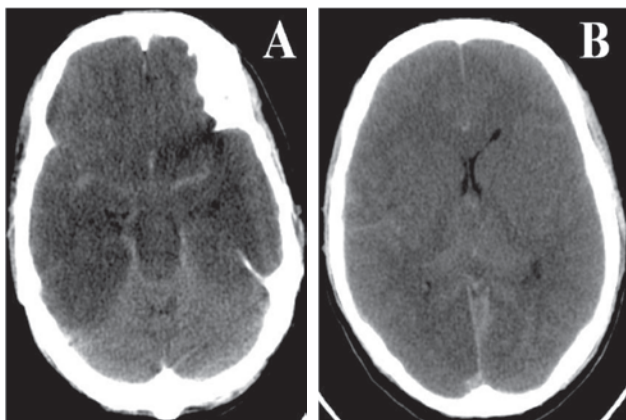


## Clinical Image

# Pseudo Sub-Arachnoid Hemorrhage

Ahmad Mursel Anam<sup>1</sup>, M Mufizul Islam Polash<sup>2</sup>, Farzana Shumy<sup>3</sup>, Mahmudul Hasan<sup>4</sup>, Raihan Rabbani<sup>5</sup>

A 21-year-old normotensive and non-diabetic gentleman was found unconscious at home following ingestion of some indigenous medication. He was presented to the emergency of Square Hospital the next day with history of two episodes of convulsion in addition to the altered consciousness. On admission, he was found with Glasgow Coma Scale (GCS) 3/15, and hypotension (BP 90/70 mmHg). Pupils were mid-dilated and fixed, with no reaction to light. All deep jerks and plantar reflexes could not be elicited. All other systemic examination was normal. All the laboratory investigations were within normal range. Plain CT-scan of brain was consistent with sub-arachnoid hemorrhage (SAH) [Fig. A & B]. Urgent neurosurgical consultation was sought & surgery was planned.

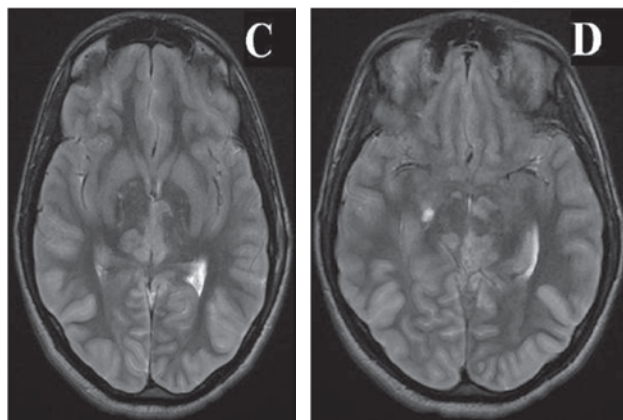


**Fig. A & B:** Non-contrast CT brain scans consistent with diffuse sub-arachnoid haemorrhage, with effacement of the sulci and lateral ventricles, consistent with cerebral oedema. Note the loss of grey-white differentiation, sulcal and basal cistern effacement, increased density of falx and sylvian fissures.

The history of convulsion following ingestion of indigenous medicine, and hypotension as a presenting feature, also aroused the possibility of either toxic encephalopathy or

hypoxic brain injury. An MRI of brain [Fig. C & D] was consistent with hypoxic-ischemic brain damage, and the CT-scan findings turned out to be 'pseudo sub-arachnoid haemorrhage'. The patient was managed accordingly, but his family took him home the next day owing to financial reasons.

Pseudo sub-arachnoid haemorrhage is a rare CT scan finding that has been reported in different cerebral disease with cerebral oedema, like bacterial meningitis, subdural haematoma and spontaneous intracranial hypotension.<sup>1,2</sup> Increased density on CT scan has been noted along the falx, tentorium, Sylvian fissures and around the basal cisterns. Loss of grey-white differentiation, consistent with cerebral oedema, is frequently associated with these appearances.<sup>1</sup>



**Fig. C & D:** MRI brain (T2-weighted sequence) of the same patient showing diffusely increased signal, consistent with hypoxic-ischemic brain damage.

The mechanisms causing the appearance of pseudo sub-arachnoid haemorrhage remain unclear. Cerebral oedema may produce venous congestion and impaired circulation, with increased density along the dura and cerebral sulci. These hyperdense areas may then appear more marked alongside the hypodensity of cerebral oedema.<sup>1,2</sup>

Clinicians should be familiar with such rare neuroradiological appearances, as well as the disease associations, so that they may suspect and make prompt diagnosis and facilitate appropriate management in such cases.

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- 1 Dr. Ahmad Mursel Anam, MBBS, Chief Resident, ICU, Square Hospitals Ltd, Dhaka, Bangladesh.
- 2 Dr. M Mufizul Islam Polash, MBBS, Clinical Staff, ICU, Square Hospitals Ltd, Dhaka, Bangladesh.
- 3 Dr. Farzana Shumy, MBBS, FCPS (Medicine), Medical Officer, Department of Internal Medicine BSMMU, Dhaka Bangladesh.
- 4 Dr. Mahmudul Hasan, MBBS, Resident Medical Officer, ICU, Square Hospitals Ltd, Dhaka, Bangladesh.
- 5 Dr. Raihan Rabbani, MBBS, FCPS (Medicine), MD (USA), Associate Consultant, Square Hospitals Ltd, Dhaka, Bangladesh.

### Corresponding Author:

Dr. Ahmad Mursel Anam, MBBS, Chief Resident, ICU, Square Hospitals Ltd, Dhaka, Bangladesh. Email: murselanam@gmail.com