

Atypical Neuropathic Presentation of Hip Labral Tear Managed Through Spinal Cord Stimulator



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Background

- Hip labral tears are prevalent in 22% to 55% of individuals experiencing hip pain due to factors such as repetitive motions, overuse, traumatic injuries, joint deformities, and degenerative conditions [1].
- Pain from hip disorders, including labral tears, is typically classified as nociceptive [2,3].
- Efficacy of non-steroidal anti-inflammatory drugs (NSAIDs) for treating this pain might be inconsistent [4], due to recent research suggesting neuropathic pain's role in joint discomfort, including the hip [2,3].
- We present a case study illustrating the successful management of neuropathic pain induced by a hip labral tear through the implementation of a spinal cord stimulator.

Case

- 51-year-old female presented with severe and persistent chronic lower back pain accompanied by anteriorly and laterally radiating numbness/pain down the right leg and right anterior groin pain, which extended laterally to the buttock following a fall down the stairs.
- MRI of the right hip revealed an anterior labral tear and iliofemoral ligament tear, while MRI of the Lumbar Spine showed multilevel spondylotic changes from L2 down to S1 without any signs of nerve impingement.
- Seen by orthopedic surgery but due to the neuropathic presentation was concern that labral tear might not be the cause despite groin pain
- Physical Exam: TTP of Greater trochanter, gluteus max, + FABER/FADIR, + log roll
- Interventions: physical therapy, oral analgesics, transforaminal and paramedian epidural spinal injections, sacroiliac injections, right intra-articular hip injections, and greater trochanteric injections, with no significant relief

Imaging

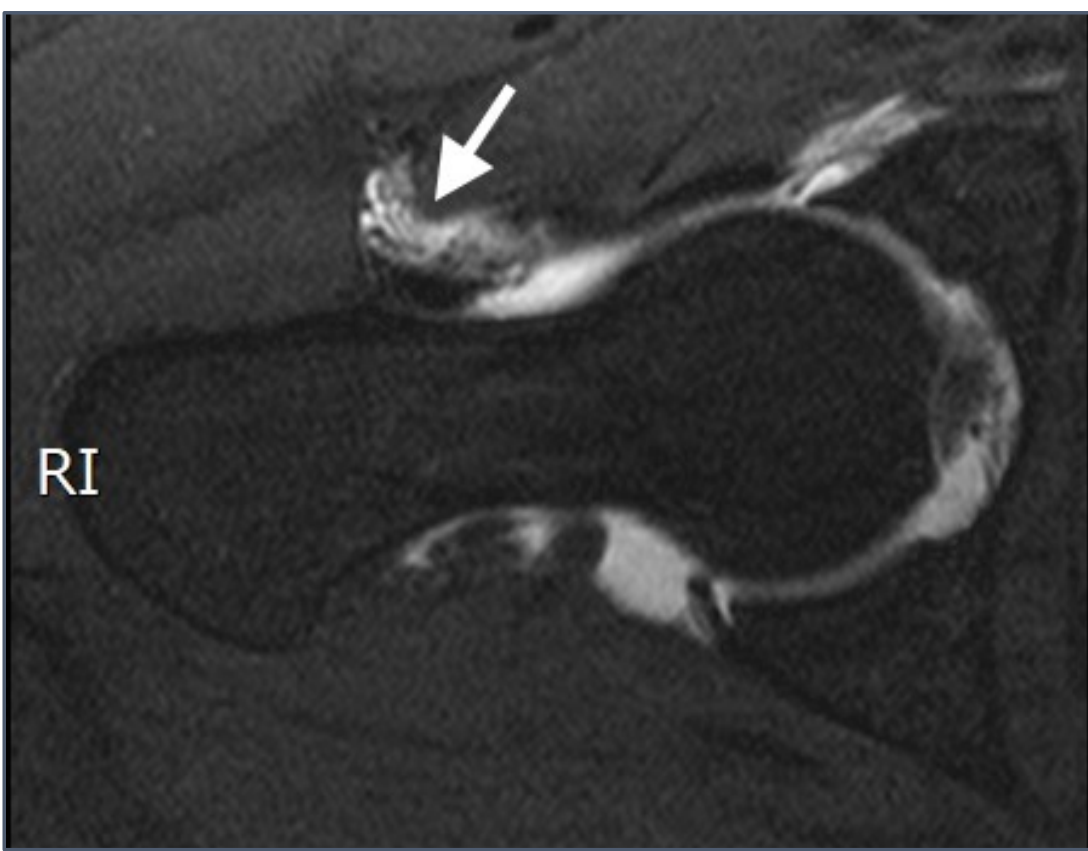


Figure 1. Axial T1 image demonstrates an iliofemoral ligament tear (large white arrow).

