Incidence of pseudomeningocele is estimated to be 0.07-2% following lumbar laminectomy or discectomy. Formation occurs following a dural tear with concomitant arachnoid breach allowing CSF to accumulate; connective tissue reaction leads to capsule formation. There have been case reports of pseudomeningocele following lumbar puncture, myelography and intrathecal catheter placement as well as spontaneous occurrence related to spondylolisthesis. As in this case, nerve roots may herniate thorough the dural opening into the pseudo-cyst causing radiculopathy. The cyst itself can also cause spinal canal and nerve root compression.

Conclusion

Although pseudomeningocele is an uncommon occurrence after lumbar spine surgery it should be considered in the differential diagnosis of recurrent low back and radicular pain following surgery, especially in the presence of orthostatic headache. Caution should be taken during interventional procedures near the area of any suspected communication with the intrathecal space.

References


Case Report

HPI

We present a case of what appeared to be facet joint cyst on MRI, however, post-laminectomy pseudomeningocele could not be excluded on the basis of imaging alone.

A 49 year old female with PMH significant for HTN and lumbar laminectomy at L4/L5 five years prior was referred from an orthopedic spine clinic with low back and right leg pain in an L5 distribution. She was offered a L5-S1 fusion but desired to pursue conservative measures initially. MRI was consistent with a cyst versus CSF collection at the right L4-L5 facet joint. The case was discussed with our surgical colleagues and aspiration was planned under fluoroscopic guidance.

After accessing the joint, the aspirate was determined to be CSF on the basis of beta-2-transferrin, as well as the observation of contrast spread from the facet joint into the intrathecal space. This spread confirmed the pseudomeningocele had eroded into the synovium of the facet.

The patient was subsequently taken to the OR with orthopedic as well as neurosurgery teams for re-do lumbar decompression and posterior fusion at L4 and L5 with extensive pseudomeningocele repair. Surgical findings included nerve root herniation into the pseudomeningocele.

Imaging

Post operative pseudomeningocele presenting as a facetogenic cyst

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