

## **Conference**

Submitted in 2026 for the 2026 International Pain and Spine Intervention Society Annual Meeting

## **Title**

A Novel Fluoroscopically Guided Percutaneous Technique for Cervical Synovial Cyst Management: A Case Report

## **Authors**

Lisa K. D'Souza, Azeem Ahmad, Sama Joshi, Jordan Wickstrom, Akhil Chhatre

## **Case Diagnosis**

Left C7–T1 medial facet cervical synovial cyst with intracanalicular extrusion causing radiculopathy and myelopathy.

## **Case Description**

A 77-year-old female presented with 6 months of progressive left upper-extremity pain, numbness, and weakness. MRI revealed a left medial C7–T1 facet intracanalicular synovial cyst causing thecal sac compression, with associated anterolisthesis at C7–T1. Following multidisciplinary discussion with neurosurgery, percutaneous management was attempted. Under multiplanar fluoroscopic guidance, a 22-gauge spinal needle was advanced into the left C7–T1 facet joint, and an indirect fenestration technique was used to access the posterior cyst wall via the joint capsule. Contrast injection followed by manual pressurization resulted in cyst rupture, confirmed by contrast extrusion into the spinal canal. At one-week follow-up, the patient reported mild symptomatic improvement, including increased grip and elbow extension strength. Given concern for persistent segmental instability, she subsequently underwent surgical decompression and instrumented fusion.

## **Background Information Summary**

Cervical synovial cysts (CSCs) arise from cystic extrusion of the facet joint synovium, most commonly in the context of degenerative changes, hypermobility, or segmental instability. There is no current consensus regarding optimal management of CSCs; treatment options include surgical intervention and percutaneous cyst aspiration.<sup>1</sup> Surgical management may be suboptimal for patients with elevated perioperative risk or those with mild symptoms.<sup>2</sup> While percutaneous rupture is well described for lumbar synovial cysts, published literature on percutaneous management of CSCs is limited.<sup>3</sup> This represents a novel case of fluoroscopically guided percutaneous rupture of a CSC.

## **Discussion/Conclusion**

CSCs associated with neurologic deficits are typically managed surgically, with fusion considered based on cervical spine stability. Although lumbar data suggest lower recurrence with surgery than percutaneous techniques, nonsurgical management may

benefit select patients. This first reported case of fluoroscopically guided CSC rupture demonstrates technical feasibility and supports a potential role for percutaneous intervention as part of multidisciplinary care. Further research is needed to define patient selection criteria and long-term outcomes.