

INTRACRANIAL PRESSURE /SHUNT

Policy

An increase in intracranial pressure (ICP) occurs when the flow of Cerebral Spinal Fluid (CSF) is obstructed. It is important for staff to recognize symptoms that indicate an interruption of the flow of CSF.

Objectives

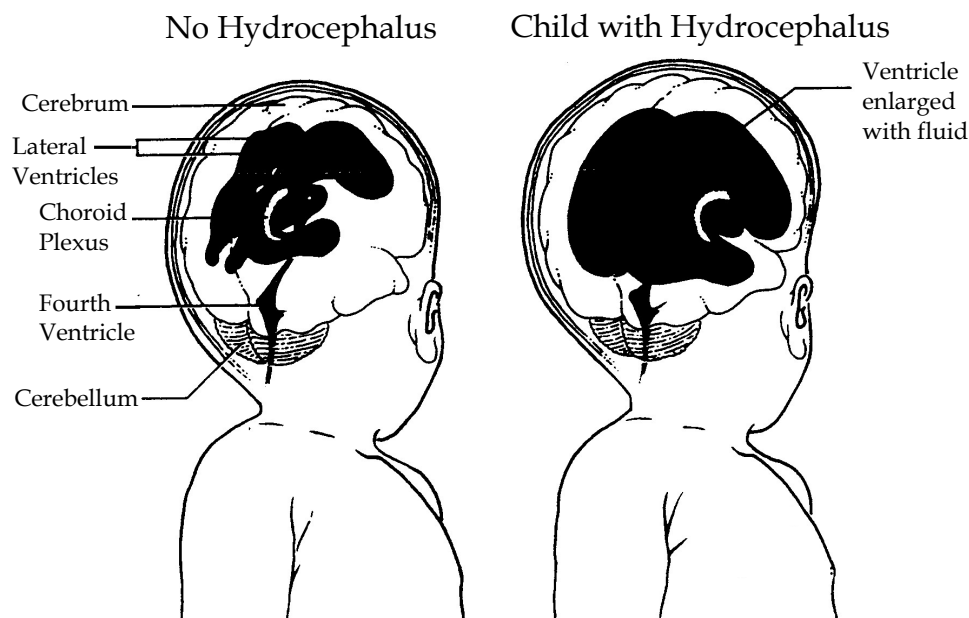
- To understand how a shunt works.
- To help identify and report the signs and symptoms of increased ICP

Overview

Cerebral Spinal Fluid (CSF) is produced in the ventricles. The brain literally floats in CSF and protects it from minor and moderate trauma.

Flow of CSF can be obstructed by congenital malformations, infections or tumors encroaching on the ventricular system. It causes an abnormal collection of fluid within the cavities or ventricles of the brain. This condition of overly filled ventricles is called **hydrocephalus** or water on the brain. This leads to an increase in intracranial pressure which can become life threatening. The treatment to relieve this is a **shunting** procedure, which provides an alternative route for the return of CSF to the circulation, thus preventing a build up of CSF in the cranium.

*The Ventricular System of the Brain
When the spinal fluid does not circulate
normally the ventricles enlarge and
hydrocephalus results*



Signs and Symptoms

As a regular part of the care of a client with a shunt certain observations can be made about the malfunctioning of the shunt.

- irritability
- increased drowsiness
- decline in the inability to wiggle toes
- decline in the ability to grasp
- abnormal posturing
- increase in temperature
- vomiting
- possible seizure
- bulging fontanelle (in infants)
- bulging eyes
- headaches
- cerebral spinal fluid leaks, clear or blood tinged fluid from the ears and nose
- decreased level of consciousness

If you notice or suspect a malfunctioning shunt inform the Nurse Clinician immediately as medical attention will be necessary.

Shunts

A shunt is required to allow the continuous drainage of CSF and prevent hydrocephalus.

A shunt is a thin, flexible tube with a valve. It is positioned in the brain to drain excess fluid out of the head. The fluid is shunted elsewhere in the body (usually into the abdominal cavity) where it is absorbed into the bloodstream. If fluid builds up, the valve of the shunt opens. The valve shuts when the pressure goes down to normal levels.

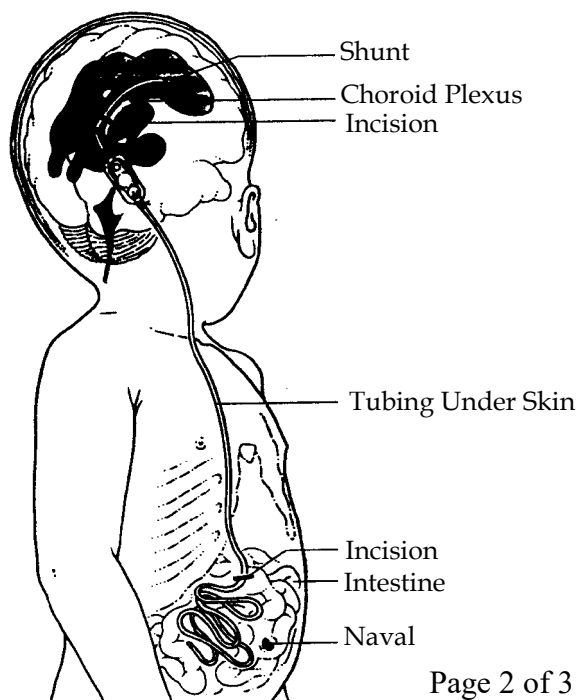


Figure 6

Child after Shunt Surgery

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