

Intraspinal synovial cyst resolved by fluoroscopic guided epidural aspiration : a CASE REPORT

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Introduction

Although degenerative zygapophyseal joint synovial cysts are well documented as a potential cause of lumbosacral radiculopathy, only few of intraspinal cysts from spondylolysis are previously reported. To our knowledge, this is the rare reported case of a cyst associated with spondylolysis and radiculopathy, also is the first to describe clinical and radiologic, electrodiagnostic resolution of the cyst with fluoroscopic guided epidural aspiration.

CASE REPORT

He is a 58-year-old male truck driver with a history of bilateral pubic and left acetabulum, ilium fracture due to trauma. He was almost recovered by surgery and rehabilitation. One day, he began to complain about radiating pain on left lower extremity. At that time, LS-spine MRI study showed a cystic lesion in the ventral aspect of left L5 compressing the nerve root with spondylolysis<Figure1>. Acute left L5 radiculopathy was observed on the electrodiagnostic study. We asked to orthopedic surgeons for the need for surgery, but they replied not need to surgery. We attempted fluoroscopic guided epidural aspiration twice<Figure2>, and aspirated about 2 cc of bloody and serous liquid at each time. The patient reported that radiating pain improved after the procedure. Follow-up LS-spine MRI showed a decrease in cyst size<Figure3>. Without further intervention, the patient's symptoms gradually improved over time. Finally, radiating pain of left lower extremity completely disappeared, and only intermittent cramp remained. Follow up electrodiagnostic study showed that all abnormal spontaneous activity was completely disappeared<Table1>. In Conclusion, after fluoroscopic guided epidural aspiration, the patient's symptoms, radiologic findings and electrodiagnostic findings were all improved.

Discussion

Some treatment options for cysts related to spondylolysis may be inferred from the limited information available for zygapophyseal cysts. Retrospective studies indicate high success rates (up to 91%) for improvement of pain after surgical excision of zygapophyseal cysts. The evidence on percutaneous treatment is limited to small retrospective series. Results of these studies indicate that various combinations of fluoroscopically guided transforaminal epidural steroid injection, zygapophyseal joint injection, and attempted cyst aspiration or rupture may be associated with pain relief in up to 70% of patients observed for up to 2 years after treatment. However, it still unclear what treatment is best.

Conclusion

A synovial cyst related to spondylolysis is a rare cause of lumbar radiculopathy. There is limited information available on the pathogenesis, natural history, and most appropriate treatment for these cysts. To our knowledge, this case demonstrates as a first that clinical and radiologic resolution of such a cyst is possible with non-surgical intervention in the patient with radiculopathy.

Table 1. Electromyography at 2017.10.17 and Electromyography at 2018.5.31

Side	Muscle	Ins	Fibs	PSW	Amp	Dur	Poly	Recr
Left	Vastus Medialis	N	N	N	N	N	0	Complete
Left	Tibialis Anterior	N	2+	2+	N	N	0	Reduced
Left	Gastrocnemius (medial head)	N	N	N	N	N	0	Complete
Left	Tensor Fascia Lata	N	3+	3+	N	N	0	Single
Left	Lumbar paraspinal muscle	N	2+	2+			0	

Ins, insertional activity; Fibs, fibrillation potential; PSW, positive sharp waves; Amp, amplitude; Dur, duration; Poly, polyphasic activity; Recr, recruitment; N, normal

Side	Muscle	Ins	Fibs	PSW	Amp	Dur	Poly	Recr
Left	Tibialis Anterior	N	N	N	N	N	0	Complete
Left	Tensor Fascia Lata	N	N	N	N	N	0	Complete

Ins, insertional activity; Fibs, fibrillation potential; PSW, positive sharp waves; Amp, amplitude; Dur, duration; Poly, polyphasic activity; Recr, recruitment; N, normal



fig 1. Cystic lesion at ventral aspect of left spondylolysis, R/O synovial cyst, with severe central canal stenosis and suspicious left L5 nerve root compression on LS-spine MRI at 2017.10.23

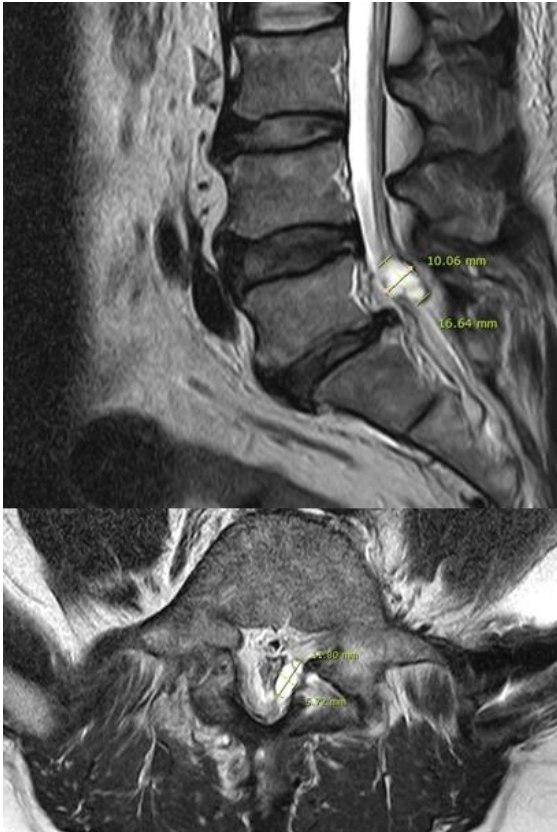


fig 3. Slightly decrease extent of presumed synovial cyst at ventral aspect of left spondylolysis, with slightly improving state of severe central canal stenosis and suspicious left L5 nerve root compression on LS-spine MRI at 2017.11.28