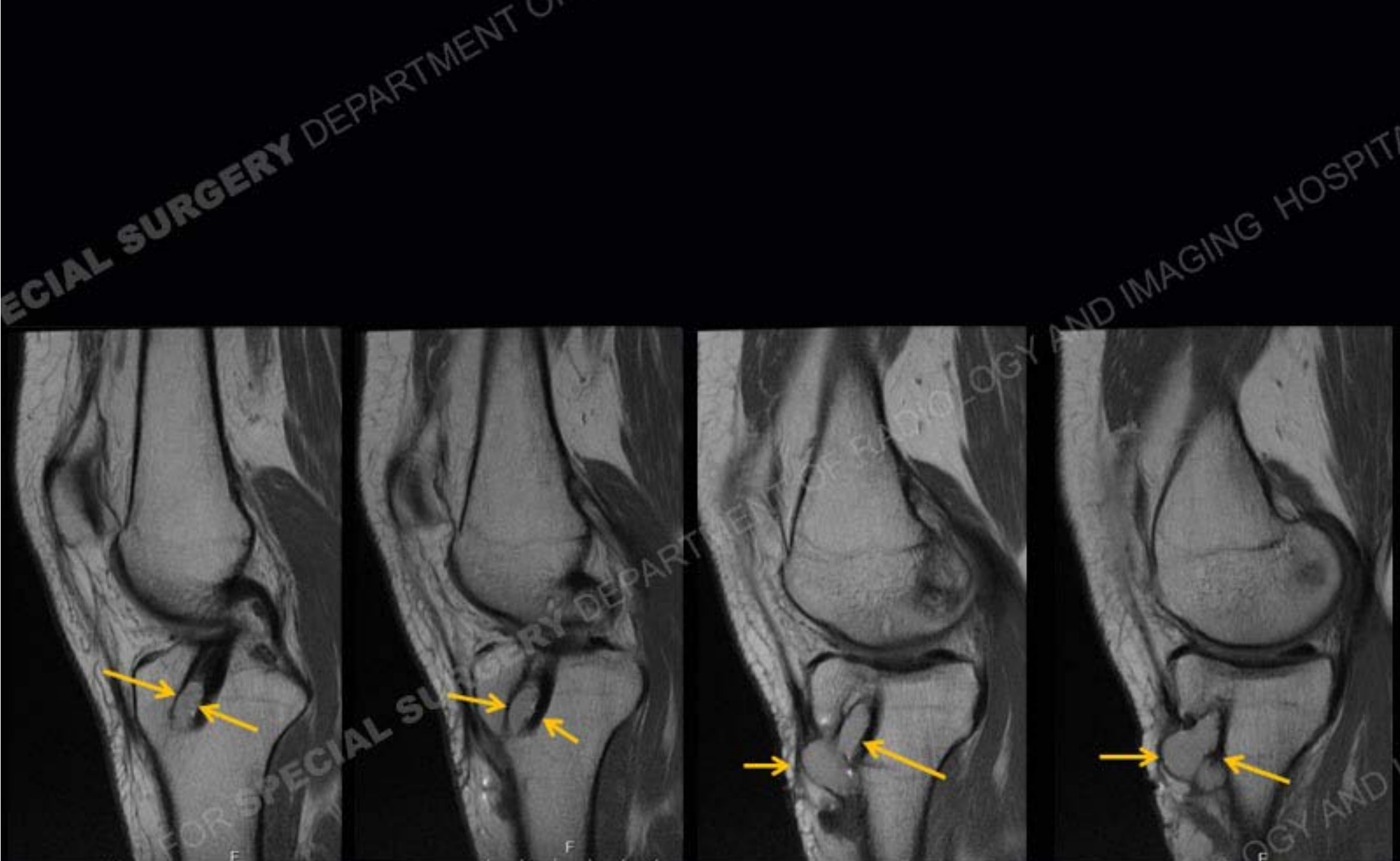
MRI evaluation was performed to assess the area of palpable concern and the integrity of the ACL reconstruction



