

A Peculiar Case of Spontaneous Bilateral Subdural Haemorrhage

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ABSTRACT

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Spontaneous intracranial hypotension and its complications are rarely encountered in the practice scenario. Imaging findings can mislead inexperienced eyes to misdiagnose and possibly over manage such cases. As demonstrated by this instance the patient was referred to our hospital with bilateral subdural haemorrhage for drainage. Adequate history and review of imaging allowed identification of the problem as SIH. The patient responded to epidural blood patching which was resorted to as she was not showing adequate improvement with conservative management.

Keywords: Spontaneous intracranial hypotension, Low pressure headache, Epidural blood patch

*See End Note for complete author details

INTRODUCTION

SIH is a rarely encountered problem in clinical practice. It presents with varied manifestations like postural or continuous head ache due to the sagging of the brain causing compensatory venous dilation and effusions.¹ It is important to identify this problem as the diagnosis can be easily missed and there also exists a chance of over treatment. This case proves to be an excellent example where unnecessary surgery was avoided at an opportune moment.

THE CASE

48 year old lady with no pre-morbidity was referred from the gulf to our hospital for burr hole drainage of bilateral subdural haematomas which had been detected on MRI Brain done as a part of evaluation of headache. We reviewed the history. Initially the headache had been typically orthostatic in nature; increasing on sitting up and improving in the recumbent position. Since one week the patient began to have continuous throbbing diffuse headache. There were no other neurological deficits. Clinical examination was normal. There was no papilloedema. A CT brain was done at our centre which showed persistent subdural collections.

The MRI done was reassessed. Images showed dilated

venous sinuses, bilateral subdural collections and pachymeningeal enhancement with contrast, all signs of spontaneous intracranial hypotension² (**figure 1**).

In view of the classical history and the imaging findings, the patient was started on fluid replacement, theophylline, caffeine and other symptomatic measures. The patient transiently improved but had a recurrence of symptoms over the following week. In view of the same autologous epidural blood patch was planned. 20 ml of blood was injected into the epidural space at the lumbar region as a blind procedure. Patient was continued on strict bed rest on which she improved. Patient had minimal discomfort over injection site the next day. At the end of 2 days headache had completely resolved; when patient was again gradually mobilised. She was subsequently discharged with no further headache on follow up at 1 month.

DISCUSSION

Spontaneous intracranial hypotension results from CSF volume depletion, nearly always from spontaneous CSF leaks. Incidence is more in the middle aged population, among females as also those with connective tissue disorders such as Marfan's syndrome.³ Leaks can occur spontaneously or more commonly iatrogenically post lumbar puncture. Spontaneous leaks are most common in the thoracic region.^{3,4}

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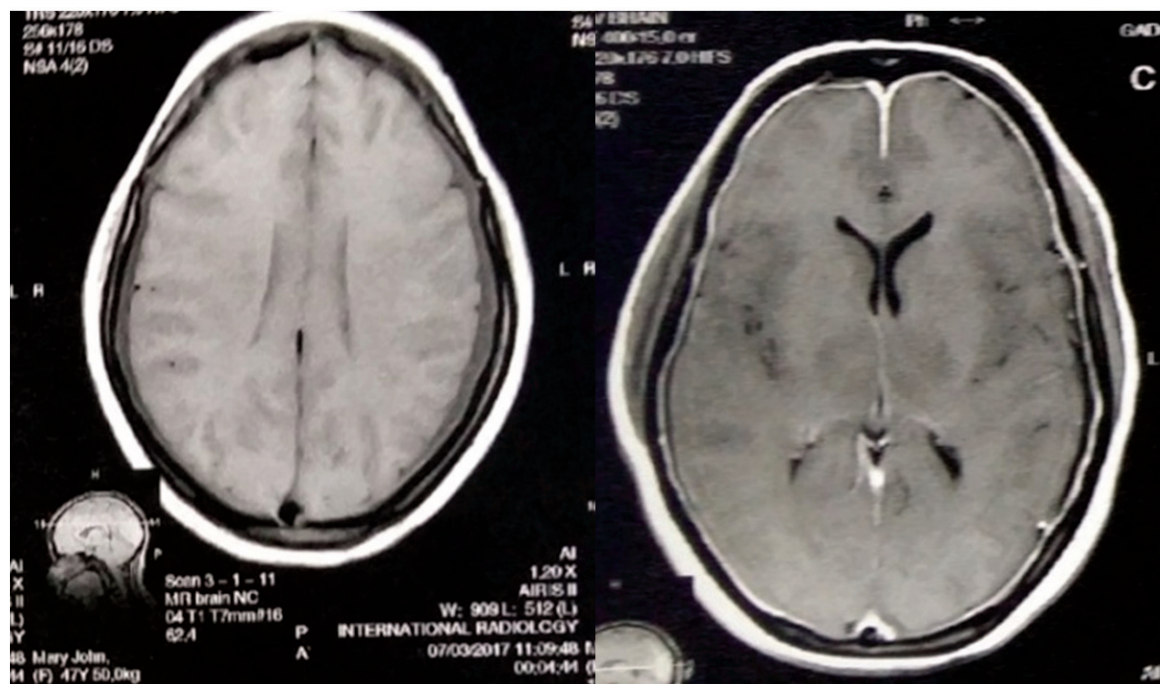


