

## Case Diagnosis

Synovial hypertrophy of the right hip

## Case Description

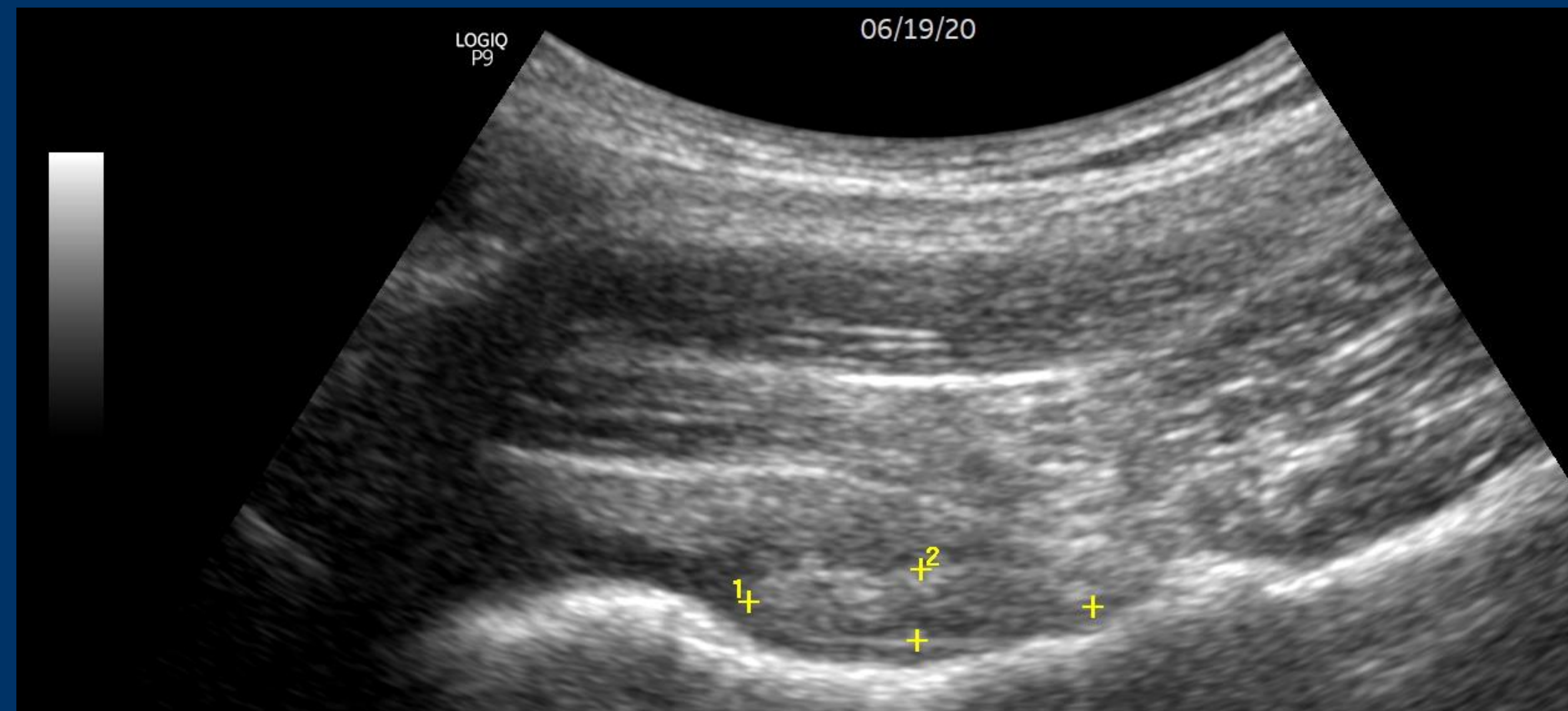
Patient: 72-year-old male with 3 months of gradual onset, activity-provoked right groin pain

Exam findings: Pain reproduced on hip range of motion, provocative maneuvers, and anterior hip joint palpation

### Imaging:

- X-ray Hip and Pelvis: Minimal degenerative changes
- MRI Pelvis: Intraarticular effusion of the right hip with a possible intraarticular loose body, measuring 6 mm in diameter, seen on only a single slice in the coronal plane
- Bedside Ultrasound: Synovial thickening and a 2.9 x 0.6 cm elliptical, slightly compressible intra-articular mass of intermediate echogenicity without internal vascular flow, consistent with synovial hypertrophy

