ELBOURNE NEUROSURGERY

PROCEDURE INFORMATION

VENTRICULO-PERITONEAL SHUNT



www.neurosurgery.com.au

WHY DO YOU NEED A SHUNT INSERTED?

The fluid filled cavities in the middle of the brain (ventricles) produce a fluid called cerebrospinal fluid(C.S.F.). This washes the brain and the brain floats in it. The C.S.F. is normally absorbed after it travels through the middle of the brain and over the surface of the brain. If it is not absorbed it still gets produced and the pressure builds up inside the head and the ventricles get bigger.

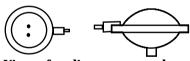
This is called hydrocephalus (water on the brain).

WHAT IS A SHUNT?

A SHUNT is a plastic tube with a valve in the middle that carries the fluid from where it is building up to another place for it to be absorbed.

WHAT IS A VENTRICULO-PERITONEAL (V.P.) SHUNT?

The lining around the bowel in the abdomen (peritoneum) is covered with a membrane that will absorb fluid. In a V.P. shunt the tubing runs from the ventricle to the peritoneum under the skin. The valve that controls the pressure usually sits as a small bump under the skin behind the right ear. The tubing and the valve are able to be felt under the skin but not usually seen.



Views of medium pressure valve

WHAT YOU NEED TO TELL THE DOCTOR BEFORE SURGERY?

If you have clotting problems.

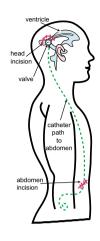
Any recent new Health problems.

If you are taking blood thining agents.

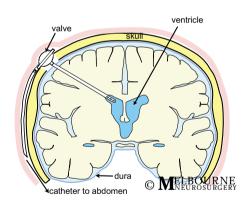
e.g. Warfarin/aspirin/anti- inflammatory

Drug or other allergies

HOW IS IT PERFORMED?



In the operating theatre you are given a general anaesthetic. The area of the incision on the head and abdomen is then shaved and prepared with anti-septic. You are covered in drapes so that only the incisions and the area between can be seen. Local anaesthetic is injected and then the skin is cut. A hole in the bone of the skull is drilled down to the dura. The incision in the abdomen is the opened and we dissect down to the space around the bowel (peritoneal space). A tube is tunnelled under the skin between the two incisions.



A small hole is made in the dura and brain and we push a blunt catheter through the brain down to the ventricles. The catheter to the abdomen is fed down the tube. The two catheters are then connected to the valve. Once inserted all bleeding is stopped. Everything is then repositioned the way we found it. The valve is sutured to

repositioned the way we found it. The valve is sutured to stop it moving. The skin is then closed either with nylon suture or with special staples.

WHAT HAPPENS NEXT?

You will wake up in recovery and after about 1 hour you will be transferred to the ward. The nursing staff will be continually checking your pulse/blood pressure/limb strenghts and level of alertness looking for any changes to indicate a complication. During the first night on the ward you will be woken for these observations. You will have intramuscular and oral analgesia. Operations on the head do not often hurt much. You will not be able to eat or drink until we are sure the bowel is working.

Sometimes you will have difficulty passing water and you may require a catheter(this may have been inserted for the operation).

Usually the day after surgery the drip in your arm will be removed. The first day after surgery you may have to stay in bed. The next day you will be encouraged to go for a walk. Gradually over the next two days you will be able to get around as normal. When you are comfortable you will be able to go home. You may have a repeat scan of your head before going home. Commonly you will have a headache for a while after the operation. The sutures are usually removed about 5 - 10 days after the surgery.

HOW LONG WILL YOU BE IN HOSPITAL?

Unless you have been admitted as an emergency you may be admitted on the day of surgery or the day before. You will fast from midnight on the day of surgery.

You will be discharged about 4-6 days post-operatively. On discharge you will be able to perform most tasks of daily living (e.g. showering/dressing/etc.) Depending on how quickly you recover from any preoperative disability you may require rehabilitation.

WHAT YOU SHOULD NOTIFY YOUR DOCTOR OF AFTER SURGERY

Increasing Headache

Fever

Fitting

Swelling or infection in the wound.

Fluid leaking from the wound.

Weakness or numbness

Drowsiness

Worsening Balance

WHAT HAPPENS WHEN YOU GO HOME?

You may be tired

It is common to require a rest in the afternoon

You may have intermittant headaches.

These will all improve with time.

You will not be able to drive for 3 months.

You will be reviewed at 4 - 6 weeks post operatively.

The shunt will grow with you.

You will be able to live almost normal life.

WHAT ARE THE RISKS?

Discuss these and others with your surgeon

THE COMMON RISKS ARE

Blockage

Infection Meningitis

Peritonitis

Skin infection

Post operative blood clot requiring drainage.

Stroke from the catheter damaging the brain.

Seizure

Death (rare)

Hernia or damage to bowel.

Clot in the legs(can travel to the lungs[uncommon])

Complication not related directly to the surgery

e.g. Pneumonia

Heart attack

Urine infection

COULD THE SHUNT EVER STOP WORKING?

YES Different parts of the shunt may fail. The catheter in the brain or abdomen may block with tissue. The valve may block with debris. Any of these will cause the shunt to either completely block or work at a higher pressure.

WHAT HAPPENS IF IT BLOCKS?

Sometimes nothing at all if the shunt was only needed for a short time.

Usually your pre-operative symptoms may recur but the common symptoms of blockage are

Headache

Vomiting/nausea

Mental deterioration

Fits

IF YOU THINK YOUR SHUNT IS BLOCKED YOU MUST CONTACT YOUR SURGEON OR HOSPITAL URGENTLY.

YOU WILL BE ASKED TO SIGN A CONSENT FORM TO SAY THAT YOU UNDERSTAND THE RISKS.
IF YOU ARE NOT SURE ASK BEFORE YOU SIGN.



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