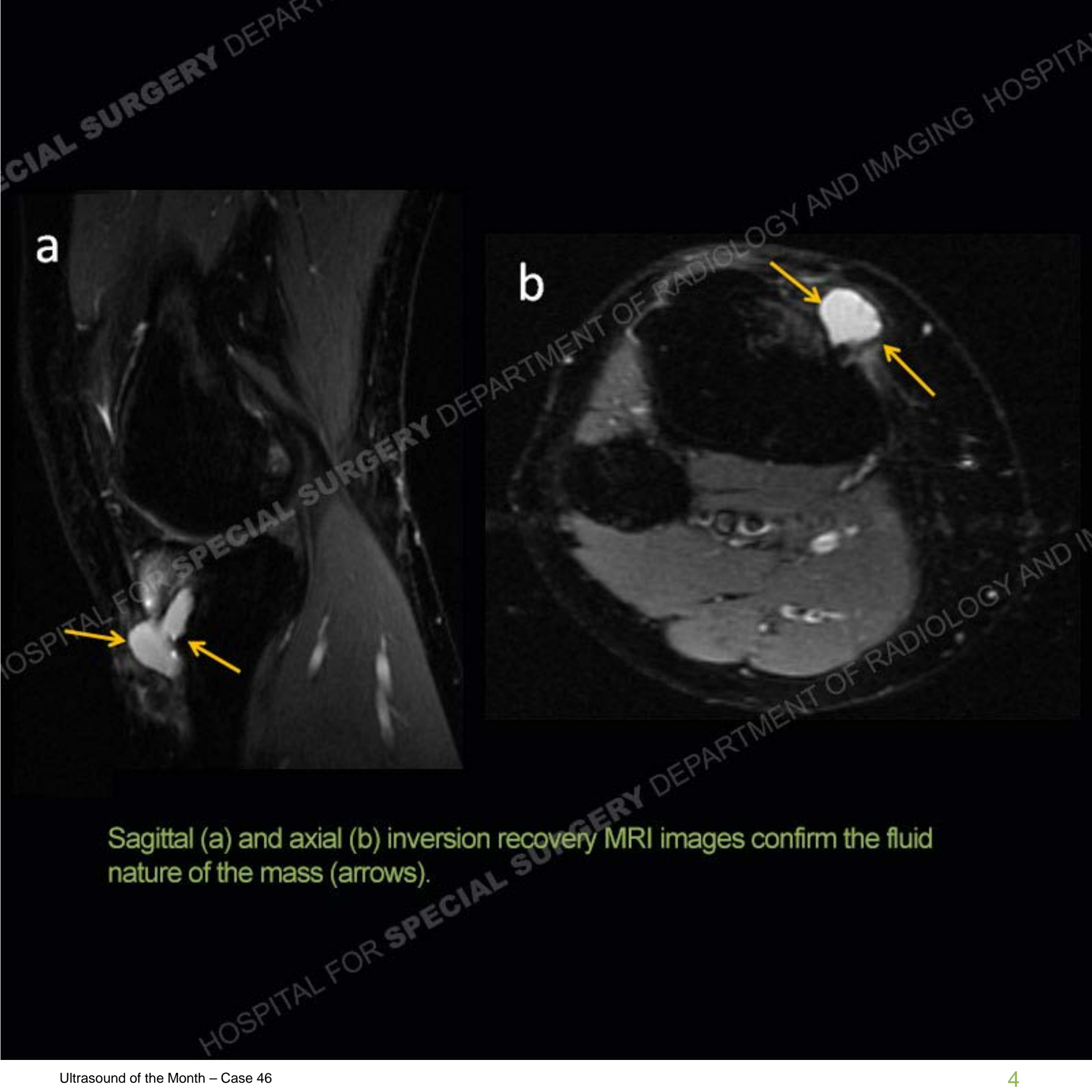


MRI evaluation demonstrated an intact ACL reconstruction without tear (arrows).

