



Case report

Giant dorsolumbar pseudomeningocele: Unusual evolution of traumatic dural tiny tear.

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Abstract

The pseudomeningocele is a rare entity usually described in the literature as complication of lumbar surgery. We hereby report a case of a giant dorsolumbar pseudomeningocele arising after fracture-dislocation of the dorsolumbar spine.

Keywords:

Pseudomeningocele, spine, trauma, surgery.

Introduction

Pseudomeningocele is an extradural cystic collection of cerebrospinal fluid (CSF). The cysts are located in the paraspinal space and rarely reach the subcutaneous area. Huge cysts are always symptomatic and require surgical repair. Spinal pseudomeningoceles are a common complication of large tears in the dural-arachnoid layer. The postoperative etiology is the most frequent. The defect can be also traumatic or congenital [1].

Observation

We report a case of a 31-year-old patient, a victim of a road traffic accident which caused severe polytrauma including a C2 Magerl type fracture of T11, with a partial neurological deficit (Frankel B). The patient underwent an emergency T11-T12 laminectomy, posterior fixation of T10-T11-T12-L1 and a posterolateral bone graft (Figure 1). We discovered two millimetric dural breaches opposite T11 which were respected. These dural dehiscence lesions were not related to the laminectomy. The postoperative course was uneventful.

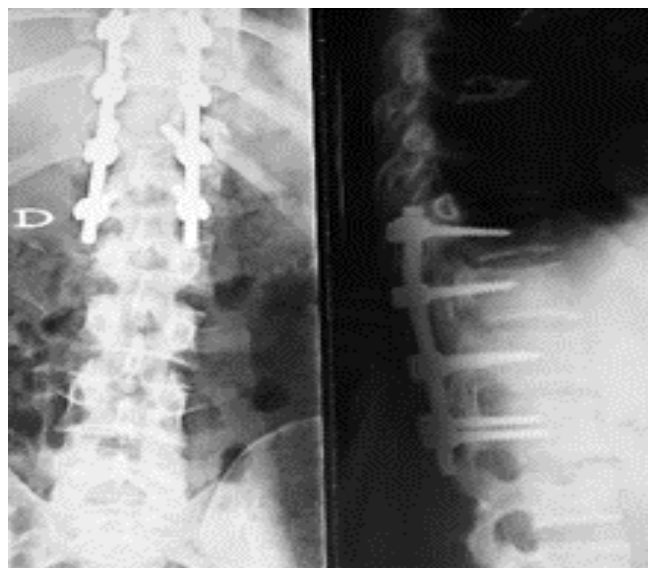


Figure 1: Post-operative X ray following laminectomy, posterior fixation, and posterolateral graft.

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At two years follow up, the patient was complaining of persistent back pain at the operative site. This has been attributed to the fixation material. The removal of the material was performed with intraoperative discovery of a small right posterolateral pseudo-meningocele at T11 level which was respected. One year later, the patient presented with a right paravertebral painful mass measuring 20 cm. There were no associated neurological symptoms. The MR scan revealed a dorsolumbar paraspinal giant pseudomeningocele (Figure 2). There was diffuse extradural CSF collection extending from T10 to L1 with no compression of the spinal cord. The patient underwent excision of the pseudomeningocele and repair of the dural sac defect (Figures 3). The right foraminal breach was closed with biological fibrin glue. Seen two years later, the patient had no complaints and the MR scan was normal.



Figure 2: Axial MRI showing dorsolumbar paraspinal pseudo meningocele : extradural CSF intensity cystic collection in the lumbar paraspinous area.

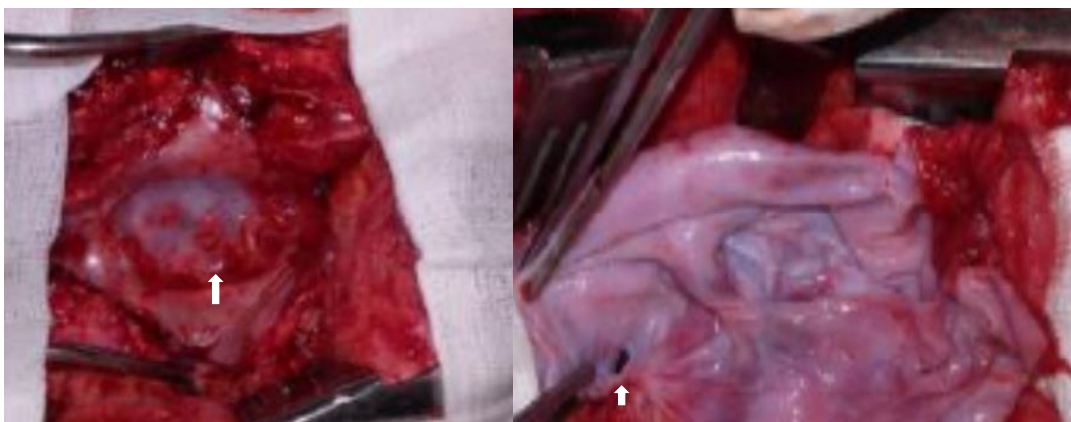


Figure 3 Per-operative findings of giant pseudo meningocele and a size-increased dural defect.

Discussion

Pseudomeningoceles with a size of more than eight centimeters in diameter has been reported previously in only 22 cases [1,2]. Pseudomeningoceles are usually asymptomatic being embedded in the posterior paraspinal soft tissue. Otherwise they cause variable symptoms depending on the size and the location. Persistent pain and palpable mass were the characteristic symptoms in our case. MRI is the gold standard for diagnosis and follow-up after treatment [3]. A pseudomeningocele appears as a hypointense lesion on T1 weighted sequences, and hyperintense lesion on T2 weighted sequences. Rarely, pseudomeningoceles can be complicated by nerve herniation, progressive myelopathy or meningitis [4].

Once diagnosed, surgical repair is recommended for large pseudomeningoceles to prevent fistulization and infection [5,6]. Several procedures have been described in literature in the management of pseudomeningoceles. The treatment options include simple observation for spontaneous resolution of small lesions, epidural blood patch, external lumbar subarachnoid drainage, synthetic dural patch, and closure of the dural sac [7]. This observation may encourage spinal surgeons to repair small dural tears to avoid potential CSF leak and its complications.

Conflict of Interest: None

References

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