

Acute-on-chronic subdural hematoma

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A 38-year-old male complains of a right-sided retro-orbital-temporal headache of 2-day duration. It is described as intermittent and pressure-like, and is preceded by bouts of left arm numbness. He denies diplopia, visual changes, nausea, vomiting, or alterations in his consciousness. No acute trauma is reported, but he gives a history of airline

travel within the past 24 h. His parents are present at the bedside and volunteer that the patient and his wife were involved in a motorcycle crash 3 months ago in which his wife was killed.

The patient is alert and oriented with normal vital signs and a normal physical exam. A CT of the head without contrast is performed and reveals an acute-on-chronic subdural hematoma with a 1.6-cm midline shift (Figs 1, 2 and 3). Neurosurgery is performed emergently.

Subdural hematoma (SDH) is a collection of blood between the dura and arachnoid membranes not restricted by cranial sutures. They do not cross the midline because of the menigeal reflections and are classified as: acute, chronic, or as in this case, acute-on-chronic. An acute SDH is hyperdense (white) on CT, whereas a sub-acute

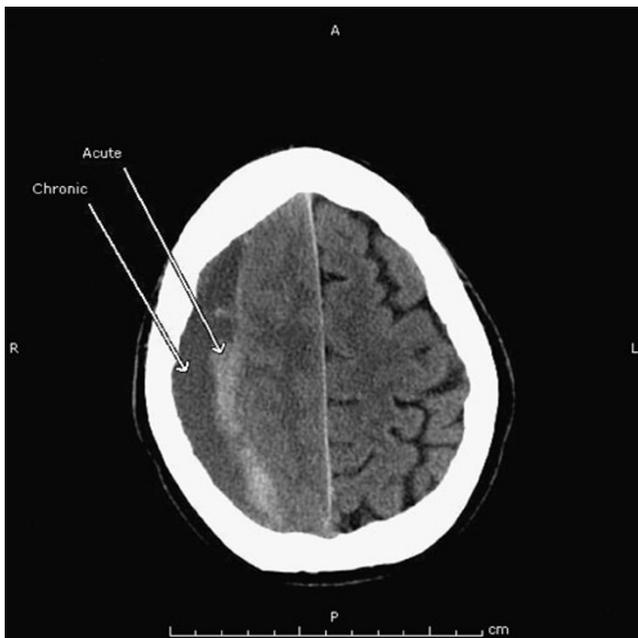


Fig. 1 Acute bleed is hyperdense and chronic is hypodense

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Fig. 2 CT head showing acute-on-chronic SDH

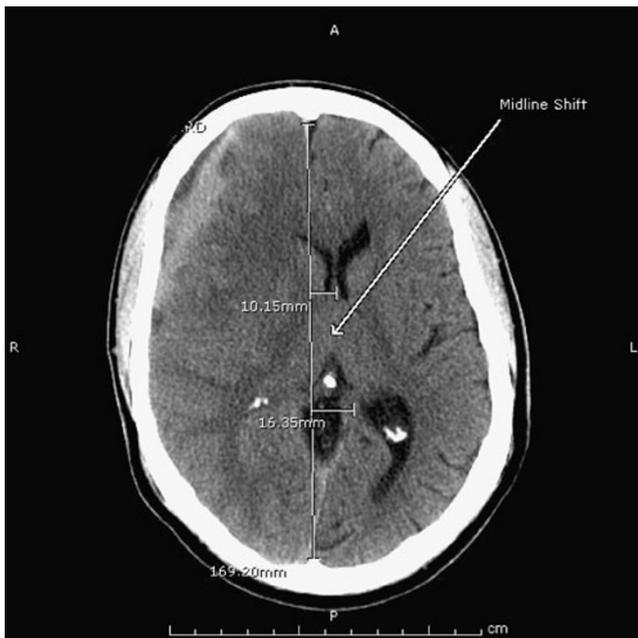


Fig. 3 CT head showing a midline shift to the left

SDH will appear isodense (grey) and hypodense (black) when chronic. A chronic SDH is a collection of blood breakdown products that has been present for at least 3 weeks and can become acute-on-chronic if small hemorrhages in the collection occur. Common signs and symptoms of a chronic SDH include: headache (90%), hemiparesis (58%), confusion (56%), and a decreased level of consciousness (40%) [1].

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