

# Not All That Stiff Is Meningitis : When Headache Hides a Hemorrhage in a Child

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## ABSTRACT

In pediatric emergency practice, the triad of headache, fever, and neck stiffness often suggests meningitis. However, these symptoms can also be associated with intracerebral hemorrhage (ICH), a rare but potentially fatal condition in children.

The overlap in presentation poses a diagnostic challenge.

Here, we discuss a case where clinical features initially mimicked meningitis but ultimately revealed spontaneous ICH, highlighting the critical importance of high index of suspicion and the need for early neuroimaging.

## INTRODUCTION

## CASE SUMMARY

An 11-year-old previously healthy boy presented with sudden-onset severe headache during sleep, accompanied by multiple episodes of vomiting. There was no history of trauma or seizures. On examination, he was drowsy, responsive only to pain, with reactive pupils and poor visual tracking. He demonstrated questionable neck stiffness, weak limb movements, and hyperreflexia. Meningitis was initially suspected, but his consciousness deteriorated rapidly, prompting intubation. Urgent brain CT revealed a right occipital lobar hemorrhage with intraventricular extension, significant cerebral edema, and obstructive hydrocephalus. An emergency external ventricular drain (EVD) was placed. Further CT angiography and venography revealed no vascular malformations, aneurysms, or mass lesions. He was managed in the pediatric intensive care unit with neuroprotective strategies. He was discharged after 10 days of hospitalization without neurological deficits.



Figure 1: an acute intraparenchymal hematoma at Right occipital region measuring 3.3 x 3.2 x 2.7 cm (AP x W x CC) causing significant cerebral oedema, obstructive hydrocephalus and tonsillar herniation



Figure 2: Sagittal View

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## DISCUSSION

This case illustrates the diagnostic complexity when features of meningitis and ICH converge. Headache, vomiting, altered sensorium, and neck stiffness are common to both, often leading to empiric treatment for infection. However, early signs of increased intracranial pressure (ICP), such as deteriorating consciousness, should raise concern for ICH and prompt neuroimaging. This approach is crucial to avoid unnecessary lumbar puncture in the presence of raised ICP, which could result in herniation or other catastrophic complications. In this patient, meningeal irritation was likely due to blood in the subarachnoid or intraventricular spaces. Notably, the absence of identifiable risk factors for hemorrhage supports the diagnosis of idiopathic spontaneous ICH, a rare condition in pediatric neurology.

## CONCLUSION

Clinicians should consider ICH in pediatric patients with acute neurological symptoms and signs of raised ICP. Early neuroimaging is essential for safe and effective management.

## KEYWORDS

Pediatric meningitis, ICH, Neuroinfection