

Myelomeningocele

A neural tube defect found before or at birth

Myelomeningocele

Special terms

Myelo

The spinal cord and nerves.

Meninges

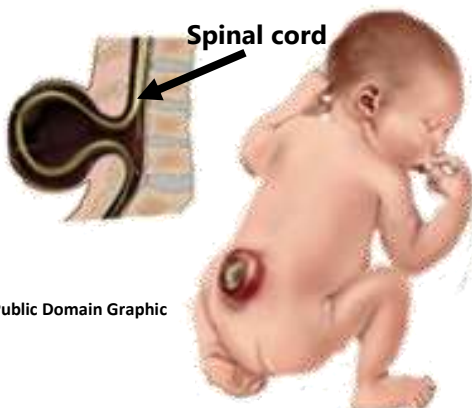
The protective membrane covering the brain and the spinal cord.

Neural tube defect

The neural tube is a protective tube around the spinal cord and brain. It closes by week 6 of pregnancy. A neural tube defect happens when the tube does not close all the way.

Meningocele

Because of this opening, a baby is born with a defect of the spine and spinal cord. The meninges and spinal cord develop outside of the body through this defect in the bony spine opening in the skin. We call this a meningocele.



CDC Public Domain Graphic

Picture of infant with myelomeningocele

Early diagnosis

We can see this defect on a fetal ultrasound or MRI.

Problems in different areas of the body

Depending where the defect is on the spinal cord, the baby may have decreased control of:

- Legs: May not be able to walk without help.
- Bladder: We may need to empty bladder with a catheter.
- Bowel: May leak stool (poop) and become constipated.

Other problems include:

- Developmental problems
- Hydrocephalus or chiari malformation

Closing the myelomeningocele

24 to 48 hours after birth

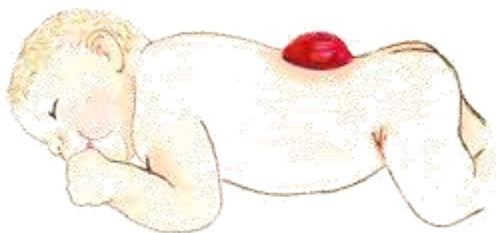
Goal of neurosurgery team

- To close the spinal opening in the back.
- To promote healing of the skin following the closure.
- To continue to follow the infant for signs of hydrocephalus.
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Care after myelomeningocele surgery

Positioning

Positioning is very important for healing. Your baby cannot lay on their back for 7 to 14 days.



Baby must lay flat on stomach or side

Incision

No dressing on incision: In NICU, we will keep the incision area open. It is important for your neurosurgery team to watch this area for any leaking or infection.

Stitches: Will dissolve in 4 to 6 weeks.

Staples: We may use staples to close the defect.

Diaper

Your baby will not have a diaper. The NICU team will use absorptive pads under your baby.

Holding your baby

The NICU team will help you hold your baby. It is important to keep your baby flat.

Discomfort

We will have pain medicine to keep your baby comfortable. Your doctor will explain what pain medicines are best for your baby.

Bladder catheterizations

Babies with myelomeningoceles often have problems emptying their bladder. An over-filled bladder can cause infections and kidney problems. The NICU team will check the absorptive pads under your baby for urine.

It may be necessary to use a catheter to empty your baby's bladder.

- We place a small soft tube called a catheter into the bladder to drain urine.
- We may need to catheterize your baby several times a day.
- Your NICU team will adjust the times according to your baby's needs.

Cerebrospinal fluid (CSF)

CSF is a clear, watery fluid. It is continuously made in the spaces inside of the brain called the ventricles.

- CSF flows out of the ventricles and circulates around the brain and spinal cord.
- The blood vessels of the brain reabsorb CSF into the bloodstream.

Repairing the myelomeningocele can block and stop the normal flow of CSF.

Hydrocephalus

When the usual pathway of CSF is blocked, CSF will start building up inside the ventricles. The ventricles will become larger. We call this hydrocephalus. As the ventricles grow in size, your baby's head will start looking bigger.



Hydrocephalus occurs in up to 80% of babies with myelomeningoceles.

Pressure develops on brain if not treated

The increased fluid in the ventricles will start placing pressure on the delicate brain tissue. This can cause serious health problems, even death. A head ultrasound will help us keep track of the size of your baby's ventricles.

Shunt surgery for hydrocephalus

This is the most common treatment for hydrocephalus.

The shunt is a small tube. We place one end in the ventricles to drain off excess CSF. We place the other end of the tubing down into an area of the body where the CSF is absorbed.

The neurosurgery team will discuss the shunt procedure with you before surgery.

Before going home

Follow-up appointments

We will schedule all follow-up appointments before you go home.

Catheterizations

We will teach you how to perform bladder catheterizations and when to follow-up with the urology team.

Incision care

We will give you more information on how to take care your baby's surgical incision. This will include:

- When and how to give your baby a bath.
- Possible problems to watch for and what to do.

Shunt surgery for hydrocephalus

If your baby needs a shunt, we will give you more information on:

- Hydrocephalus.
- Shunt surgery for treating hydrocephalus.
- Caring for your infant after shunt surgery.

Neurosciences

For locations and contacts visit:

cookchildrens.org/services/neurosciences/contact-us/ or



are only general guidelines. Your healthcare provider will provide specific instructions. If you have questions or concerns, contact your healthcare provider.