Cervical spinal epidural abscess

see also Cervical Spondylodiscitis.

see Upper cervical spinal epidural abscess

Epidemiology

The cervical region is a much smaller epidural space and as such is less prone to infection. Generally, spinal epidural abscesses are more common in the lumbar area because it has a larger epidural space with more tissue prone to infection.

The cervical region has a smaller epidural space, explaining the relatively rare incidence of Upper cervical spinal epidural abscess.

Treatment

Currently, SEAs are widely treated with bony decompression, followed by internal stabilization in purulent osteomyelitis. However, a growing number of studies have reported minimally invasive approaches without internal fixation.

Outcome

Spinal epidural abscesses (SEAs) in cervical locations are particularly life-threatening.

Case series

Kunert et al., describe four patients with cervical SEAs that were evacuated by cervical oblique corpectomy (OC) without fusion.

This study included two women and two men (aged 44-90) that received operations for removing ventral cervical SEAs. All patients presented with progressively increasing myelopathy, and 3 had severe comorbid conditions. In all cases, a multilevel OC without fusion was performed. The amount of bone resection was tailored to fit the needs of granulation removal, with an effort to retain as much of the vertebral bodies as possible. Then, pus was evacuated and debridement of granulation was performed, followed by rinsing and drainage.

The neurological status of 3 patients improved significantly after surgery. At the last follow-up examination, one showed full recovery, and in two a minor residual deficit persisted. During mean follow-up of 5.5 years, no internal stabilization was necessary. The oldest patient was tetraplegic, and had several concomitant diseases. That patient died from sudden cardiac arrest on the third postoperative day. Oblique corpectomy did not affect the anterior or posterior column. Additionally, it provided a broad view of the ventral aspect of the spinal canal.

Oblique corpectomy allows appropriate spinal cord decompression and granulation removal in the

case of cervical spine epidural abscess, without sacrificing spinal stability [1].

Case reports

2016

A unique case of a patient presenting with a spinal epidural collection several days after a fall. While a spinal epidural hematoma was suspected based on the patient's history and MRI findings, a spinal epidural abscess was found during surgery. The patient underwent laminectomy and instrumented fusion with successful treatment of her infection [2].

A case of a 21-year-old woman presenting with quadriplegia which was initially diagnosed with an spinal epidural abscess in view of her MR scan and raised inflammatory marker levels. Histology revealed an epidural extra-osseous Ewing's sarcoma (EES). Epidural location of EES is a very rare condition which can be very challenging to diagnose. Early diagnosis and surgical excision followed by chemotherapy represent the main stem of management [3].

2015

Raus et al., present a case of a 3-month-old girl in which the diagnosis of spontaneous cervical epidural abscess developed after an initial episode of acute enterocolitis and was subsequently identified at a later visit to the emergency department for right-upper extremity hypotonia. Endoscopy revealed slightly domed retro pharynx and magnetic resonance imaging (MRI) scan showed cervical spondylodiscitis at the level of intervertebral disc C5-C6 with right-sided epidural abscess that compressed the spinal cord and right C6 nerve root, without extension into superior mediastinum. The systemic antibiotic treatment with meropenem and clindamycin solved the symptoms but the spondylodiscitis complicated with vertebral body fusion which can be symptomatic or not in the future and needs follow-up. Cervical spontaneous spondylodiscitis with abscess is very rare, especially in this age group. This case emphasizes the importance of investigating an upper extremity motor deficiency in infancy and diagnosing any potential spondylodiscitis complication [4].

A patient with cervical epidural abscess due to Streptococcus viridans endocarditis. Both epidural abscess and infective endocarditis (IE) were managed conservatively with intravenous antibiotics for 8 weeks, with recovery. It is important to remind spinal epidural abscess can occur in those patients with bacterial endocarditis [5].

2004

A case of cervical epidural abscess after epidural steroid injection is presented and the relevant literature is reviewed.

The patient had partial recovery of neurologic function within the first 24 hours after decompressive

laminectomy, irrigation, and debridement. There were no perioperative complications. Intraoperative cultures permitted positive identification of the infecting organism and appropriate antibiotic selection. At 7-month follow-up, there was no recurrence of infection and the patient had recovered baseline neurologic function and neck pain status.

Cervical epidural abscess is a rare but potentially devastating complication after epidural steroid injection. Neurologic compromise may occur. Timely diagnosis and appropriate treatment may result in good clinical outcomes [6].

1)
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