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POST-HAEMORRHAGIC HYDROCEPHALUS

fact sheet

Post-haemorrhagic hydrocephalus occurs in infants who have had a grade 3 or 4 intraventricular haemorrhage (IVH).

What causes post-haemorrhagic hydrocephalus (PHH)?
This is due to the blood clot from the haemorrhage blocking the flow of the cerebrospinal fluid (CSF) flowing around the brain and down the spinal cord, resulting in too much fluid collecting in the ventricles.

What are the chances of my baby getting this condition?

Previous Grade 3 haemorrhage	20-50% of infants will get PHH
Previous Grade 4 haemorrhage	50-60% of infants will get PHH

What symptoms may my baby have?

Symptoms that may indicate PHH include:
- Increasing head circumference
- Poor feeding
- Irritability
- Vomiting
- Reduced activity

How do we treat PHH?

Regular cranial ultrasounds are performed every week to follow the size of the ventricles. We will also measure your baby's head circumference several times a week.
If the ventricles become excessively enlarged and the head circumference is increasing, a therapeutic lumbar puncture will be performed to remove excess fluid.
A lumbar puncture is a way of draining the excess fluid by inserting a small needle between the vertebrae (bones of the spine) into the spinal canal below where the spinal cord ends. Fluid then drains out through the needle. This procedure may take up to 20 minutes for enough fluid to be removed. Therapeutic lumbar punctures may be performed several times to reduce the pressure the fluid can place on the brain.
Lumbar punctures are successful in managing post-haemorrhagic hydrocephalus in 50% of cases. In some cases not enough fluid can be drained by the lumbar puncture. In other cases the fluid continues to accumulate and further treatment is required.

If the lumbar punctures do not relieve the pressure then a ventricular reservoir or ventriculo-peritoneal shunt (VP shunt) may be required.

A ventricular reservoir is a tube that is placed directly into the ventricle. The tube is attached to a disc which is placed outside or under the scalp. When necessary, fluid can be withdrawn from the disc by a small needle. This is performed if the baby is too small for a VP shunt or the cerebro-spinal fluid (CSF) has too much protein and would block a VP shunt. This is a temporary solution and the baby may need a VP shunt later.

A VP shunt is a long tube with a valve. One end is placed into the ventricle and the tube tunnelled under the skin behind the ear, down the neck and chest into the abdominal cavity (peritoneum). The CSF drains into the abdomen and is reabsorbed by the body.

If a ventricular reservoir or VP shunt is required, the medical staff will discuss this with you in more detail.

What are the long-term consequences of post-haemorrhagic hydrocephalus?
Due both to the haemorrhage and the hydrocephalus there can be long term implications for your infant's development both intellectually and physically. These will be discussed with you by the medical staff.

All babies who have had post-haemorrhagic hydrocephalus are enrolled into our NICU Growth and Development Clinic. Your baby will be assessed at 8 and 12 months of age and at 3 years of age. If any problems are seen when examining your baby we help arrange extra support through various community services to assist your child.

If you have any further questions please ask the medical and nursing staff.

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