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## Non-Communicating Hydrocephalus

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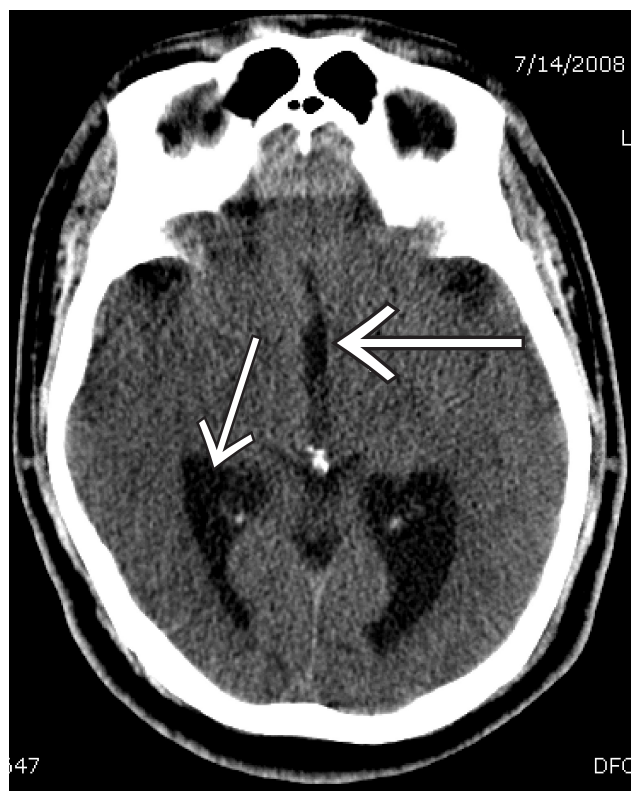
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**Figure 1.** Hydrocephalus with enlarged lateral and third ventricles on computed tomography.



**Figure 2.** Normal fourth ventricle on computed tomography suggesting the hydrocephalus being related to acquired stenosis of the aqueduct of Sylvius.

A 28-year-old male presented to the emergency department with acute onset of confusion, slurred speech, disequilibrium, and right-sided facial droop. He had no headache, fever, chills, recent trauma, recent travel, or similar symptoms in the past. He was previously healthy with no history of drug, alcohol or tobacco use. His family history and review of systems were unremarkable. Although his vital signs were normal, his mental status fluctuated widely, from completely cogent to having difficulty following basic instructions. He had a slight right-sided facial droop and right upper extremity weakness with

pronator drift. His right lower extremity had normal strength and function. His deep tendon reflexes and sensation were intact. His balance was poor and he fell toward his right side. The remainder of his exam was unremarkable.

Non-contrast head computed tomography demonstrated hydrocephalus with enlarged lateral and third ventricles, no focal lesions and no hemorrhage (Figure 1). Complete blood count, serum chemistry and coagulation studies were all normal. The patient received consultation from the neurology and neurosurgical services, and was admitted for an MRI and possible ventriculostomy. An MRI confirmed

the diagnosis of hydrocephalus but revealed no additional pathology. In the absence of other findings and a normal fourth ventricle (Figure 2), the hydrocephalus in this case appears to be related to acquired stenosis of the aqueduct of Sylvius, the narrow channel of cerebrospinal fluid (CSF) that connects the third and fourth ventricles.<sup>1</sup> It may result from any process that narrows or occludes the flow of CSF, including infections, tumors or hemorrhage. On further review of the patient's history, it was discovered that he had suffered from bacterial meningitis as a child.<sup>2</sup> The patient improved clinically over the next two days and did not require a ventriculostomy. He was discharged with close neurology and neurosurgical follow up.

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