Hematocrit Effect in Bilateral Subdural Hematomas

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Figure 1. CT scan of the head showing the "hematocrit effect".

A 72-year-old woman with a history of advanced dementia, diabetes, and hypertension developed worsening somnolence and headache after a mechanical fall

four days prior to presentation. A CT scan of the head showed bilateral subdural hematomas with a "hematocrit effect" (Fig. 1). The "hematocrit effect" is a blood-plasma level seen with acute re-bleeding into an older subdural blood collection.¹ As hematomas age, they transition over a period of 3 weeks from a hyperdense (bright on CT) to a hypodense (dark on CT) state.² In the chronic phase, hemoglobin and protein have broken down, cellular elements have disintegrated, and a collection of serous fluid remains in the subdural space. With re-bleeding, the denser cellular blood (bright on CT) will layer inferiorly to the chronic serous fluid (dark on CT) in the supine patient.³ The patient underwent uneventful, bilateral burr hole drainage of the subdural hematomas. Her mental status returned to baseline, and she was transferred to a skilled nursing facility for further care.

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