Transjugular Intrahepatic Portosystemic Shunt (TIPSS)

Why do I need a TIPSS?

Normally the blood from your gut returns in veins via the liver to the heart. The largest of these veins is called the Portal Vein. Due to the disease in your liver there is increased pressure in your blood vessels. This means the blood struggles to flow through them and is forced to find alternative routes to reach your heart. One of these routes uses the veins in the bottom of your gullet. These veins start to carry more blood and become enlarged, leaky and can bleed easily. These distended veins are called varices. If the varices start to bleed, this can lead to a very dangerous loss of blood.

The distended and bleeding vein can be prevented from bursting by placing an elastic type of band over it. If this operation does not control the bleeding your doctor may have to consider other alternatives to reduce the pressure, such as a TIPSS procedure.

A TIPSS procedure may also be suggested if you have excessive accumulation of fluid (ascites) in the abdomen. This is common in patients who have disease in their liver, especially patients with cirrhosis. When treatment options such as diuretic medicines and surgical draining of the fluid (paracentesis) are unable to keep the level of fluid in the abdomen to a normal level, a TIPSS insertion can be helpful.

What is a TIPSS?

The TIPSS procedure inserts a shunt or tube into the liver through a vein in the neck; this is done using a needle. The shunt, or stent, is usually made of metallic mesh coated with strong fabric. It is wider than the normal blood vessels allowing blood to flow through the liver. This means less blood flows through other veins, which decreases the pressure, lowering the risk of bleeding.

What happens before the procedure?

The procedure takes place in the interventional radiology department as it uses x-ray and ultrasound guidance. You will be admitted to hospital on the day of, or the day before, the TIPSS insertion. A doctor will talk to you about different aspects of your health. If you have any allergies, you must let your doctor know.
The interventional radiologist, a doctor trained specially in carrying out this surgery, will go through the procedure with you and answer any questions that you may have.

Before the TIPSS procedure you will be given a general anaesthetic so that you cannot feel the shunt being inserted. You will meet the anaesthetic team on the evening before, or on the morning of, the procedure and will be able to discuss any concerns or preferences with them.

**What happens during the TIPSS procedure?**

The TIPSS procedure will take about two hours although it can be longer in some cases. It is a sterile procedure and so your doctor will wear an operating gown and gloves. As well as the radiologist and the anaesthetic team, there will also be a radiology nurse and a radiographer (responsible for taking x-rays), looking after you. The shunt will be inserted through a vein in your neck using a needle.

**What happens after the procedure?**

You will wake up in bed on a recovery ward before being brought back to your ward. The nurses on these wards will look after you and check your recovery by measuring your blood pressure and pulse. It can take a few hours before you will feel fully awake. If you experience any pain or sickness, let the nursing staff know.

When you have recovered a dietician will discuss some changes you will need to make in your diet such as eating less salt. In most cases the stent remains in place for the rest of your life.

You will need to attend regular ultrasound scans at the x-ray department to check the stent is working and has not become blocked. In some circumstances, for example Budd Chiari syndrome, we may recommend a more formal annual check of the stent. The stent should decrease the pressure in the distended veins, decreasing the fluid in your abdomen and reducing the risk of bleeding.

**What are the risks and potential complications?**

- Sometimes the liver is too hard for the shunt to be inserted into it.
- The blood vessels are distended and fragile, so there can be bleeding during or after the operation. If there is significant bleeding you may require a blood transfusion and an additional procedure called an angiogram to get an image of the blood vessels.
- There may be bruising around the neck area where the needle and other instruments went through the skin, although this will fade within a few days.
- There may be some tenderness around the right side of your tummy (abdomen) but you should not be in pain after the procedure.
- The shunt means that some blood bypasses the liver so not all waste products from the gut will be removed. When significant amounts of waste reach the brain these can cause confusion, (known as hepatic encephalopathy). This occurs in three out of every ten patients having the procedure. The confusion often settles on its own or with the help of medicines, but if it is severe then the shunt may need to be reduced or blocked off and other options considered.
• Sometimes the stent can become blocked after a while. If this happens, a revision procedure will be needed to clear the stent blockage.

Contacts

If you have any concerns or questions about this proposed treatment, or if you feel unwell during treatment, please contact one of the medical teams caring for you or one of the hepatology specialist nurses.

In an emergency out of office hours, please phone the Addenbrooke’s switchboard on 01223 245151 and ask the operator to bleep the hepatology registrar on call.

Other sources of information

This leaflet is just part of the information you will receive. Your doctors should explain more about the options available and what happens in the procedure. Ask any questions you have before deciding to sign the consent form. You can also obtain more information from the hepatology specialist nurses.

For more reading please look at the following websites:
• The Royal College of Radiologists - www.rcr.ac.uk
• NHS Direct - www.nhsdirect.nhs.uk

Privacy & Dignity

Same sex bays and bathrooms are offered in all wards except critical care and theatre recovery areas where the use of high-tech equipment and/or specialist one to one care is required.

This document has been modified from one prepared by the Clinical Radiology Patients' Liaison Group (CRPLG) of The Royal College of Radiologists and the British Society of Interventional Radiology (BSIR). The modifications have been undertaken by the Hepatology and Interventional Radiology departments at Cambridge University Hospitals NHS Foundation Trust.
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Other formats:

If you would like this information in another language, large print or audio, please ask the department where you are being treated, to contact the patient information team: patient.info@addenbrookes.nhs.uk.

Please note: We do not currently hold many leaflets in other languages; written translation requests are funded and agreed by the department who has authored the leaflet.

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