Sagittal proton density MRI



Serial MRI images in the sagittal plane also demonstrated a ganglion extending from the tibial tunnel into the anteromedial soft tissues (arrows) correlating with the physical examination findings of a palpable mass.



a

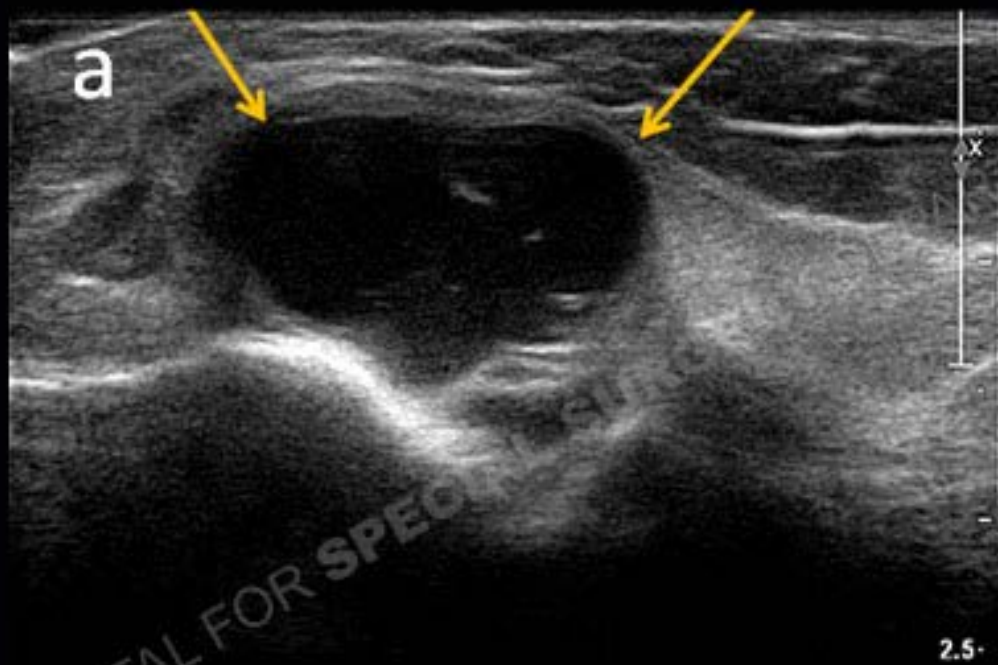
b

Sagittal (a) and axial (b) inversion recovery MRI images confirm the fluid nature of the mass (arrows).

