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Headache, seizures and loss of  
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Amit Agrawal



# Headache, seizures and loss of consciousness in an elderly male following groin hernia surgery

**Amit Agrawal**

Dr. MCh. Professor of Neurosurgery. Department of Neurosurgery, MM Institute of Medical Sciences & Research, Mullana (Ambala), INDIA

## ABSTRACT

Headache after lumbar puncture is a common occurrence and have a benign course in the majority. In rare cases, it can be a manifestation of rare but potentially life-threatening intracranial complications. We discuss a case of 65 years male patient who was operated for left inguinal hernia under spinal anaesthesia, had persistent headache partial response to conservative measures developed one episode of seizures and lapsed into altered sensorium. Imaging findings were suggestive of extensive left frontal-temporoparietal acute SDH with mass effect and midline shift. The hematoma was evacuated and the patient recovered well. Prolonged and persistent post-dural puncture headache complicated by atypical neurological deterioration following spinal anaesthesia should prompt the physician to consider the possibility of intracranial complications and to seek immediate radiological investigations.

## INTRODUCTION

Headache after lumbar puncture [post-dural puncture headache (PDPH)] is a common occurrence in most cases after lumbar puncture and most of post-LP headaches are not severe and have a benign course (1-4) but in rare cases PDPH can also be a manifestation of a rare but potentially life-threatening complication such as acute subdural hematoma (SDH). (3, 5-16).

## CASE REPORT

A 65-years old male patient was operated for left inguinal hernia one week back under spinal anaesthesia. He was complaining of persistent headache and with the diagnosis of PDPH he was given analgesics, oral hydration, and bed-rest without much improvement. On 7th day he had multiple episodes of vomiting, one episode of generalized tonic-clonic seizures and lapsed into altered sensorium. His general and systemic examination was normal. Per abdomen examination was normal. Bowel sounds were normal. Neurologically he was in altered

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Corresponding author:  
**Amit Agrawal**

MM Institute of Medical Sciences &  
Research,  
Mullana (Ambala), India

dramitagrawal@gmail.com

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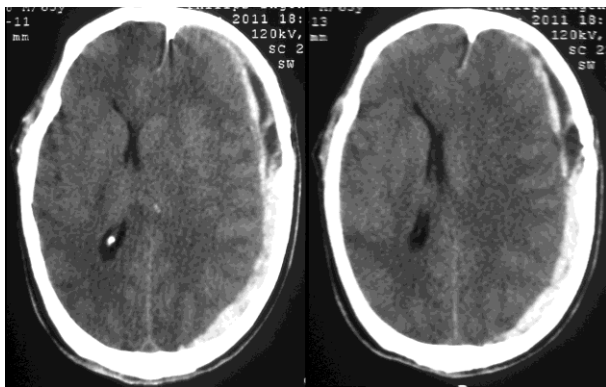
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sensorium. Glasgow coma scale was 4. Pupils were bilateral 3 mm and reacting to light. Plantars were bilateral extensor. There was no history of hypertension or diabetes. There was no history suggestive of bleeding disorders, using tobacco, or alcohol. Complete blood count including platelets and white blood cells and coagulation tests were within normal range. A plain computed tomography (CT) of brain revealed an extensive left frontal-temporo-parietal acute SDH with mass effect and midline shift (Figure-1). The patient underwent emergency craniotomy and evacuation of hematoma. He was electively ventilated and could be weaned off from ventilator and recovered well.



**Figure 1.** Plain computed tomography scan brain showing large acute left frontal-temporo-parietal subdural hematoma with mass effect and midline shift.

## DISCUSSION

Dural puncture with subsequent postdural puncture headache (PDPH) is a recognized complication of spinal anesthesia. (13, 17) The possible mechanism for PDPH is the leakage of cerebrospinal fluid depletes the cushion of CSF supporting the brain and its sensitive meningeal vascular coverings, resulting in gravitational traction on the pain-sensitive intracranial structures causing classical headache. (2, 18) Post-dural puncture headache (PDPH) is classically postural and responds within 48 h to increased fluid intake and bed rest (5, 19, 20) and more frequently seen in the younger patients and in women. (4, 21, 22) Severe and prolonged post-dural puncture headache with or without new neurological signs or deficits should be regarded as a warning sign of an intracranial complications (i.e. subdural haematoma or intracerebral haemorrhage). (3, 5-11, 14, 15, 23-27) In contrast to adults, the dura is adherent to skull and may be less stretchable

duramater due to either atherosclerosis or age-related mechanical changes in the epidural space explaining the lower incidence of PDPH. (28) The mechanism responsible for PDPH i.e. the leakage of CSF and subsequent lowering of the intracranial pressure following dural puncture and caudal movement of the spinal cord and brain stretching and tearing dural veins, results in subdural bleeding in the elderly. (2, 5, 7, 13, 18, 27, 29, 30) The management of acute SDH depends on size of the hematoma as smaller lesions in conscious patients can be managed conservatively under close supervision, (5, 7, 9, 31, 32) however the larger lesions with neurological deficits require neurosurgical intervention and evacuation of hematoma. (7, 8) While considering the patient of PDPH for conservative management, particularly a lumbar autologous extradural blood patch as a possible means to stop the CSF leakage one should be cautious and has low threshold for cranial imaging as the procedure can worsen the patient and neurological deterioration if there is intracranial hematoma. (7)

## CONCLUSION

In summary, prolonged and persistent post dural puncture headache complicated by atypical neurological deterioration following spinal anesthesia should prompt the physician to consider the possibility of intracranial complications and to seek immediate radiological investigations to avoid a potential negative outcome.

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