



Diagnostic Imaging

Percutaneous Transhepatic Cholangiogram (PTC), Biliary Drain Insertion, Dilatation and Stent Insertion

Information for Patients Undergoing PTC

What is a percutaneous biliary drainage?

This procedure involves relieving a blockage to the bile duct to treat your jaundice, either by placing a drainage tube into the bile duct, and/or placing a stent across the blockage. This will allow bile to drain in the normal way to allow your jaundice to clear.

Why do I need a percutaneous biliary drainage?

One of the normal functions of the liver is to produce bile. This drains through small tubes or ducts into one large tube called the common bile duct, which empties into the duodenum. The duodenum is the first part of bowel after the stomach.

You may have had an ultrasound scan, MR or CT scan, which will have shown that the bile duct has become blocked. A drainage procedure is required to relieve the blockage. This will need to be done through the skin, as you may either have had an unsuccessful endoscopic procedure, or the blockage may be too high in the liver for the endoscope to reach.

If the bile duct becomes blocked, bile cannot drain normally and jaundice (yellowing of the skin) develops. This is a potentially serious condition which needs to be treated, usually by inserting a fine plastic tube through a tiny skin incision into the obstructed bile duct, to allow either the bile to drain externally into a bag, or via a stent placed across the blockage, allowing bile to drain into the bowel in the normal way. This procedure is called percutaneous, meaning through the skin, biliary drainage. Sometimes a drainage tube is placed into the blocked bile ducts for a few days initially before a stent is placed a few days later.

Who has made the decision?

The Consultant in charge of your case and the Interventional Radiologist performing the procedure will have discussed your case and feel that this is the best option.

Who will be performing the PTC?

A doctor called an Interventional Radiologist who has been specially trained in using x-ray and scanning equipment will perform the procedure.

Where will the procedure take place?

In the x-ray department in an Interventional Suite which is adapted for these specialised procedures.

Is there any preparation?

If you are not already an inpatient in hospital, you will be admitted the day before your procedure.

If you are taking anticoagulants eg warfarin, clopidogrel, apixaban or rivaroxaban, you will be required to stop taking them prior to the procedure. Please contact the Radiology Nurses on 01305 255276 to inform them of this.

Consent

Informed consent will be obtained prior to the procedure. Staff will explain all the risks, benefits and alternatives before asking you to sign a consent form. If you are unsure about any aspect of the treatment proposed, please do not hesitate to speak with a senior member of staff.

What happens during the procedure?

You will be given a strong sedative and pain killer intravenously and the skin at the tube entry site will be anaesthetised with an injection of local anaesthetic. A nurse will be next to you to monitor your pulse and blood pressure. A fine needle is inserted through the skin and into your liver. When the interventional radiologist is sure the needle is in a satisfactory position in one of the bile ducts, the drainage tube will be inserted.

The procedure may finish at this stage, with the catheter being fixed to the skin surface and attached to a drainage bag, or the blockage will be crossed and a stent placed.

Dilatation may be required to the area that is narrowed. A thin plastic catheter with a balloon attached to the end is positioned across the narrowing. The balloon is inflated; this action opens up the blockage to allow bile to drain the normal way into the bowel. The balloon will be inflated a few times and then removed. A drainage catheter may be left in place for a few days.

How long will it take?

Every patient's situation is different, and it is not always easy to predict how difficult the procedure will be. The procedure may take between 30 minutes and a few hours depending on how complex the blockage is.

Will it hurt?

The local anaesthetic may sting briefly and you may experience some discomfort from time to time. The team looking after you will give you more sedation and pain relief as required to make you as comfortable as possible

What happens afterwards?

You will be taken to your ward on a bed or trolley. Nursing staff will monitor your blood pressure, pulse, drain site etc, to make sure that there are no problems. You will generally stay in bed for a few hours until you have recovered.

You will stay in hospital overnight.

If the drainage catheter has been left in your body, it will be attached to a collection bag. It is important that you try to take care of this. You should try not to make any sudden movements, for example getting out of the chair, without remembering the bag, and making sure that it can move freely with you. It may need to be emptied occasionally, so that it does not become too heavy, the nurses will measure the amount in it each time.

The colour of the bile may change, it may be clear or yellow initially, but as the liver function improves it will change to dark brown or green.

How long will the drainage catheter stay in, and what happens next?

This varies from patient to patient and the doctors looking after you will be able to advise you. You may need to stay in hospital a short while. You may need to have further scans or x-rays. It may not be possible to complete the biliary stenting at the same time as inserting the drainage catheter, which will mean more than one visit to the x-ray department. If you have an external drain this will be removed in the x-ray department.

What are the risks and complications?

Percutaneous biliary drainage is a safe procedure but, as with any medical treatment, there are some risks and complications that can occur.

As patients with jaundice are more likely to have difficulties with blood clotting, there may be slight bleeding from the liver or into the bile ducts. This could result in some bloodstaining of the bile in your drainage bag; however, this nearly always settles down without the need for further treatment. On rare occasions, this may require a blood transfusion. On very rare occasions, this may be severe and require an operation or another radiological procedure to stop it.

The bacteria in the bile might be released into the bloodstream, making you unwell; however, if there is any suggestion of infection you will be given antibiotics.

Sometimes there is a small leak of bile from the bile duct where the tube has been inserted, resulting in a small collection of bile in the abdomen. This can be painful, and if this becomes a large collection, it may require draining, possibly via a second drainage catheter.

If the bile ducts are very small, it may not be possible to access them, in which case a further attempt can be made at a later date.

If a stent is inserted, there is a small chance that over time the stent can become blocked. This could result in a recurrence of your jaundice; however, it can often be treated using an endoscope.

Despite these possible complications, the procedure is normally very safe and is carried out with no significant side effects at all, and will almost certainly result in a great improvement in your medical condition.

Contact Numbers

We hope that you have found this information useful. If you have any questions or are worried about anything, please contact your referring consultant or family doctor (GP).

To contact your referring consultant please call:

Dorset County Hospital - 01305 251150 and ask for the secretary of your consultant.

or

Radiology Sister - 01305 255276

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If you have feedback regarding the accuracy of the information contained in this leaflet, or if you would like a list of references used to develop this leaflet, please email pals@dchft.nhs.uk



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