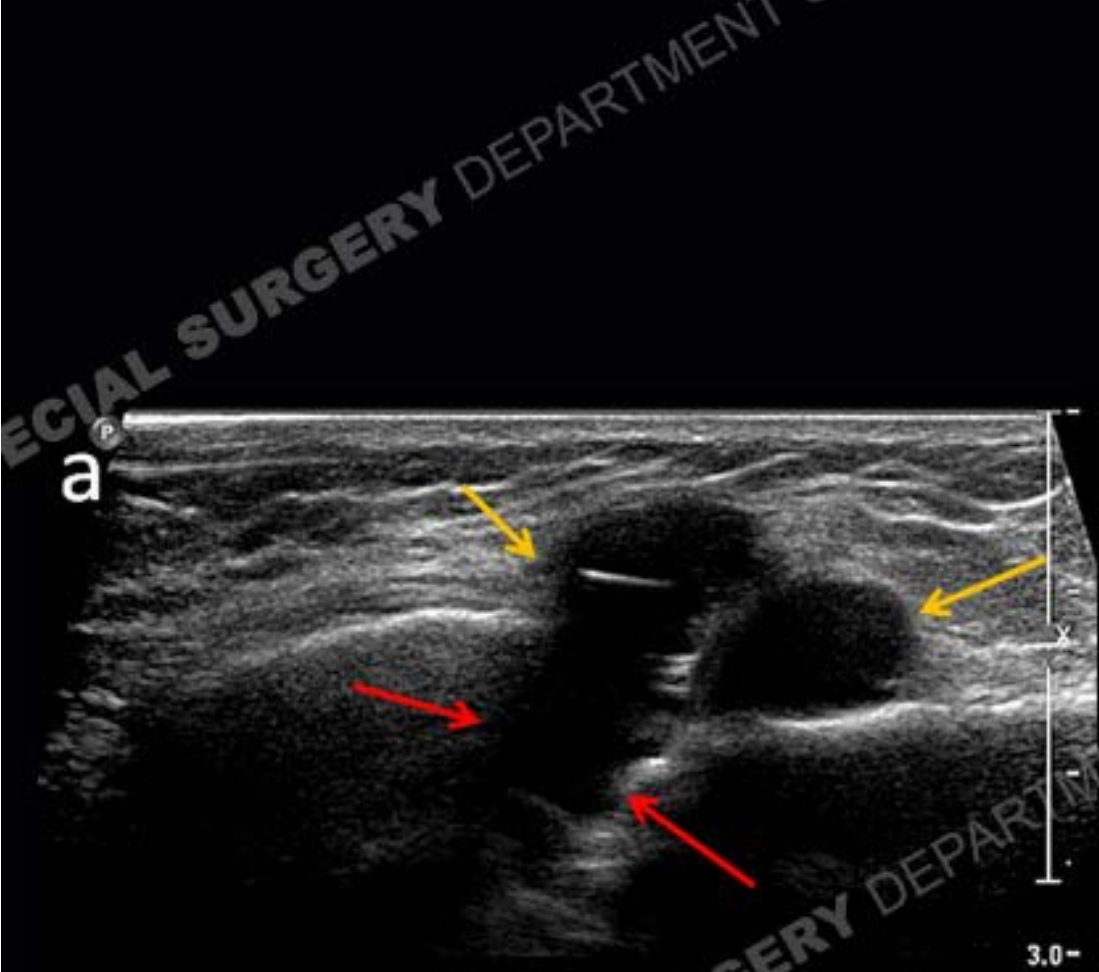
Physical Examination

After reviewing the MRI findings, the patient was sent for sonographic evaluation and possible aspiration of the ganglion at the tibial tunnel.

