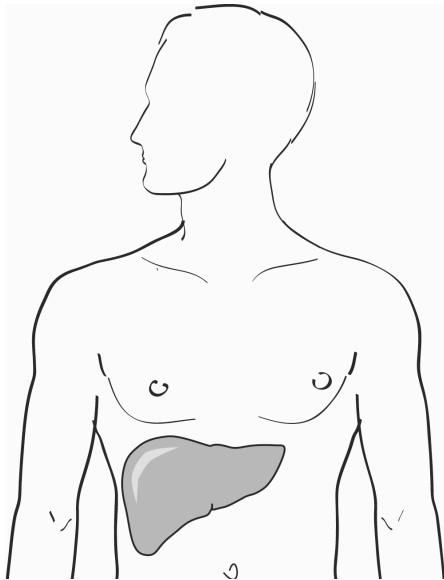


# PTC

## (Percutaneous transhepatic cholangiogram) and biliary drain/ dilatation/ stenting

You have been referred for a percutaneous transhepatic cholangiogram (PTC) by your doctor. This leaflet provides you with general information about this procedure. Please ask us if you are unclear about anything. There is a glossary of the medical terms used at the end.



### **What is PTC?**

A percutaneous transhepatic cholangiogram (PTC) is an examination of the biliary tree, duct and drainage system of the liver with the aid of x-ray. A PTC should identify any potential problems, enabling the doctors to decide upon the most appropriate treatment for you.

### **Where will the procedure take place?**

It is carried out in the Special investigations suite on the ground floor of the Royal Free. The procedure is performed by a radiologist (an x-ray doctor).

### **Before the procedure**

You may be asked to come into hospital the night before the procedure. The nurses on the ward will go through the preparation with you; give you a hospital gown and paper pants to wear, ensure you have a name band on and lock up your valuables. You will see a doctor.

You will have an intravenous line inserted (to give you medication if required) and you may have some additional blood samples taken. On the day of the procedure, you may be given some antibiotics. You will be asked not to eat anything for up to four hours before the procedure. You will be escorted down to the Special suite for your procedure by one of the ward nurses.

## Consent

The doctor carrying out the procedure will explain the procedure and its risks and benefits. You will have a chance to ask questions. The doctor will then ask you to sign a consent form for this procedure and further treatment if necessary.

## The procedure

When you enter the room, we will ask you to lie on your back on the x-ray table where you will be prepared by the nurses.

- You will have a little probe put on your finger. This monitors your pulse and oxygen saturation. You will be given some oxygen via an oxygen mask.
- Your right arm will be moved away from your side and may be put behind your head. The area where the radiologist will carry out the procedure will be exposed.
- The radiologist will perform an ultrasound scan of the liver before s/he starts the procedure.
- We will give you sedation and pain relief.
- During the procedure, you will be covered with a sterile drape to ensure everything is kept clean and sterile.
- Some local anaesthetic (to numb the area) will be injected through the skin into the incision (cut) site in the upper abdomen using the ultrasound guidance.
- A fine needle is then introduced under x-ray guidance. An x-ray camera will come over your

chest area, in order to take the pictures, but it will not touch you.

- The stylet within this needle is then withdrawn and contrast medium (an x-ray dye) is injected in order to locate the bile ducts. You may get a warm feeling when the dye is injected, which is normal and wears away shortly after.
- The doctor may ask you to hold your breath briefly, when s/he wants to take a picture of the bile ducts.

The taking of these pictures is called a cholangiogram, which shows the biliary tree. It is these pictures that would identify any problems such as a narrowing, blockage or obstruction. If any problems are identified, these then may need some intervention. These are some of the interventions that can take place:

### *Biliary drainage*

Biliary drainage is when an external drain (a tube) is inserted in order to drain and remove excess bile from the bile ducts. This is done if the bile ducts become blocked or obstructed and is done to prevent infection, jaundice and skin itching.

### *Biliary dilatation*

Biliary dilatation is when the stricture (narrowing) within the bile ducts is opened up with a balloon attached on the end of a catheter. This balloon is inflated a number of times at the point of narrowing in order to open it up.

A drainage catheter may be inserted afterwards if necessary.

### *Biliary stenting*

Biliary stenting is when a plastic or metallic stent is placed across the stricture (narrowing) in order to open up that narrowing or to drain off excessive fluid.

### **Pain**

During the procedure, you normally feel pushing as catheters and drains are inserted inside you. If you experience some discomfort or pain, you can have some more analgesia (painkillers) injected into your vein – tell the doctor. You will also get some sedation to relax you.

### **Length of procedure**

The procedure time can vary depending on what is being done. A PTC alone usually takes from 30 minutes to 1 hour. Biliary dilatation/stenting takes from 45 minutes to 1 hour 30 minutes.

### **Risks**

As with any procedure, there are risks; and complications can occur. Some of the complications associated with the procedures are:

- Slight pain - for which you will be given pain controlling drugs.
- Infection can occur within the bile ducts, but to prevent this you will be given antibiotic cover.

- Bleeding can occur post procedure but the ward nurses will carry out regular observations on you to check for this.
- If a drain or a stent is inserted, this could become blocked, and may have to be re-opened again.

### **After the procedure**

After the procedure, you first go to the recovery bay to have your vital observations (blood pressure, pulse and oxygen saturations) measured. When you are stable, your ward nurse will come to collect you. You will be on bed rest for a few hours and you will be closely monitored again for your blood pressure, pulse, temperature and incision site. You should tell the nurses on the ward about any feeling of high temperature or pain. You will be encouraged to drink fluids and eat normally. You may be given more antibiotics on the ward. If you have had a drain inserted, then this will be monitored to make sure it is draining properly and is not blocked. A follow-up cholangiogram may be performed a few days later to check drainage and the anatomy of the biliary tree again. Further treatment will depend on the effectiveness of this initial treatment.

### **Admission wards**

The wards that you may be admitted to and their numbers are as follows:

Jex Blake 020 7830 2718 / 020 7794 0500 ext 33961

Cordwainers 020 7830 2707 / 020 7794 0500 ext 33921

PITU 020 7794 0500 ext 38082.

### **Useful website**

British Liver Trust.

[www.britishlivertrust.org.uk](http://www.britishlivertrust.org.uk)

Tel: 08707 708 028

For further information, contact the nurse specialist on 020-7794 0500 bleep 1066.

### **Questions**

You may want to write down any questions you have here.

### **Key words (glossary)**

Bile – a greenish-yellowish fluid secreted by the liver and stored in the gallbladder.

Bile duct – a duct that carries bile from the liver and gallbladder to the duodenum (first part of the small intestines)

Biliary tree – description of the shape of how the bile duct lies anatomically

Cholangiogram – injecting contrast dye into your bile ducts to visualise the biliary tree.

Contrast – a dye injected into a vein during x-ray examinations.

Drain – a tube that is attached to a bag, for removing fluid that collects inside you.

Liver – an organ located in the right upper quadrant of the abdomen, which plays an important part in metabolism, digestion, detoxification and elimination of substances from the body.

Radiologist – a doctor who specialises in the use of imaging techniques such as x-rays.

Stent – a tube made of metal or plastic that is inserted into a vessel to keep it open and prevent closure.

Stricture – an abnormal narrowing of the bile duct.

Stylet - a stiff wire, inserted in catheters and other instruments to maintain their shape and prevent clogging