Percutaneous Transhepatic Cholangiogram (PTC) and Biliary Stent

Radiology
This leaflet informs you about the procedure known as a Percutaneous Transhepatic Cholangiogram (PTC) and biliary stent. It explains what is involved and the possible risks.

The benefits and risks of this procedure should already have been explained to you by your doctor. If you have any concerns about the procedure, you should discuss these with your consultant prior to being admitted. You will have an opportunity to ask the radiologist any other questions you may have. Please make sure you do this before you sign the consent form.

The Radiology Department

The radiology department may also be called the x-ray department or diagnostic imaging department. It is the facility in the hospital where radiological examinations of patients are carried out, using a range of equipment.

Who does what?

A specially trained doctor called a **radiologist**. Radiologists have special expertise in using x-ray and scanning equipment, and also interpreting the images produced. They need to look at the images whilst carrying out the procedure.

They are supported by **specialist radiographers**, who are highly trained to carry out x-rays and other imaging procedures.

**Radiology nurses** are specialist nurses who will assist the radiologist and care for you throughout the procedure until you are handed back to the ward nurses, who will collect you from the Interventional Suite where this procedure will take place.

Prior to this procedure being performed, the radiologist will explain what is involved and you will have the opportunity to ask any questions you have regarding the procedure.

A written consent will be required. (You should have sufficient explanation before you sign the consent form)
What is a PTC and biliary stent?

Your doctor has discovered that you have a block in one of the ducts that drain the bile from the liver into the bowel which may be causing jaundice. Percutaneous means through the skin, hepatic means to do with the liver, and cholangiogram is an x-ray of the bile ducts. A stent is a metal or plastic tube that is inserted through a duct that is blocked in order to allow it to drain into the bowel.

Why do I need a biliary stent?

One of the normal functions of the liver is to produce bile. This drains through a series of tubes, or ducts, which then empty into the duodenum (the first part of the bowel after the stomach).

If the bile duct becomes blocked, then bile cannot drain normally, and jaundice develops. This is potentially a very serious condition, which needs to be treated. Our aim is to position a stent, a tube through the blockage, to allow the bile to drain away normally. This in turn will relieve the jaundice.

Who has made the decision that I need this procedure?

The consultant in charge of your case, and the radiologist carrying out the PTC and stent insertion will have discussed the situation, and feel that this is the best treatment option. However, you will also have the opportunity for your opinion to be taken into account and if, after discussion with your doctors, you do not want the procedure carried out, you can decide against it.

Do I need to do anything before my appointment date?

Please ring the radiology department if you take warfarin, aspirin, Clopidogrel or anything that thins your blood.

If you have Diabetes – Please phone and tell us.

If you are taking Metformin / Glucophage we will need to modify your medication for two days after the procedure. Ladies - if you are pregnant or think you may be pregnant please phone us before your appointment. We may need to change or cancel your appointment.
**How do I prepare for a PTC and stent?**

You need to be an inpatient in the hospital. You will have been allocated a bed on either the Surgical Short Stay Unit (SSSU) or onto a ward. The location will be written on the appointment letter accompanying this patient information leaflet.

You will be asked to **attend the ward three hours** prior to your appointment to allow bloods to be taken so the results are available before the procedure. **You will be asked not to eat for four hours** but you can drink water up to two hours prior to the procedure, unless otherwise advised.

You will be asked to put on a hospital gown and a cannula, (a small plastic tube) will be inserted in a vein on the back of your hand.

If you have any allergies, you must let the staff looking after you know. If you have previously reacted to intravenous contrast medium (the dye used for kidney x-rays and CT scans) then you must tell the radiographers.

**Can I bring a relative or friend?**

Yes, but for safety reasons, they will not be able to accompany you into the x-ray room, except in very special circumstances.

You must arrange for someone to collect you and drive you home after your required amount of bed rest, and for someone to stay with you overnight. Some patients may need to remain on the ward overnight.

**What actually happens during a PTC and biliary stent?**

You will be transported to the department on a bed.

For the examination you will lie on your back on an x-ray couch. During the procedure we will monitor your blood pressure, ECG (heart tracing) and pulse.

You will have a cannula (a short plastic tube) placed into a vein in your arm. This will allow us to give you some sedation and painkillers, and make you more relaxed.
It is vital to give antibiotics for this procedure to prevent infection.