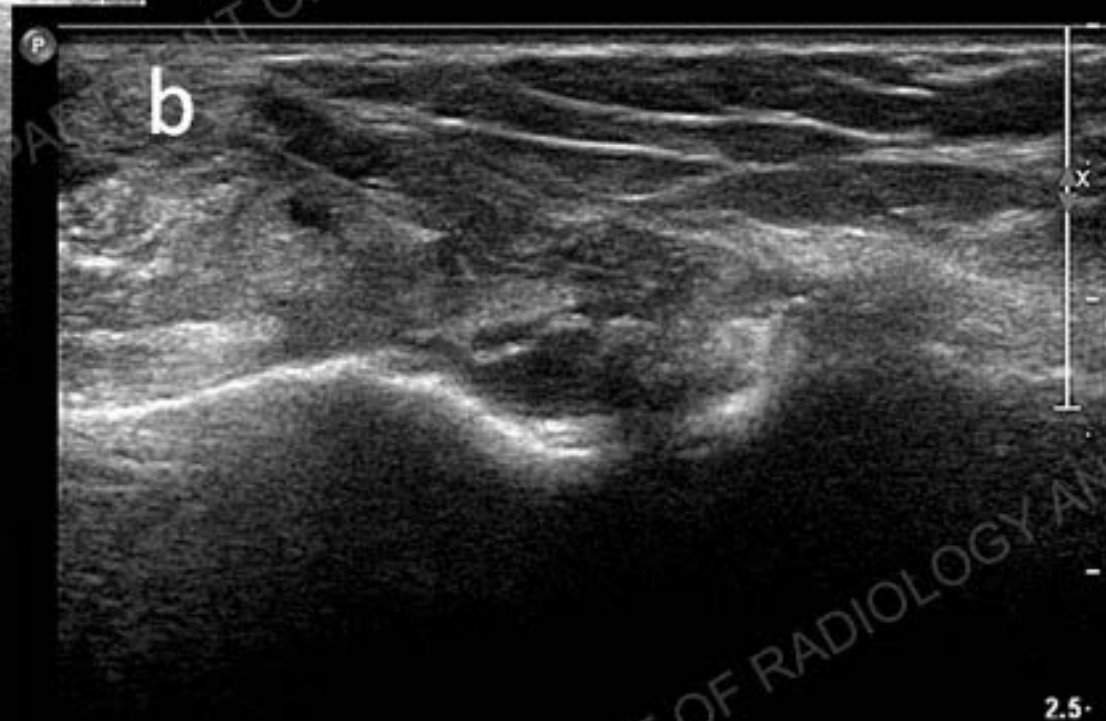
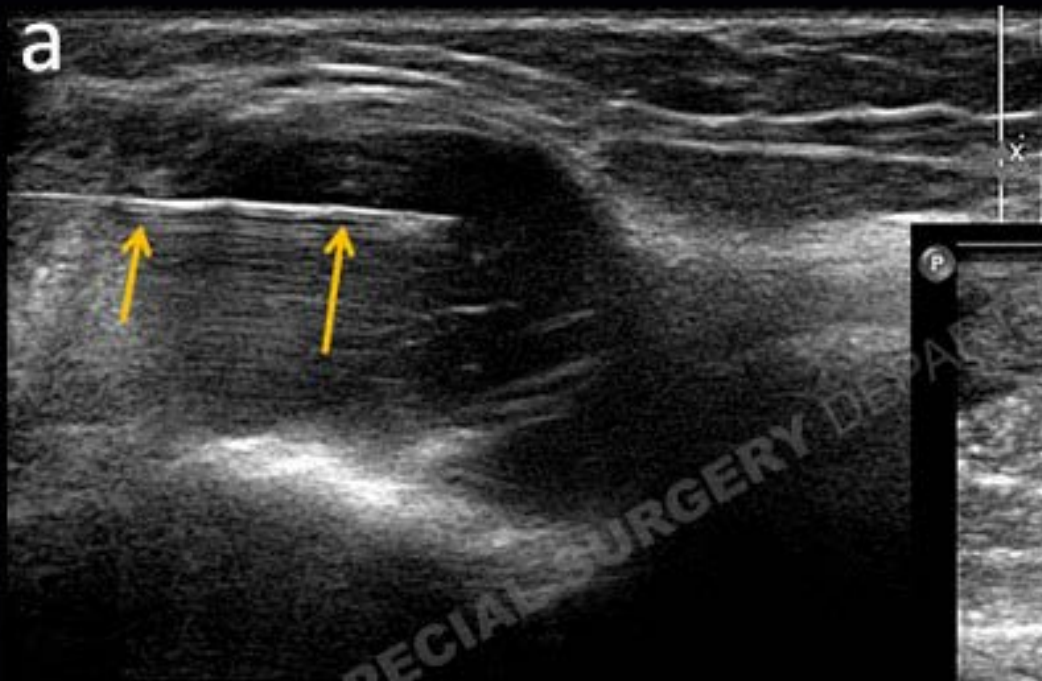




Transverse ultrasound image (a) demonstrates an anechoic lesion anteromedially matching the lesion noted on axial MRI (b). The sonographic appearance is consistent with a fluid-filled ganglion cyst.



Long axis ultrasound image (a) demonstrates the ganglion (yellow arrows) extending into the tibial tunnel (red arrows). This correlates with the sagittal MRI image (b).



Under direct sonographic visualization, a 16-gauge needle (arrows) was advanced into the ganglion (a). The ganglion decompressed entirely, yielding thick clear gelatinous material. Post-aspiration image (b) demonstrates no residual fluid.

Diagnosis: Ganglion cyst

Ganglion cyst extending from the tibial tunnel into the adjacent soft tissues in the setting of prior ACL reconstruction



Discussion

MRI is the examination of choice in evaluating the integrity of the ACL in the setting of prior reconstruction and easily demonstrates the presence of ganglion cysts

Ultrasound may be used to confirm the diagnosis and more importantly to guide the safe and complete aspiration of these ganglion cysts

Ganglion cyst fluid is often extremely thick, requiring the use of larger (16-18 gauge) needles for complete aspiration

As clinically indicated, the fluid may be sent for laboratory analysis to exclude the possibility of infection

