

Radiology Department

TIPSS Procedure: information for patients

Introduction

You have been advised by your hospital consultant that you need to have a Transjugular Intrahepatic Porto-systemic Shunt (TIPSS) procedure. This leaflet explains what is involved and what the possible risks are.

The information may not answer all your questions, so if you have any concerns, please ask the ward staff. If you feel unhappy with any part of your care within the X-ray Department please ask to speak to a senior member of staff.

Please read this leaflet carefully to ensure you are successfully prepared for the examination.

Please contact the X-ray Department if your weight is equal to or more than 205Kg (32 stone) you may require an alternative examination.

Points to remember

- Please bring any sprays or inhalers that you are taking with you to the X-ray Department.
- We also ask you to leave any valuable possessions on the ward.
- If you are taking **Aspirin** or **Warfarin** please inform the ward staff, as this medication may need to be stopped prior to the procedure.

What is TIPSS?

This is a procedure to place a small tube (stent) between the blood vessels that feed and drain the liver.

Transjugular

This means that the radiologist will put a fine, hollow needle into the jugular vein in your neck. The radiologist will pass a fine, thin wire in a straight line, through this needle until it reaches the veins in your liver. This is much easier than you would imagine. Over this wire the radiologist will pass a fine plastic tube called a catheter.

Intrahepatic

The catheter that the radiologist has inserted 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.



Patient Information

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 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.

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has been passed between your liver vein and the portal vein, a wire will be passed through the needle and the needle withdrawn.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 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 in your liver is blocking the flow of blood like a dam, and is causing the blood pressure in the portal vein to rise. Because of this, you may have developed extra veins inside your abdomen, like varicose veins, which may have bled into your stomach, or your gullet. You may have vomited blood. You may also have excessive fluid inside your abdomen. Your gastroenterologist or your surgeon will have tried other methods of stopping the bleeding, or lowering this high portal blood pressure. These probably have not worked. The doctors looking after you will have decided that these other methods of treatment are no longer effective and the best treatment for you now is a TIPSS.

Referral and consent

The doctors in charge of your case, and the radiologist (a specialised X-ray doctor), doing the TIPSS, will have discussed the situation and feel that this is the best option. However, you will also have the opportunity for your opinion to be taken into account. If, after discussion with your doctors, you do not want the procedure to be carried out you can decide against it.

How do I prepare for a TIPSS?

You need to be an inpatient in the hospital.

- The procedure is normally carried out under general anaesthetic and this will have been discussed with you during the consultation with your surgeon/gastroenterologist. In preparation for this you will have a cannula in your arm, through which antibiotics and the anaesthetic medicines can be given.
- You will have had some blood tests before the procedure to check that you do not have an increased risk of bleeding.
- Please do not eat for the 6 hours prior to your procedure time. You can drink water only during this time but must stop 2 hours before your procedure time.
- If you have any allergies or you have previously reacted to intravenous contrast medium, you must let the doctor know. Intravenous contrast medium is the injection we give you during the procedure to highlight the blood vessels in your liver.
- Please let someone know if you have diabetes.
- If you normally take Warfarin tablets and your doctor has not made arrangements to alter this, please contact the Department.

Patient Information

During your examination

- The procedure will be explained to you again by the radiologist and you will be able to ask any further questions that you may have
- In the X-ray department, the anaesthetist, who you will have met already, will put you to sleep. However, if it has been decided not to use a general anaesthetic, then do not worry. An anaesthetist or the radiologist will make certain that you are heavily sedated so that you do not feel any pain, and do not remember the procedure.
- Once you are asleep, you will be monitored throughout the procedure and given oxygen.
- The radiologist will keep everything sterile, and will wear a theatre gown and operating gloves.
- The skin of your neck will be cleaned with antiseptic and the rest of your body will be covered with a sterile drape.
- The radiologist will use X-ray equipment to check exactly where the guide wire, catheter and stent are positioned.
- When you wake up, if you have had a general anaesthetic you will be in the theatre recovery area. You will have a small needle in your arm or hand and probably with a bag of fluid attached to it.
- You may feel some stiffness in your neck where the needle has been inserted.

What happens afterwards?

You will wake up in a theatre recovery ward if you have had a general anaesthetic. You will then be taken back to your ward. Nurses on the ward will carry out routine observations, such as taking your pulse and blood pressure. You will generally stay in bed for several hours or overnight, until you have recovered.

