

A Rare Persistence of Neurovascular Fluid Following Iliopsoas Bursa Steroid Injection

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Background

Iliopsoas bursa injections are frequently performed for diagnostic and therapeutic management of hip related pain. We present a medically challenging case involving prolonged fluid retention with femoral nerve compression symptoms following an image-guided iliopsoas bursa injection

Case Report

A 77yo patient with a hx left hip pain underwent a fluoroscopy-guided left iliopsoas bursa injection using 1mL 40mg/mL Kenalog and 1mL 0.25% Bupivacaine, along with 1mL of 240mg iodine/mL Omnipaque. Within days, she reported worsening left groin and thigh pain, as well as progressive weakness of the ipsilateral leg, resulting in intermittent left foot drop. MRI of the left hip, 8 weeks later revealed a significant focal fluid collection in the fascial plane between the femoral neurovascular bundle and the quadriceps musculature at and distal to the level of the lesser trochanter. This was favored to represent sequelae of the recent injection.

Further workup, including EMG/NCS, ruled out femoral neuropathy or lumbar plexus involvement, while brain MRI excluded central lesions. Remarkably, follow-up MRI neurography demonstrated persistent fluid accumulation even 10 weeks post-injection, without evidence of abscess or hematoma. Given the patient's non-progressive clinical course, surgical exploration was deferred. Eventually, her symptoms gradually improved with conservative management including physical therapy.

While generally safe, complications such as transient femoral neuropathy have been reported, though persistent neurovascular fluid collections are exceedingly rare.