Figure 1. MRI showing dilated venous sinuses, bilateral subdural collections and pachymeningeal enhancement with contrast (all signs of spontaneous intracranial hypotension)

Head ache in spontaneous intracranial hypotension occurs due to low CSF pressure. Leakage of CSF decreases pressure causing brain sagging and traction on pain sensitive structures such as bridging veins and sensory nerves. Auditory muffling, tinnitus, nausea vomiting, neck pain, late constant headache, end of day headache etc. are the common symptoms encountered. Typical postural variation is characteristic in the early stages.⁵

Diffuse pachymeningeal enhancement, tonsillar descent, inferior displacement of optic chiasm, flat anterior pons, venous dilation, subdural collections are the common imaging findings which are obtained. CT or MR Myelography, nuclear cisternography are the definitive investigations although clinical diagnosis is often sufficient.²

Conservative treatment including bed rest, hydration, caffeine and theophylline has been tried. In case of non resolution, epidural blood patch or surgical repair of dural tear is attempted.⁶ Epidural blood patch causes compression of thecal sac and thereby elevates sub arachnoid pressure which improves headache. Single blood patch mediates improvement in 70-98% of cases.⁷

It is important to elicit accurate history in all cases. In this patient we were able to avoid unnecessary surgery and intervention due to the above.

END NOTE

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List of Abbreviations

- SIH: Spontaneous intracranial hypotension
MRI: Magnetic resonance imaging
CT: Computed tomography

Conflict of Interest: None declared

Editor's Remarks: Spontaneous Intracranial Haemorrhage is an extremely rare problem and has varied presentations. Exact detection leads to correct management. This awareness is needed and hence this case is included in this issue.

REFERENCES

1. Wouter I, Schievink. Spontaneous spinal cerebrospinal fluid leaks and intracranial hypotension. JAMA. 2006 May 17;295(19):2286-96.
2. Messori A, Salvolini U. The spectrum of spinal MR findings in SIH. Eur Radiol 2002;12:2608-09.

3. Vaidyanath R, Kenningham R, Khan A, Messios N. Spontaneous intracranial hypotension: a cause of severe acute head ache. *Emerg Med J* 2007; 24; 739-41.
4. Chung SJ, Kim J S, Lee M C. Syndrome of cerebral spinal fluid hypovolaemia- clinical and imaging features and outcome. *Neurology* 2000; 55:1321-7.
5. Schwedt T J, Dodick D W. Spontaneous intracranial hypotension. *Curr Pain Headache Rep.* 2007 Feb;11(1):56-61.
6. Feltracco P, Galligioni H, Barbieri S, Ori C. Thoracic epidural blood patches in the treatment of spontaneous intracranial hypotension: A retrospective case series. *Pain Physician.* 2015 Jul-Aug;18(4):343-8.
7. Berroir S, Loisel B, Ducros A, Boukobza M, Tzourio C, Valade D, et al. Early epidural blood patch in spontaneous intracranial hypotension. *Neurology.* 2004 Nov 23;63(10):1950-1.