

Radiology Department

# TIPSS procedure

## (Transjugular Intrahepatic Porto-Systemic Shunt)

Information for patients



This is a major procedure to place a small tube (stent) between the blood vessels that feed and drain the liver. The liver disease you have is blocking the flow of blood in the area, leading to high pressure. The procedure will relieve this. It is carried out by an experienced X-ray doctor called a Radiologist in the X-ray department.

This leaflet tells you about the TIPSS procedure and what the risks are. This will add to the discussions you have with your doctors so that you have all the information you need before you sign the consent form.

## What is a TIPSS procedure?

The best way of describing what TIPSS is, is to explain what the letters stand for.

**T** is for **TRANSJUGULAR**. This means that the radiologist will put a fine, hollow needle into the jugular vein in your neck while you are asleep. Through this needle the radiologist will pass a fine, thin wire until it reaches the veins from your liver. Over this wire the radiologist will pass a fine plastic tube called a catheter, about the size of a very long piece of spaghetti.

**I** is for **INTRAHEPATIC** (into the liver). The catheter will be passed down one of your liver veins into the liver itself. The radiologist will then take the wire out and insert a long curved needle.

**PS** is for **PORTOSYSTEMIC**. The long needle will be pushed from your liver vein (or **systemic** vein) into your **portal** vein, which lies close to it. It is this portal vein which has become partially blocked up by your liver disease. Because of the blockage, there is high blood pressure in this part of your circulation, and this procedure is designed to relieve this.

**S** is for **SHUNT**. Once the needle has been passed between your liver vein and the portal vein, a wire will be passed through the needle and the needle withdrawn. Over the wire the radiologist will pass a metal spring called a stent. This stent will expand to create a channel between the two veins. Blood will then flow from the high-pressure portal vein into the low-pressure liver (or systemic) vein. The high pressure in the portal vein which is causing the problem will consequently be reduced, back towards normal.

## Why do I need a TIPSS?

The disease you have in your liver is blocking the flow of blood in the blood vessels and is causing the pressure to increase in the liver circulation. This may cause you to develop extra veins, like varicose veins, in your abdominal blood vessels. These may bleed and you may have vomited blood.

The doctors caring for you may have tried other methods to lower this pressure or stop the bleeding, which may not have worked. They will have discussed your care with the radiologist and decided that this is the best treatment to avoid a further major bleed into your gut – which may be life-threatening. The other main reason for creating a TIPSS is if there is a large volume of fluid (ascites) accumulating in the abdomen that is requiring very frequent drainage.

This decision will be discussed with you and you will have the opportunity to ask any questions. It is your decision to decide whether to consent to this procedure.

## What are the risks and complications?

- Sometimes the doctors are unable to place the stent as the liver has become quite hard and the needle used will not pass through it.
- Serious bleeding may be a major problem as a result of the delicate nature of the blood vessels in liver disease. You may need to revisit the X-ray department to have a second procedure to block the large varicose veins in your gut (embolization).
- Bleeding may occur from the liver which may require a blood transfusion.
- Bruising may occur at the entry site in your neck. This should subside in a day or two.

- Because the liver takes waste products out of the blood stream, if too much blood bypasses the liver, the waste products can remain in the blood and can cause you to become confused. If it is severe it may be necessary to block off the TIPSS.

## How do I prepare?

You will be an in-patient in hospital. You will not be able to have anything to eat or drink ('nil by mouth') for 4 hours before the procedure. A cannula, which will be used to give you pain killing medication and sedation, will be placed into a vein your hand. You will need to have antibiotics as a precaution against infection. You will be given either a general anaesthetic, or local anaesthetic with sedation. If you have any allergies please make sure you tell the medical team caring for you.

## What happens during the procedure?

You will change into a hospital gown and be taken to the X-Ray department on a trolley. The procedure will be carried out under sterile conditions to keep the risk of infection to a minimum.

The anaesthetist will put you to sleep if you are having general anaesthetic. If you are having local anaesthetic you will be given sedation and painkillers throughout the procedure to keep you comfortable. Your blood pressure, heart rate and oxygen levels will be continuously monitored.

It is unlikely that you will remember much about the procedure as one of the medications used has an amnesiac property – causing loss of memory. You will be taken back to the ward where the nursing staff will continue to monitor you.

## What happens next?

You will be asked to attend the ultrasound department or need injections of X-ray dye through the TIPPS regularly for up to five years to check your liver and make sure the stent is not becoming blocked. If this happens you may require a further procedure to stretch the stent with a balloon. If you have a liver transplant you will be monitored by the ultrasound department until this happens.

## How to contact us

If you have any questions or concerns, you may telephone the number on your appointment letter.

## Further information

[www.rcr.ac.uk](http://www.rcr.ac.uk) – Royal College of Radiologists

[www.cirse.org](http://www.cirse.org) – Cardiovascular and Interventional Society of Europe

[www.bsir.org](http://www.bsir.org) – British Society of Interventional Radiology



If you need an interpreter or need a document in another language, large print, Braille or audio version, please call **01865 221473** or email **PALSJR@orh.nhs.uk**

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