

Spinal Cerebrospinal fluid fistula

Spinal leakage of [cerebrospinal fluid](#) (CSF) is considered to be the primary cause of [spontaneous intracranial hypotension](#) (SIH).

[Cerebrospinal fluid fistula](#) following [spinal surgery](#) is a relatively common surgical [complication](#). A disturbance in the underlying [Cerebrospinal fluid motion](#) could be the causative factor in a small group of patients with refractory Cerebrospinal fluid fistulas that require multiple surgical repairs and prolonged hospital admission.

A retrospective case series of patients with persistent post spinal surgery Cerebrospinal fluid fistula referred to the hydrocephalus service for continuous intracranial pressure (ICP) monitoring. Patients' notes were reviewed for medical history, ICP data, radiological data, and subsequent management and outcome.

Five patients (two males/three females, mean age, 35.4 years) were referred for ICP monitoring over a 12-month period. These patients had prolonged Cerebrospinal fluid fistula despite multiple repair attempts 252 ± 454 days (mean \pm SD). On ICP monitoring, all five patients had abnormal results, with the mean ICP 8.95 ± 4.41 mmHg. Four had abnormal [pulse amplitudes](#), mean $6.15 \text{ mmHg} \pm 1.22$ mmHg. All five patients underwent an intervention. Three patients underwent insertion of ventriculoperitoneal (VP) shunts. One patient had venous sinus stent insertion and one patient underwent medical management with acetazolamide. All five of the patients' Cerebrospinal fluid fistula resolved post intervention. The mean time to resolution of Cerebrospinal fluid fistula post intervention was 10.8 ± 12.9 days.

Abnormal cerebrospinal fluid dynamics could be the underlying factor in patients with a persistent and treatment-refractory Cerebrospinal fluid fistula post spinal surgery. Treatments aimed at lowering ICP may be beneficial in this group of patients. Whether abnormal pressure and dynamics represent a pre-existing abnormality or is induced by spinal surgery should be a subject of further study ¹⁾.

¹⁾

Craven C, Toma AK, Khan AA, Watkins LD. The role of ICP monitoring in patients with persistent Cerebrospinal fluid fistula following spinal surgery: a case series. Acta Neurochir (Wien). 2016 Sep;158(9):1813-9. doi: 10.1007/s00701-016-2882-5. Epub 2016 Jul 8. PubMed PMID: 27393191.

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