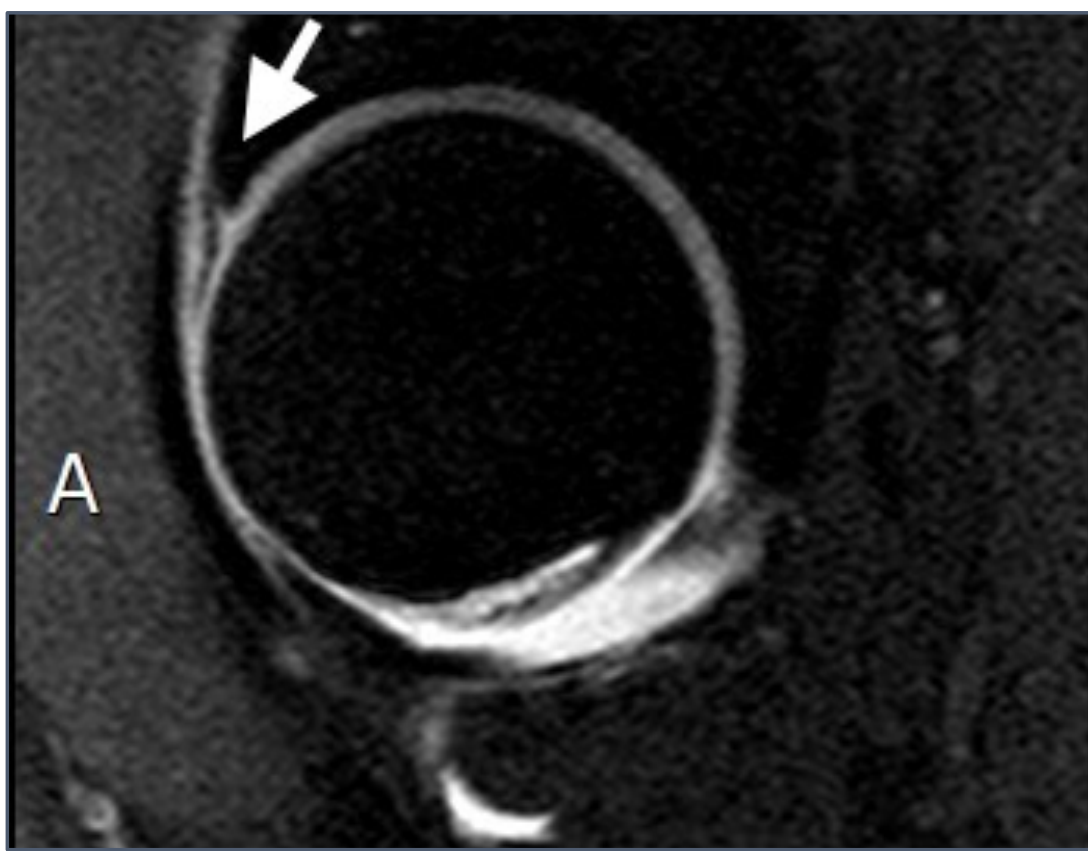


Figure 2. Sagittal T1 demonstrating anterior labral tear (large white arrow).



Figure 3. Sagittal T2 image. Mild multilevel degenerative changes. No evidence of high-grade spinal canal or neural foraminal stenosis or nerve root impingement.

Intervention



Figure 4. An 8 contact stimulator lead was placed to the level of T8 vertebrae. The lead was slightly left of center. Stimulation testing was performed. The patient's pain distribution was captured with stimulation.

Discussion

- Labral tears often lead to anterior hip and groin pain [1]. Diagnosing labral tears can be challenging, with many patients going undiagnosed for 2 years on average.
- Managing hip labral tears involves a spectrum of options, including physical therapy, intra-articular steroid injections, and resorting to arthroscopic hip labral repair when conservative approaches prove ineffective. Additional interventions encompass femoral nerve blocks and ablations, designed for patients contending with persistent hip pain.
- Spinal cord stimulation has shown to be a successful intervention for neuropathic pain that is resistant to both pharmacotherapy and conventional interventional approaches aimed at pain modulation.
- Spinal Cord stimulators transmit pulsed electrical energy through leads implanted in the epidural space
- Neuromodulation is based on the gate control theory of pain, in which pain impulses carried by C Fibers and A –delta fibers could be interrupted by stimulating A-beta fibers [5]

Conclusion

Hip labral tears, prevalent in a substantial portion of hip pain cases, stem from various causes. While nociceptive pain is typically associated with these tears, recent research indicates a potential role of neuropathic pain in joint discomfort. This case study involving a patient with chronic radiculopathy and an anterior labral tear highlights the successful use of a spinal cord stimulator for comprehensive pain relief. This underscores the complexity of pain management and the importance of tailored strategies.

References

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