Laboratory findings: Serum markers were negative for inflammatory arthropathy

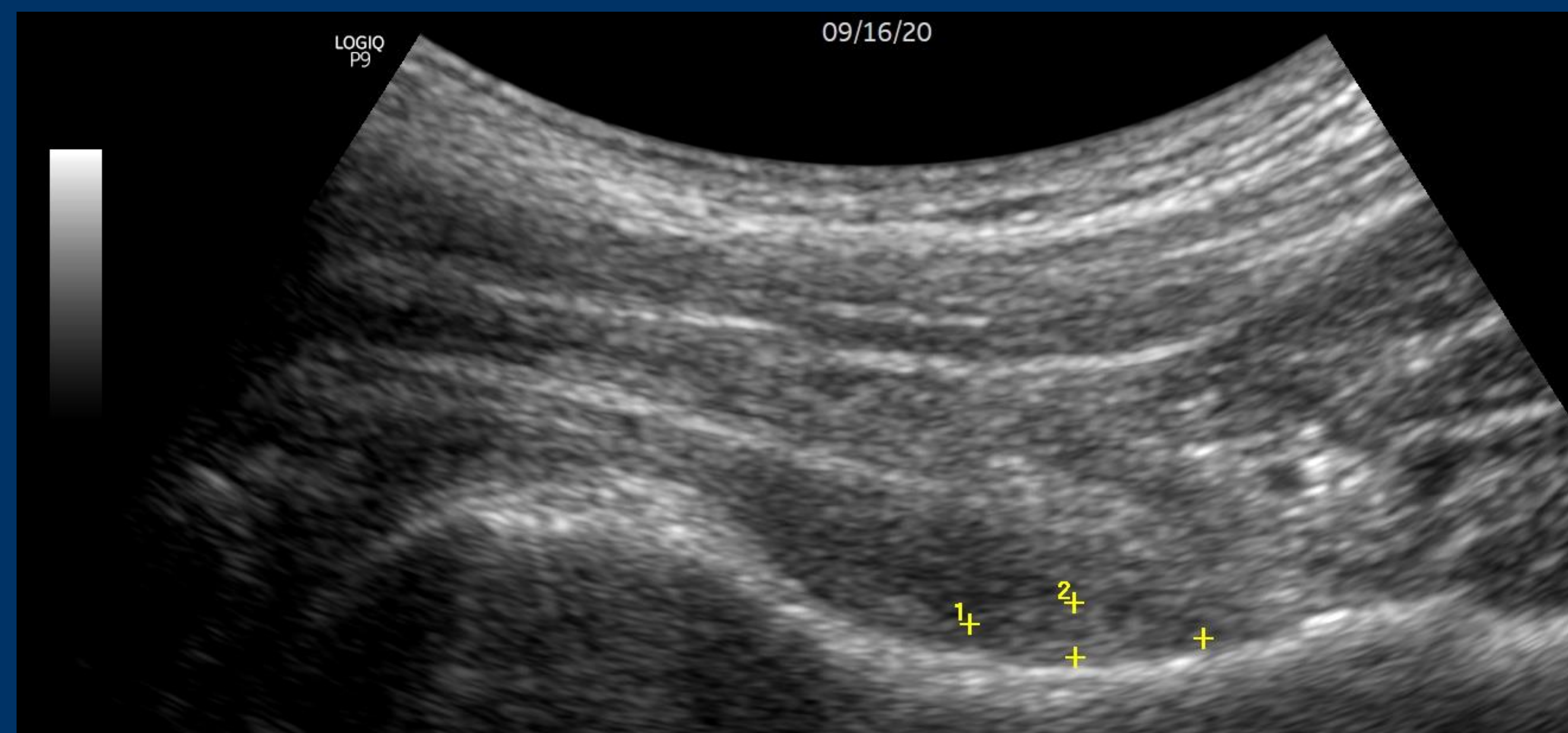


Bedside ultrasound longitudinal to the femoral neck with curvilinear transducer on initial ultrasound evaluation

## Case Description (continued)

Treatment: Ultrasound guided intra-articular injection of methylprednisolone and physical therapy

Response: Symptoms improved for 3 months, repeat ultrasound at his follow-up appointment demonstrated the mass had decreased in size to 1.6 x 0.4 cm. Hip injection with methylprednisolone and lidocaine was repeated with similar results.



