

## Pseudo-enhancement from polycythemia

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A 23-year-old body builder presented to emergency personnel comatose and dyspneic. History included use of performance-enhancing drugs including anabolic steroids, "lean body" supplement containing ephedra, and caffeine. Cranial CT (without any intrathecal or IV contrast) revealed hyperintensity in the subarachnoid space, along both sylvian fissures, and along the falx. A diagnosis of subarachnoid hemorrhage was made.

Further review of the CT revealed hyperintensity confined to the intravascular space (figure). Hemoglobin and hematocrit values were 21.2 g/dL and 62.3%. Neurologic condition and hematologic profile were normal within 72 hours after rehydration and ventilatory support.

Secondary polycythemia should be considered in the differential diagnosis of conditions<sup>1,2</sup> that may mimic intravascular enhancement and subarachnoid hemorrhage on noncontrast head CT in adults.

1. Phan TG, Wijdicks EFM, Worrell GA, Fulgham JR. False subarachnoid hemorrhage in anoxic encephalopathy with brain swelling. *J Neuroimaging* 2000;10:236–238.
2. Sharp S, Stone J, Beach R. Contrast agent neurotoxicity presents as subarachnoid hemorrhage. *Neurology* 1999;52:1014–1015.

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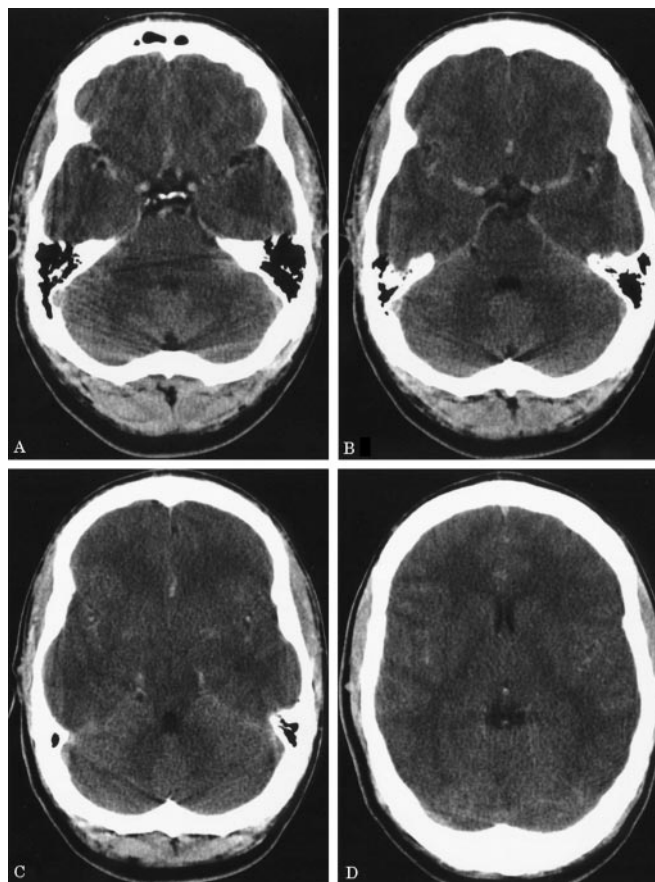


Figure. Noncontrast CT scan obtained upon admission shows hyperintensity in the intravascular space and mild loss of sulcal/gyral pattern.

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