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

This leaflet provides information about the procedure, what to expect on the day, the potential risks and important information for afterwards.

Prior to the procedure, you will have a telephone consultation, where you will have the opportunity to ask further questions.

Please note that this leaflet is not meant to replace discussion between you and your doctor. You should raise any questions you may have with the doctor who has referred you or with the doctor who will be performing the procedure.

What is a PTC and biliary intervention?

A percutaneous transhepatic cholangiogram (PTC) is a procedure used to examine the bile ducts within the liver using X-ray guidance.

If a blockage or narrowing is identified, further treatments may be performed during the same procedure. These may include:

- Insertion of a biliary drain
- Dilatation (stretching) of a narrowed bile duct
- Placement of a stent to keep the duct open

The bile ducts carry bile from the liver to the bowel. If they become blocked, this can cause jaundice (yellowing of the skin and eyes), itching, infection, and abnormal liver function.

These procedures help restore the flow of bile and relieve symptoms.

Why do I need a PTC and biliary intervention?

You may be offered this procedure if you have a blockage or narrowing of the bile ducts.

Common causes include:

- Gallstones
- Tumours affecting the bile ducts, pancreas, or liver
- Scar tissue (strictures)

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Symptoms may include:

- Yellowing of the skin or eyes (jaundice)
- Itching
- Dark urine or pale stools
- Abdominal pain
- Fever or infection (cholangitis)

The procedure can help relieve these symptoms, improve liver function, and allow further treatment if needed.

How do I prepare for a PTC and biliary intervention?

You will have a pre-assessment telephone consultation with a nurse before your admission and may be asked to have blood tests before the procedure.

You should stop eating 6 hours prior the procedure, however you can drink 1 cup of clear water per hour until the procedure starts.

The procedure will take place in the Interventional Radiology (IR), within the Radiology Department at St. Peter's Hospital. When you arrive, you will be given a hospital gown to change into, and a nurse will insert an IV cannula.

The doctor will discuss the procedure with you; answer any questions you may have and ask you to sign a consent form if you are happy to proceed.

The procedure will likely be performed under local anaesthetic. Intravenous pain relief and light sedation may also be given, to ensure you are as comfortable as possible.

If you are feeling unwell closer to the day of the procedure, please let the team know.

How is a PTC and biliary intervention performed?

You will usually lie on your back on an X-ray table.

The skin on the right side of your abdomen is cleaned and numbed with local anaesthetic. Using ultrasound and X-ray guidance, a fine needle is inserted into the liver to access the bile ducts.

Contrast dye is injected to outline the bile ducts (cholangiogram) and identify any blockage.

Depending on the findings:

- A drain may be inserted to allow bile to drain externally
- A narrowed duct may be widened (dilatation)
- A stent may be placed to keep the duct open and allow internal drainage

The procedure usually takes between 1 and 2 hours.

At the end of the procedure any drains are secured in place and a dressing is applied.

What are the potential risks / complications of a PTC and biliary intervention?

PTC and biliary interventions are commonly performed and generally safe procedures. However, as with all medical procedures, there are some risks:

Pain or discomfort

- Common (up to 30–50%)
- Usually mild to moderate and managed with pain relief

Bleeding

- Minor bleeding is relatively common (up to 5-10%)
- Significant bleeding requiring treatment is uncommon (1-3%)

Infection (cholangitis or sepsis)

- Occurs in approximately 2-5% of patients
- Antibiotics are routinely given to reduce this risk
- Severe infection can be serious and requires urgent treatment

Bile leak

- Leakage of bile around the liver can occur (1-3%)
- Usually managed with drainage

Drain-related issues

- Blockage, displacement, or leakage around the drain can occur (up to 5-10%)
- May require adjustment or replacement

Stent blockage or migration

- Can occur over time (10-30%)
- May require further treatment

Injury to surrounding structures

- Rare (<1%), includes injury to blood vessels or nearby organs

Contrast reaction

Allergic reaction to contrast dye is uncommon (<1%)

Radiation exposure

- The procedure uses X-ray guidance
- Radiation dose is kept as low as reasonably achievable

Failure of procedure

- In some cases, it may not be possible to access or treat the bile ducts

Death

- Death related to this procedure is rare (<1%), usually associated with underlying illness or severe infection

What happens afterwards?

After the procedure, you will be monitored in a recovery area or ward.

- Your blood pressure, pulse, temperature and comfort will be monitored
- Blood tests may be taken to assess liver function
- You may need to stay in hospital for observation, especially if a drain has been inserted

If you have a drain:

- You will be shown how to care for it
- The drain may remain in place for days to weeks depending on your condition

You should:

Rest for a few days after the procedure
Avoid strenuous activity or heavy lifting
Take prescribed pain relief and/or antibiotics as directed

Seek urgent medical advice if you experience:

- Fever or chills
- Increasing abdominal pain
- Redness, swelling, or leakage around the drain site
- Yellowing of the skin worsening
- Reduced or no drainage from the tube (if present)

Follow-up will be arranged with your referring team and interventional radiology. Further procedures may be required depending on your condition.

Further Information

We endeavour to provide an excellent service at all times, but should you have any concerns please, in the first instance, raise these with the Matron, Senior Nurse or Manager on duty. If they cannot resolve your concern, please contact our Patient Experience Team on 01932 723553 or email asp-tr.patient.advice@nhs.net. If you remain concerned, the team can also advise upon how to make a formal complaint.

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Se precisa de uma tradução por favor contacte: 01932 723553

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यदि आपको अनुवाद की ज़रूरत है तो कृपया इस नंबर पर फोन करें: 01932 723553

Jeżeli chcemy, aby te informacje w innym języku, proszę zadzwonić 01932 723553

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