Bedside ultrasound longitudinal to the femoral neck with curvilinear transducer on repeat ultrasound evaluation

## Discussion

Diagnostic ultrasound can be useful in the evaluation and characterization of intra-articular masses in select patients

This case represents an instance when we were able to better visualize a mass seen on MRI at the point of care in high resolution using ultrasound

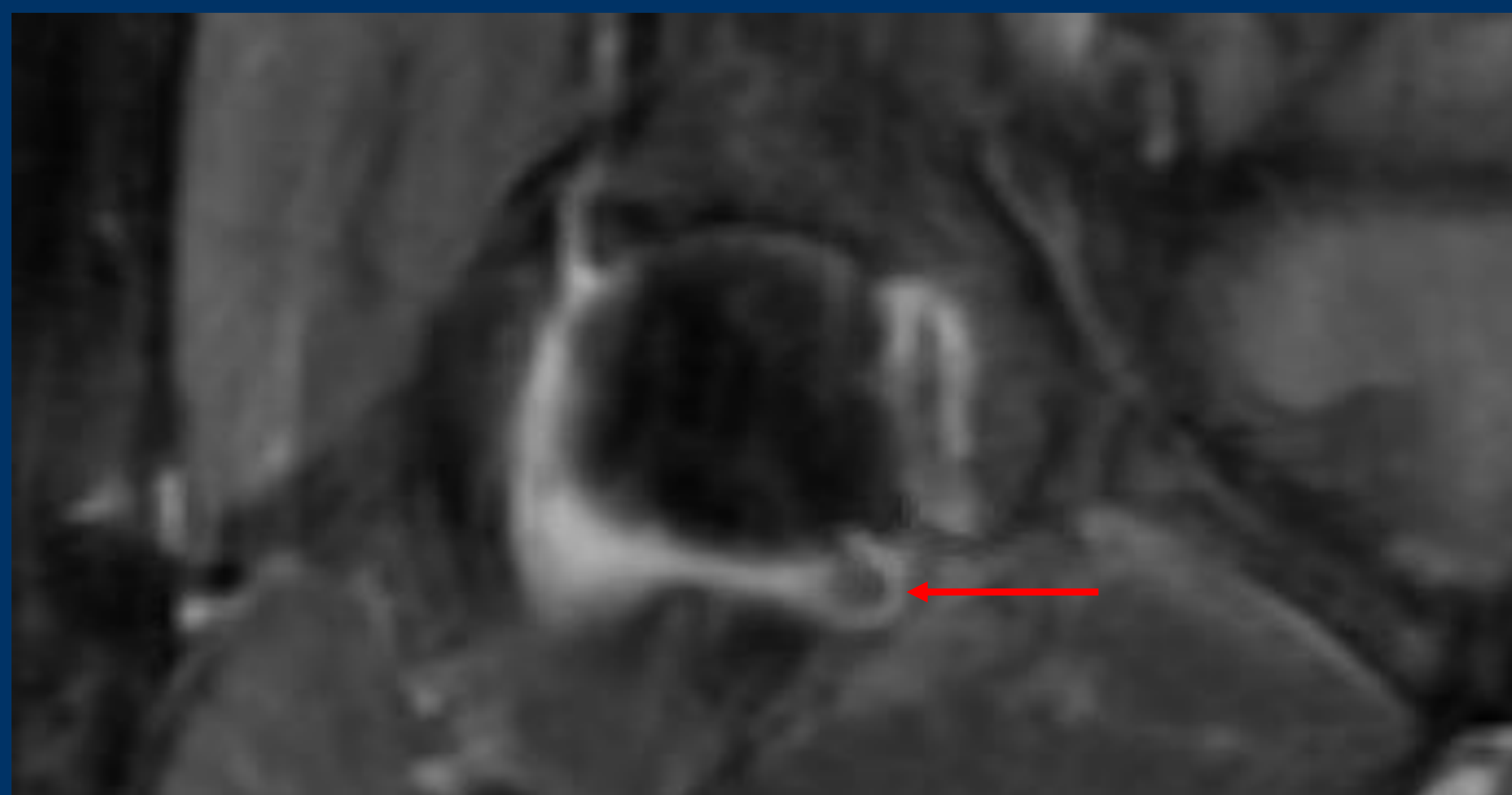
The reduction in mass size with intra-articular steroid injection is consistent with a diagnosis of synovial hypertrophy. With negative inflammatory markers, the underlying cause in this patient is unclear. Differential diagnosis includes pigmented villonodular synovitis (PVNS), siderotic synovitis, and synovial osteochondromatosis. All of these would typically cause more diffuse synovial hypertrophy.

## Conclusion

We present a case of intra-articular soft tissue mass of the hip, consistent with synovial hypertrophy. Although diagnostic ultrasound is limited in evaluation of deeper structures or with larger body habitus, it may be utilized to evaluate intra-articular masses and direct treatment accordingly.

## References

Turan A, Çeltikçi P, Tufan A, Öztürk M. Basic radiological assessment of synovial diseases: a pictorial essay. Eur J Rheumatol. 2017 Jun; 4(2): 166-174.



T2 fat suppressed imaging in the coronal plane, demonstrating intra-articular mass (red arrow)