Fig 1. AP Fluoroscopic procedure on 5/23/25

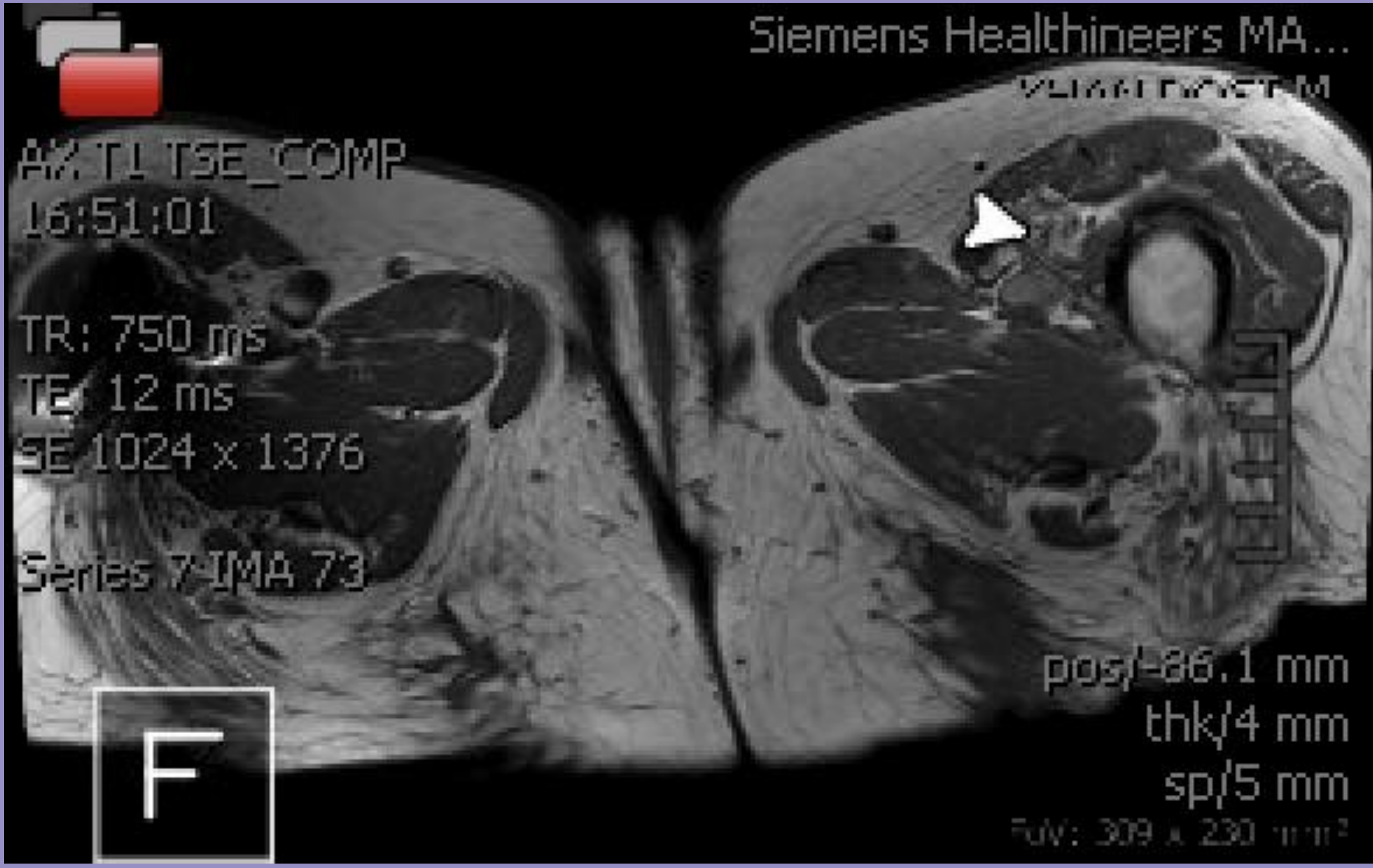


Fig 2. Axial T1 MRI Neurography Pelvis w/wo contrast 7/22/25 showing the femoral nerve

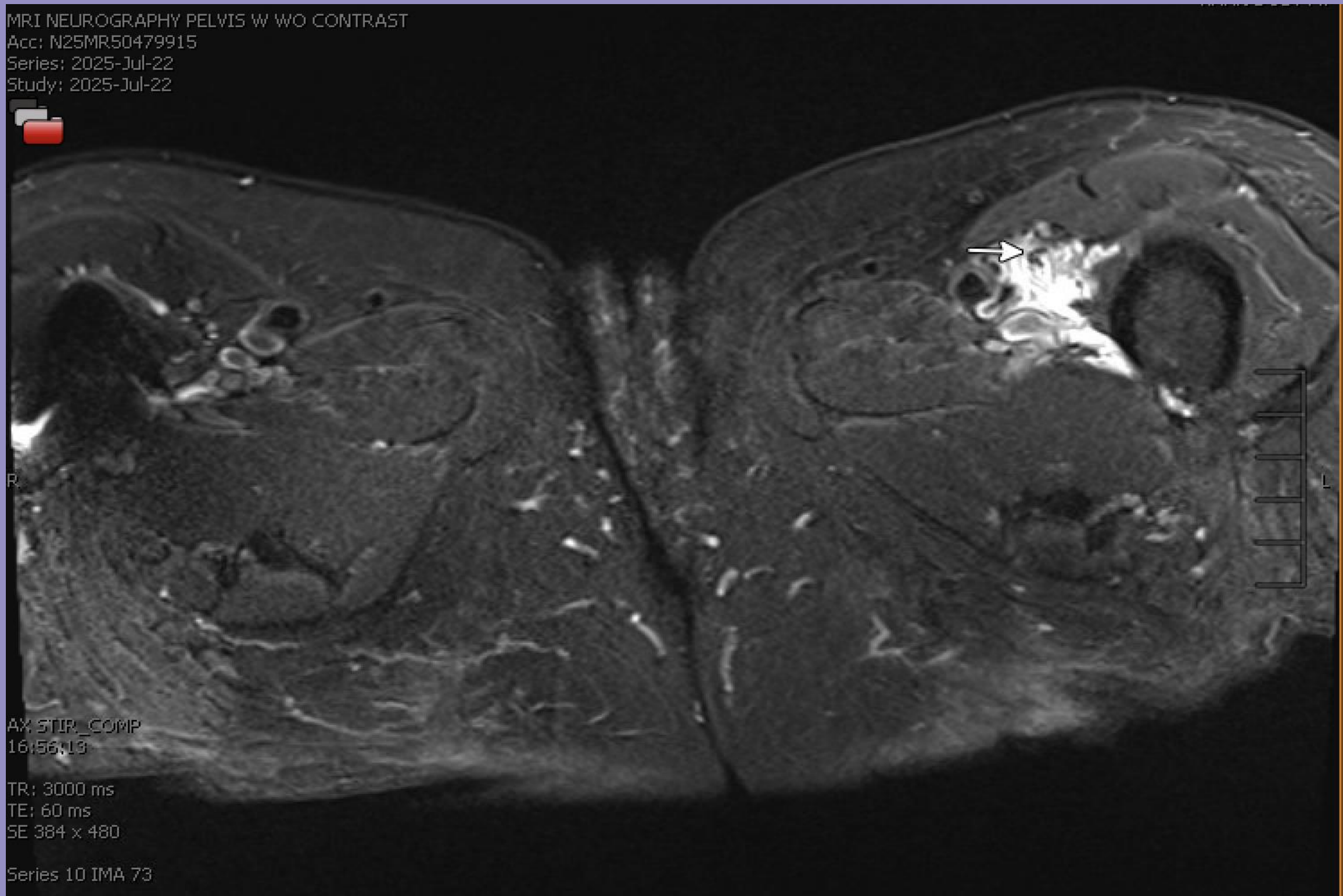


Fig 3. Axial STIR MRI Neurography Pelvis w/wo contrast 7/22/25 showing fluid signal surrounding the femoral nerve

