Postoperative Meningocele Spurious

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ABSTRACT

Lumbar meningocele spurious is a rare complication after lumbar spine surgeries. This results following a breach in the dural-arachnoid layer and extradural encapsulated cerebrospinal fluid collection. On review of the literature, less than 60 cases have been reported so far. Diagnosis of meningocele spurious is confirmed by magnetic resonance imaging. Herein, the authors have described a case of meningocele spurious after lumbar spine surgery and its management.

Keywords: Accidental durotomy, Complication, Lumbar surgery, Meningocele spurious.


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CASE REPORT

A 45-year-old male admitted to our department with chief complaint of swelling and pain over operative site for last 15 days and radiating pain in the right lower limb for 10 days. One month back, the patient had undergone lumbar spine surgery in another institution where L4 to L5 laminectomy and discectomy was performed. The patient developed backache and swelling over operative site 15 days following the surgery. The patient also experienced a severe radiating pain in the right lower limb. On examination, there was swelling over operative site and this swelling increased on straining and standing (Fig. 1). Magnetic resonance imaging (MRI) of lumbo-sacral spine was performed, which revealed 6 × 4 cm cerebrospinal fluid (CSF) intensity cystic collection at L4 to L5 region. The sac arising from L4 to L5 dura was low-signal intensity on T1W and high-signal intensity on T2W images (Figs 2 and 3). Based on the clinical and radiological findings, diagnosis of meningocele spurious was made.

In view of the symptoms, the patient was taken up for surgery. Intraoperatively, thick grayish white sac was found and it was arising from L4 to L5 dural defect. On opening the sac, a nerve root was entering the cyst through the dural defect. The root was adherent to the defect, adhesiolysis was done, and the root was reduced into the thecal sac after enlargement of the dural defect. Excess sac was excised and dura was closed in watertight fashion by a non-absorbable suture with overlying fat graft. Postoperatively, the patient’s back pain, swelling, and radicular symptoms subsided dramatically.

Meningocele spurious is also called as pseudomeningocele, pseudocyst, or false cyst. The incidence of meningocele spurious after lumbar spine surgery ranges from 0.3 to 13%.1 Postoperative meningocele spurious was first
reported by Hyndman and Gerber in 1946. Postoperative meningocele spurious may result from accidental tear in the dural mater and pia arachnoid which is left open during surgery. If the dura and pia arachnoid is torn, CSF egress into the paraspinal soft tissue. Initially, CSF may be absorbed but due to progressive reactions in the connective tissue of the surrounding tissue, CSF is absorbed less readily, which leads to the formation of meningocele spurious.

Most of the patients are asymptomatic but some patients present with postural headache, localized back pain, and radiculopathy. Nerve roots may herniate through the dural and arachnoid tears. Strangulation of the nerve root within the cyst may lead to the radicular pain and motor deficits. Magnetic resonance imaging is the diagnostic study of choice in meningocele spurious. It can accurately assess the size and location of meningocele spurious.

The treatment of meningocele spurious is debatable. Small meningocele spurious associated with minimal symptoms can be managed conservatively. Symptomatic meningocele spurious weeks-to-months after initial surgeries may be treated with surgical dural repair. A large dural defect is closed with patch techniques using fascia, dural allografts, or fibrin glue without compressing the neural elements. Release of cord or root is necessary if it is adherent to the dura.

REFERENCES