evidence of irreversible brain damage has a survival rate of about 80%, with most deaths occurring within the first year of treatment (Paulsen, Lundar, and Lindegaard, 2010). Those with poor outcomes include children shunted for post hemorrhagic hydrocephalus or meningitis. Most children who require shunting must depend on the shunt for the remainder of their life.

Nursing Care Management

An infant with suspected or confirmed hydrocephalus is observed carefully for signs of increasing ventricular size and increasing ICP. In infants, the head is measured daily at the point of largest measurement, the frontooccipital circumference (see Chapter 4 for technique). To avoid the likelihood of wide discrepancies, the point at which the measurements are taken is indicated on the head with a marking pen. Fontanels and suture lines are palpated for size, signs of bulging, tenseness, and separation. Irritability, lethargy, seizure activity, and altered vital signs and feeding behavior, may indicate an advancing pathologic condition.

In older children, the most valuable indicators of increasing ICP are alterations in the child's LOC, complaint of headache, and changes in interaction with the environment. Changes are identified by observing and comparing present behavior with customary behavior, sleep patterns, developmental capabilities, and habits obtained through a detailed history and a baseline assessment. This baseline information serves as a guide for postoperative assessment and evaluation of shunt function.

The nurse is responsible for preparing the child for diagnostic tests such as MRI or CT scan and for assisting with procedures such as a ventricular tap, which is often performed to relieve excessive pressure and to obtain CSF for examination. Sedation is required because the child must remain absolutely still during diagnostic testing (see Chapter 5).

Nursing Alert

If surgery is anticipated, intravenous (IV) lines should not be placed in a scalp vein on a child with hydrocephalus.

Postoperative Care