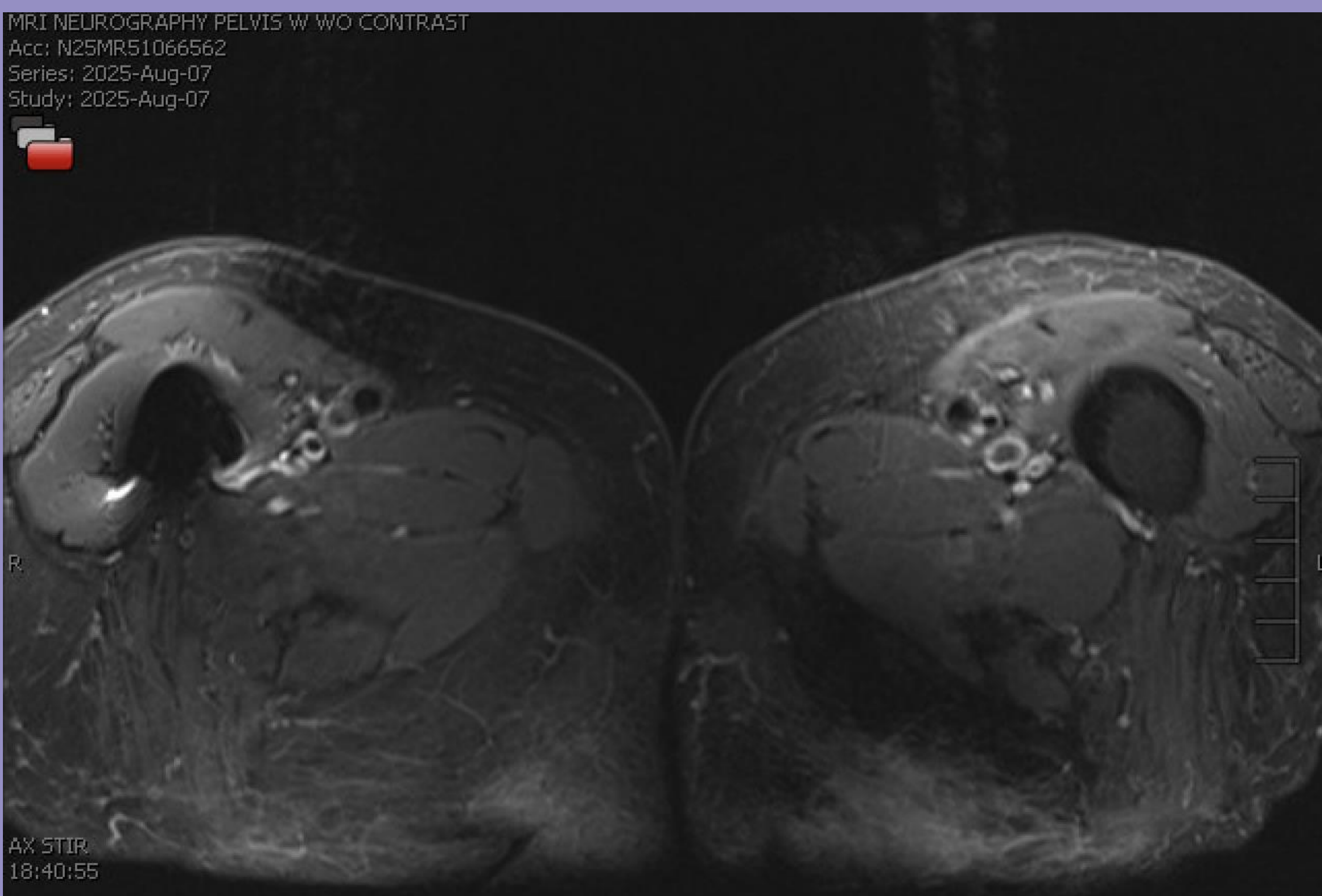


Fig 4. Axial STIR MRI Neurography Pelvis w/wo contrast on 8/7/25 showing interval resolution of fluid signal surrounding femoral nerve

Discussion

While transient femoral neuropathy is a known but uncommon complication of iliopsoas bursa injections, persistent fluid retention within the neurovascular plane is rarely documented. This case highlights the potential for delayed resorption of injectate, which may mimic serious pathology and lead to unnecessary interventions. The femoral nerve's close anatomical relationship to the iliopsoas bursa places it at risk of compression by local injectate spread. Clinicians should remain vigilant for prolonged or worsening symptoms post-injection and consider advanced imaging when clinical suspicion persists.

Conclusion

Persistent neurovascular fluid following iliopsoas bursa injection is rare but clinically significant. Awareness of this complication can aid in avoiding unnecessary invasive procedures and guide appropriate patient counseling and follow-up.

References

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