

Acute on Chronic SDH as a complication of untreated spontaneous CSF leak following air travel

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Introduction:

Spontaneous cerebrospinal fluid (CSF) leaks are a complex disorder with a wide range of clinical and radiological features. These leaks occur without any apparent cause and are often associated with disorders of the connective tissue matrix, pre-existing dural weakness, and meningeal diverticula.

Case Report:

A 41-year-old male presented with new onset persistent orthostatic headaches that significantly affected his daily activities. Upon examination, his neurological functions appeared normal. Magnetic resonance imaging (MRI) of his brain and cervical spine revealed a CSF leak at the C1/2 junction. Initially, conservative management provided partial relief, but the patient's symptoms worsened after air travel. Repeat MRI showed bilateral subdural hematomas (SDH) and extension of the CSF leak into the cervical and thoracic levels. Computed Tomographic myelogram (CT myelogram) confirmed the CSF leak at the left posterolateral dural sac at the C5/T1 level. To address the CSF leak, an autologous epidural blood patch (EBP) was performed via the T9-10 level, followed by the evacuation of the bilateral SDH. However, the patient experienced complications with cerebral salt wasting postoperatively. Fortunately, his symptoms disappeared, and subsequent CT scans showed no further CSF leak.

Discussion:

Subdural hematoma (SDH) is a common complication of spontaneous intracranial hypotension (SIH), which can be treated with an epidural blood patch (EBP). Surgical intervention is usually reserved for cases where non-surgical management fails. Surgical repair is generally safe and effective in providing relief for patients with identified structural abnormalities or focal CSF leaks. Unfortunately, spontaneous CSF leaks often go underdiagnosed due to their varied clinical and radiographic presentations. As seen in this case, the presence and worsening of signs and symptoms of a CSF leak indicate the need for further evaluation and management.

Conclusion:

Spontaneous CSF leaks are a complex disorder with diverse clinical and radiographic manifestations. Early recognition and appropriate management, whether conservative or surgical, are crucial in providing relief and preventing complications such as subdural hematomas. Healthcare professionals should maintain a high index of suspicion for CSF leaks in patients presenting with persistent orthostatic headaches or other related symptoms.