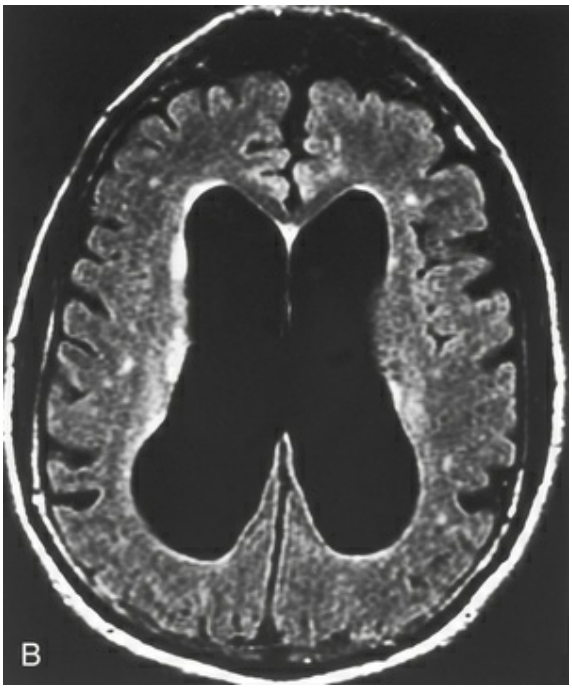

FIG 27-7 Hydrocephalus: A block in flow of cerebrospinal fluid (CSF). **A,** Patent CSF circulation. **B,** Normal-pressure hydrocephalus. (**B,** From Grossman RI, Yousem DM: *Neuroradiology: the requisites,* ed 3, St. Louis, 2010, Mosby/Elsevier.)

Most cases of hydrocephalus are a result of developmental malformations. Although the defect usually is apparent in early infancy, it may become evident at any time from the prenatal period to late childhood or early adulthood. Other causes include neoplasms, CNS infections, and trauma. An obstruction to the normal flow can occur at any point in the CSF pathway to produce increased pressure and dilation of the pathways proximal to the site of obstruction.

Developmental defects (e.g., Chiari malformations, aqueduct stenosis, aqueduct gliosis, and atresia of the foramina of Luschka and Magendie [Dandy-Walker syndrome]) account for most cases of hydrocephalus from birth to 2 years old. Hydrocephalus is so often associated with myelomeningocele that all such infants should be observed for its development. In the remainder of cases, there is a history of intrauterine infection, hemorrhage, and neonatal meningoencephalitis. In older children, hydrocephalus is most often a result of intracranial masses, intracranial infections, hemorrhage, preexisting developmental defects (e.g., aqueduct stenosis, Chiari malformation), or trauma.