The doctor and an x-ray nurse will prepare and put on sterile gown and gloves. There will be other staff in the room to look after you and to operate the x-ray equipment. The skin on your right side and trunk will be cleaned with antiseptic fluid and your body covered with sterile towels.

The radiologist will use x-rays and ultrasound to localize accurately the most suitable approach for inserting the fine plastic tube (catheter), usually in your right side. In some cases, you may need to have another tube inserted in the middle of your abdomen just below the breastbone as well. Your skin will be numbed with local anaesthetic. A catheter will be passed through the skin, into the liver, and then passed into the bile ducts. Once the catheter has been placed through the blockage and into the duodenum, the stent can be positioned. The correct positioning of the stent will be confirmed by x-rays during the procedure. Bile should then be able to pass down the stent and into the duodenum.

It is usual to leave a catheter draining the bile to an external bag for 24-48 hours following stent insertion.

**Will the procedure be painful?**

When the local anaesthetic is injected, it will sting to start with, but this soon passes off, and the skin and deeper tissues should then feel numb. You will be given sedation and painkillers to make you comfortable.

**How long will the procedure take?**

Every patient’s situation is different, and it is not always easy to predict how complex or straightforward the procedure will be. It may be over in half an hour, although you may be in the department for about an hour altogether.

**What about after care?**

You will be taken back to your ward on a trolley or a bed. Nurses on the ward will carry out routine observations, such as taking your pulse and blood pressure, to make sure that there are no untoward effects.
They will also look at the skin entry point to make sure there is no bleeding from it. You will generally stay in bed for a few hours, until you have recovered. You may need to stay overnight to have a small test the next day to check the stent is working and to remove the drain in your side.

**Are there any risks or complications associated with this procedure?**

Stent insertion is considered a low risk examination, although there are some complications that can arise.

The radiologist may not be able to pass the blockage in the bile duct.

If this happens, you may need to have an operation.

Bile can leak from the liver, resulting in a small collection of fluid inside the abdomen. If this becomes a large collection, it may require draining. It can also cause some short term discomfort.

There may be slight bleeding from the liver. On very rare occasions, this may become severe, and require a surgical operation or another radiological procedure to treat it.

Occasionally there may be infection in the liver, or in the space around it. This can generally be treated satisfactorily with antibiotics.

Radiation is used during the procedure, but your consultant has decided that the benefits of having the procedure done are greater than any potential risk of exposure to radiation. The radiation dose you receive will be kept as low as possible.

**What are the benefits of having this procedure?**

Drainage of bile in order to relieve the symptoms of jaundice.

**Is there an alternative procedure?**

Endoscopic retrograde cholangiopancreatogram. This is done in the endoscopy theatre.
Privacy and dignity

Sometimes tests or procedures, although necessary, can be embarrassing or undignified for patients but we will endeavour to do everything we can to make you as comfortable as possible during your visit to the department.

Reference source:

- Royal College of Radiologists
- For general information about radiology departments visit The Royal College of Radiologists’ website: www.goingfora.com
- NICE website (www.nice.org.uk) has further information about NICE interventional procedure guidance

Questions & Contacts

If you have any questions or would like to know more about this procedure, please telephone the Interventional Suite Radiology Department on:

01483 571122 Extension 4596

For further information about Diagnostic Imaging Services at Royal Surrey County Hospital NHS Foundation Trust, please contact:

Royal Surrey County Hospital NHS Foundation Trust,

Egerton Road,

Park Barn,

Guildford

Surrey

GU2 7XX

www.royalsurrey.nhs.uk
How to find the Radiology department

Royal Surrey County Hospital map
Level B (Ground floor)

Data sharing reference information is available on Royal Surrey County Hospital patient information leaflet entitled:

Your Healthcare records - your information PINXXXXXXX-XXX

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www.royalsurrey.nhs.uk
Royal Surrey County Hospital (RSCH) NHS Foundation Trust fully subscribes to the National Patient Safety Agency (NPSA) *Being Open* best practice framework, November 2010.

Contact details of independent advocacy services can be provided by our Patient Advice and Liaison Service (PALS) who are located in far left corner as you enter the main reception area. PALS are also your first point of contact for health related issues, questions or concerns surrounding RSCH patient services.

**Contact details**

**Telephone:** 01483 402757  
**Email:** rsc-tr.pals@nhs.net  
**Opening hours:** 9.00am–4.00pm, Monday to Friday

If you would like information documents in large print, on tape or in another language or form please contact us on: **01483 402757**

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