# Cerebral Malformations

## Hydrocephalus

Hydrocephalus is a condition caused by an imbalance in the production and absorption of CSF in the ventricular system. The causes of hydrocephalus are varied, but the result is either (1) impaired absorption of CSF fluid within the subarachnoid space, obliteration of the subarachnoid cisterns, or malfunction of the arachnoid villi (**nonobstructive** or **communicating hydrocephalus**) or (2) obstruction to the flow of CSF through the ventricular system (**obstructive** or **noncommunicating hydrocephalus**) (Kinsman and Johnston, 2016). Any imbalance of secretion and absorption causes an increased accumulation of CSF in the ventricles, which become dilated (ventriculomegaly) and compress the brain substance against the surrounding rigid bony cranium. When this occurs before fusion of the cranial sutures, it causes enlargement of the skull and dilation of the ventricles (Fig. 27-7). In children younger than 12 years old, previously closed suture lines, especially the sagittal suture, may become diastatic or opened. After 12 years old, the sutures are fused and will not open.