Cerebrospinal fluid cytology in subacute subarachnoid hemorrhage

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Figure 1 Subacute subarachnoid hemorrhage (SAH) causing vasospasm-induced ischemic stroke

A previously healthy 42-year-old man had sudden-onset severe headache resolving within days. Two weeks later, he noted acute right-sided hemiparesis. Brain CT, MRI, and digital subtraction angiography showed acute left hemispheric ischemic stroke, bilateral middle cerebral artery vasospasms, and intracerebral aneurysms (figure 1, A–E). The following day, CSF was obtained and appeared clear and without xanthochromia (figure 2A). CSF cytology proved past subarachnoid hemorrhage (SAH) by demonstrating macrophages with ingested erythrocytes, hemosiderin, and hematoidin crystals (figure 2B). CSF may be clear, but CSF cytology can prove SAH 2 weeks after aneurysm rupture leading to vasospasm and stroke.1,2
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Appendix (continued)

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References

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