Benign intracranial hypotension: A new indication for epidural blood patch

To the Editor,

Intracranial hypotension is a known complication of accidental dural puncture during epidural analgesia or deliberate dural puncture during spinal anesthesia.[1] Rarely, it can be due to spontaneous cerebrospinal fluid (CSF) leakage.[2]

A 63 years old male, known case of IHD for 8 yrs, presented to a headache clinic. He was well 10 days ago when he developed gradual onset headache, which progressively worsened over the due course. The patient experienced pain on the right side of the head, extending from right peri-orbital region to right occipital area, aggravated by sitting and standing and relieved by lying supine and after taking some analgesics. Pain score on numerical rating scale was 7/10 at the time of presentation. He was also complaining of diplopia especially in sunlight. Headache was associated with one episode of nausea and vomiting during the 10 days course. There was no previous history of headache, trauma, convulsion or any history of lumbar puncture. Physical and neurological examinations were unremarkable. The only abnormal finding was subdural hygroma (excessive collection of CSF in the subdural space) on magnetic resonance imaging (MRI) brain. Considering clinical history and MRI finding, a clinical diagnosis of SIH due to spontaneous CSF leak was made.

Due to poor financial status of our patient, further confirmatory investigation was not done to find out the exact level of CSF leak. Conservative treatment including judicious fluid therapy, paracetamol and caffeine tablets were started immediately which could not achieve relief of pain. Pain management service was consulted. After discussion with the neurologist, a diagnostic lumbar epidural blood patch was planned in the operating room.

Epidural blood patch was inserted at the level of L1-2 level and 20 mL of blood was injected in increments with careful monitoring of the neurological status of the patient. The headache disappeared within an hour, and the patient was kept in strict observation for next 24 h for any sign of neurological deficit. With normal recovery, he was discharged home on the next day. Later we followed him in an outpatient clinic.
Although there are some reports available for successful epidural blood patch for intracranial hypotension in the literature. In all these cases, CSF leaks site were identified first and then patch was applied at the level of a puncture site, after failure to respond to conservative treatment. Ferrante et al. also reported lumbar epidural blood patch in a case where CSF leak was at C2 to D3 level.[3] Buguet-Brown et al. demonstrated three cases in which no unusual finding were found in MRI brain, who were treated with lumbar epidural blood patch.[4]

In our case, patient’s MRI brain was normal. Patient refused to undergo further testing, and his pain was not relieved by conventional methods. We explained to him about lumbar epidural blood patch for diagnostic purpose which subsequently became therapeutic as well. Currently, the patient has no headache, and all of his symptoms attributed to SIH have been completely resolved per date of this report.

In summary, SIH is a diagnosis made on history and examination and dramatic pain relief can be obtained after epidural blood patch without identification of CSF leak site; however, one should be careful when to offer this intervention and should perform this procedure with caution.

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