Once you have recovered from the procedure, you will probably feel no different than you did before, except that hopefully, the bleeding which was part of your problem should no longer happen, or the fluid in your abdomen should begin to drain away. It is possible that you will be asked to keep to a new diet. This may have a very low protein and salt content. You must talk to the dietitian if such a diet is recommended. You will also be asked not to drink any alcohol.

Is TIPSS permanent and what happens next?

The stent that the radiologist has put in between your liver vein and your portal vein will stay in for the rest of your life. It can, however, become blocked and in order to prevent this, the radiologist will ask you to attend the X-ray department regularly for ultrasound examinations to check your liver. With ultrasound, the radiologist will be able to see the TIPSS and see if it is becoming blocked.

Risks of the procedure

As with any procedure or operation, complications are possible. We have included the most common risks and complications in this leaflet. The probability of these complications and the risks will be discussed with you before you sign the consent form.

- TIPSS is a very complicated procedure. Generally it is very safe and you are carefully monitored by an experienced anaesthetist or by the radiologist and

Patient Information

other trained staff. However, there are some risks and complications that can arise, as with any medical treatment.

- The biggest problem is being unable to place the stent between the two veins. This can happen sometimes because the liver disease has made the liver very hard, and the needle will not pass through it. If this happens, you may need the open operation.
- Sometimes, even though the TIPSS has been performed satisfactorily, bleeding can continue. This is because the high pressure in the portal vein has made the veins very delicate. If this happens, you may need to go back to the X-ray department and have these veins blocked off with little metal coils. This is a fairly simple procedure and does not require a general anaesthetic.
- Because patients with jaundice are likely to have difficulties with blood clotting, there may be some bleeding from the liver, where the needle was pushed between the two veins. On very rare occasions this may require a blood transfusion. If the bleeding continues, the bleeding blood vessel may need to be blocked off (embolised).
- You may also develop a bruise in your neck, which can be a bit sore for 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 this happens you may require the diet mentioned previously, and if it is severe it may be necessary to block off the TIPSS on purpose.
- There is a small risk (about 1%) that the portal vein flowing into the liver has become very fragile and when the stent/balloons are placed the portal vein can tear and develop a leak outside the liver. If this does happen then a further radiological procedure (stent-graft) or operation will be required to stop the internal bleeding.
- Rarely the contrast medium used can cause deterioration in kidney function, which is usually only temporary but occasionally can be more long term. This is of particular concern for people who already have impaired kidney function. You will have a blood test to assess your kidney function prior to the procedure.

The contrast agent contains iodine and is excreted by the kidneys in your urine. Please inform the radiologist or radiographer:

- If you are allergic to iodine, have any other allergies or suffer from asthma.
- If you have reacted previously to the injection used for kidney X-rays or CT scanning.
- If you have known kidney problems.

Despite these possible complications, the procedure is normally very safe. At all times during and after the procedure the staff will be monitoring your responses to this treatment in order to minimize the effects of any complications.

X-rays are a type of radiation. We are all exposed to natural background radiation every day of our lives; this comes from the sun, food we eat, and the ground. Exposure to X-rays carries a small risk, but your doctor feels that this risk is outweighed by the benefits of having the procedure. We will take all safeguards to minimise the amount of X-rays you receive.

Patient Information

Patients aged 12 – 55 years - could you be pregnant? The risks of radiation are slightly higher for the unborn child so you will be asked to confirm that you are not pregnant before the examination can proceed.

Other sources of information:

For information about interventional radiology including further information about this procedure you can view the British Society of Interventional Radiology website: www.bsir.org/patients

For information about the effects of X-rays read the NRPB publication: “X-rays how safe are they?” on the Health Protection Agency website: www.hpa.org.uk

Please note that the views expressed in these websites do not necessarily reflect the views of UHCW NHS Trust or the NHS.

The Trust has access to interpreting and translation services. If you need this information in another language or format please contact the number on your appointment letter and we will do our best to meet your needs.

The Trust operates a smoke free policy.

Document History

Department	Radiology
Contact Tel No	27161
Published	July 2014
Reviewed	Sep 2018
Review	Sep 2020
Version	3
Reference No	HIC/LFT/1812/14