



SECTION 12: CARE OF THE CHILD WITH NEUROLOGICAL OR NEUROSURGICAL CONDITION

12.4 Ventriculoperitoneal Shunt

12.4.1 Ventriculoperitoneal (VP) Shunt – Insertion or Revision

Aim

To promptly identify complications and implement timely treatment.

Complications post VP Shunt insertion/revision¹

- Blockage
- Disconnection
- Infection
- Ileus/peritonitis
- Haematoma

Key Points

- This procedure is to be read in conjunction with:
 - [Preoperative Procedural Care](#) (PNPM 8.1.2)
 - [Neurological Observations](#) (PNPM 3.1.7)
 - [Surgical prophylactic antibiotic protocol.](#)
- Implement latex precautions for patients at risk (eg. patients with spina bifida).
- Consider appropriate comfort measures/pain relief. Non-steroidal anti-inflammatory analgesia (NSAID) may be considered 24 hours following surgery **only** after discussion with the neurosurgical Registrar or Consultant.

Procedure	Additional Information
<p>Pre-operative; Record baseline or hourly full neurological observations (FNO) on the appropriate age chart (MR872). Complete and document all vital signs on the CEWT chart.</p>	

Procedure	Additional Information
<p>Post-operative: Refer to post-operative notes for specific instruction otherwise:</p> <ul style="list-style-type: none"> • Record one hourly FNO for 24 hours.² • Contact neurosurgeon/registrar immediately if any change in GCS/ neurological status. • Report fever >38.5 to neurosurgeon/ registrar.² • After the first 24 hours, discuss the ongoing frequency of FNO with the surgeon or neurosurgical registrar. 	<p>FNO see: Neurological Observations</p>
<p>Wound(s):</p> <ul style="list-style-type: none"> • Check head/abdominal dressings at least once per shift. 	
<ul style="list-style-type: none"> • Keep wounds dry and change dressing when: <ul style="list-style-type: none"> – excess ooze is present – the dressing becomes wet or soiled • Contact the neurosurgeon/registrar for review if excessive ooze is present. 	<p>Refer to PNPM 9.3.1 Simple Dressing.</p> <p>May indicate CSF leakage, shunt malfunction or blockage.</p> <p>CSF leak is associated with increased risk of shunt infection.³</p>
<p>Pain</p> <p>Perform and document regular pain assessments on the CEWT chart:</p> <ul style="list-style-type: none"> • Monitor effects of analgesia • Report increasing abdominal pain or headaches to neurosurgeon. 	<p>Continuous analgesia to be documented on the Pain Assessment & Management Record as per APS protocol.</p> <p>NSAID's may be considered 24 hours post surgery on the instruction of the neurosurgeon only.</p>
<p>Diet and Fluids</p> <ul style="list-style-type: none"> • Check that bowel sounds are present prior to commencement of fluids.³ • Introduce fluids slowly progressing to diet as tolerated. 	<p>Insertion or revision of a VP shunt can cause postoperative ileus or peritonitis.</p>

Procedure	Additional Information
<p>Discharge:</p> <ul style="list-style-type: none"> • Prior to discharge remove the wound dressing(s) for review by the neurosurgeon/Registrar. • Re-apply dressing(s) following review. <p>Provide patient/carer with verbal/written information:</p> <ul style="list-style-type: none"> • Signs and symptoms of shunt malfunction, blockage and infection. • Wound care: <ul style="list-style-type: none"> – Keep dry for 7 days. – Non-dissolvable sutures or staples are usually removed 7 to 10 days post surgery unless otherwise requested by the neurosurgeon. – Note: Dissolvable sutures may be present. 	<p>Refer to procedure for Removal of sutures/staples PNPM 9.5.2.</p>

Related policies, procedures and guidelines.

[Neurological Observations](#)

Resources.

[Spina Bifida and Hydrocephalus Association WA](#) (SBHAWA). Provides information and support services for individuals, families and carers affected by Spina Bifida and/or hydrocephalus.

[Hydrocephalus: Child and Youth Health](#), Women's and Children's Health Network, Government of South Australia

References:

1. Spina Bifida and Hydrocephalus Association SA Inc. Hydrocephalus. 2013 Available from: <http://www.spinabifida.asn.au/Hydrocephalus.aspx> Accessed February 2014
2. Lee S. Consultant Neurosurgeon. Princess Margaret Hospital for Children. Personal Communication [Expert Opinion]. February 2014
3. Women and Newborn Health Service. Insertion or Revision of Ventriculoperitoneal Shunt. Neonatology guidelines. 2010. Available from: <http://www.kemh.health.wa.gov.au/services/nccu/guidelines/documents/7372.pdf> Accessed December 2013.

Bibliography:

Hydrocephalus Association USA. Life-Threatening Complications of Hydrocephalus. Bethesda MD, USA. Available from: <https://www.hydroassoc.org/hydrocephalus-education-and-support/learning-about-hydrocephalus/life-threatening-complications-of-hydrocephalus/> Accessed March 2013


University Hospital Southampton NHS Foundation Trust. Hydrocephalus: Patient information factsheet. 2011

Scottish Intercollegiate Guidelines Network (SIGN). Early Management of Patients with a Head Injury Section 7: Inpatient observation. <http://www.sign.ac.uk/guidelines/fulltext/46/section7.html> 2000. Accessed: 1 December 2006

Government of South Australia. Child and Youth Health. Hydrocephalus. Women’s and Children’s Health Network (WCHN). Available from: <http://www.cyh.com/healthtopics/healthtopicdetails.aspx?p=114&np=304&id=2679> Accessed March 2014

Mooney, G.P. & Comerford, D.M. Neurological Observations. Nursing Times 2003; 99(17)24-25

Joanna Briggs Institute. Observations Neurological: Recommended practice. <http://www.joannabriggs.edu.au/isearch/index.php> 2005. Accessed: 1 December 2006

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