

Radiology

Percutaneous biliary drain/stent

You have been advised by your hospital consultant that you need to have a biliary drain or stent inserted. This information tells you about having this examination. It explains what is involved and what the possible risks are.

This leaflet may not answer all your questions, so if you have any questions or worries, 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 make sure 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.

What is a biliary drain/stent?

A biliary drain/stent is a thin plastic or metal tube that is inserted through the skin into a narrowed part of the bile duct. Once inserted, the drain/stent helps to keep the narrowed section open, which lets bile to drain into the small bowel.

The examination will be performed by a radiologist who will be assisted by a radiographer and a radiology nurse. It is not always easy to predict how complex or how straightforward the procedure will be, and thus how long it could take. As a guide, expect to be in the Radiology Department for a couple of hours.



Why do I need this procedure?

Bile is produced by the liver and stored in the gall bladder until needed to help with the digestion of fat. The bile empties through a system of tubes, called bile ducts, into the small bowel.

In the event the bile ducts become narrowed, bile will back up into the liver. A percutaneous biliary drain/stent insertion is done if a bile duct becomes narrowed. The drain/stent helps to prevent or relieve infection, jaundice, and skin itching, which are caused by bile backing up into the liver.

You may already have had a biliary drain inserted to relieve your earlier symptoms. You should have discussed with your hospital consultant or ward doctor that a biliary stent will provide longer term relief and allow for the removal of the drainage catheter from your side in a couple of days.

Points to remember

- Please bring any sprays or inhalers that you are taking with you to your appointment.
- Please leave any valuable possessions on the ward.
- You will have conscious sedation during the procedure. If you are diabetic, please inform the ward staff so that an alternative medication may be given if necessary - you are required to have nothing to eat or drink before the examination.
- If you are taking **aspirin** or **warfarin** or any other blood thinning medication please **inform the ward staff**, as this medication may need to be stopped prior to the procedure.

Preparation

- As the procedure will be performed under conscious sedation, **please do not eat for the 6 hours** before your procedure time. You can drink sips of water only during this time. This will help reduce the risk of nausea and vomiting following sedation.
- You should continue with any other usual medications and take with a small sip of water.

Patient Information

- You will have had some special blood tests to check your blood clotting ability. Vitamin K may be required before the procedure if your blood clotting ability is lower than desired.
- You will need a small plastic tube, known as a cannula inserted into a vein in your arm after you have arrived on the ward or while you are in X-ray Department, to allow administration of intravenous medications, and fluids if needed.
- To reduce the risk of infection, you will be given intravenous antibiotics by a nurse or doctor on the ward before going down to the X-ray Department.
- Your doctor's team will explain the procedure, and you will be asked to sign a consent form.
- You will need to wear a hospital gown. The porters will collect you from the ward and bring you to the X-ray department, on your bed, for the procedure.

During your examination

- The examination will be explained to you again by the radiologist. You will be able to ask any further questions that you may have.
- You will be taken into the X-ray room where you will be asked to get onto the X-ray table and lie on your back.
- You will be attached to monitoring equipment. Your vital signs (blood pressure, pulse) will be monitored regularly by a radiology nurse during the examination.
- You will be given conscious sedation and enough painkillers to help you relax and make you feel sleepy throughout the examination. It is routine for you to be given continuous oxygen through a face mask or nasal cannula during sedation.
- Your skin will be cleaned with cold antiseptic solution and sterile drapes will be placed over this area. Then your skin will be numbed with local anaesthetic. When the local anaesthetic is injected, it will sting to start with, but this soon wears off, and the skin and deeper tissues should then feel numb.

If you already have a biliary drainage catheter in place:

- The guide wire will be passed through this catheter and manipulated through the stricture under X-ray control and a stent inserted.

If you do not already have a biliary drain in place:

- The radiologist will use the ultrasound machine to locate your bile duct. This is usually in your right side.
- A thin needle will then be inserted into the bile duct. When the radiologist is sure that the needle is in the correct position, a guide wire will be placed through the needle, into the duct and manipulated through the narrowing under X-ray control.
- Once the guide wire is in place, the stent will then be passed over the guide wire and positioned with its ends either side of the narrowing – this will let bile drain freely into the small bowel.
- An external drainage catheter (biliary drain) will also be passed into the bile duct over the guide wire. This will be fixed to the skin surface and may be either clamped shut or attached to a drainage bag. A dressing will be placed on your skin over the catheter.
- This external drainage catheter will be left as a temporary measure to maintain access to the bile ducts for at least 24 hours - until it is confirmed that the stent is working successfully.

Referral and consent

If you are having the biliary drain/stent insertion as a planned procedure, then you should have plenty of time to discuss the situation with your consultant and the radiologist who will be inserting the biliary stent.

If you need the biliary drain/ stent insertion as an emergency, there may be less time for discussion, but **you should have had sufficient explanation before you sign the pink consent form**. If after discussion with your hospital doctor or radiologist you do not want the procedure carried out, then you can decide against it.

You will be asked to sign a pink consent form confirming that you understand the procedure and are aware of the risks and benefits it entails.

Patient Information

If the radiologist feels that your condition has changed or that your symptoms do not suggest such a procedure is needed, they will explain this to you, communicate with the referring clinician, and ask that you return to your referring clinician or ward for review. At all times, the radiologist and referring clinician will be acting in your best interests.

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 possibility of these complications occurring will vary for each patient, and the possibility of these complications happening to you will be discussed with you before you sign the consent pink form.

- **Sedation** - on rare occasions, sedation can cause problems with breathing. If you wish to, this can be discussed with the radiologist at the time of your consultation or before the procedure.
- **Pain** – you may experience discomfort and pain during and after the procedure. The radiology nurse will administer pain control drugs during the procedure to minimise this. You may ask for further pain relief from the nurses on the ward following the procedure.
- **Bleeding** - There is a risk of bleeding after the examination. The ward nurses will monitor you closely for 4 – 6 hours after the procedure.
- **Infection** – Occasionally, there may be infection in the bile ducts. Antibiotics are given before the procedure to help prevent infection, and may be continued after the procedure if necessary.

It is possible that you may have an allergic reaction from the contrast agent used. You will be asked about allergies by the radiologist, radiographer, or radiology nurse prior to procedure.

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 to minimise 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 test. We will take all precautions to minimise the amount of X-rays you receive.

Patient Information

Safety

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 and CT scanning.
- if you are on renal dialysis.

All 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.

After your examination

- You will be taken back to your ward. Ward nurses will carry out close and regular observations of your vital signs, to make sure that there are no problems. You will stay in bed overnight. You should tell the nurses if you feel pain or a raise in your body temperature. You may be given more antibiotics.
- Whilst the drainage tube stays in place, it is important that you take care of it and don't pull it out. If a drainage bag is attached to the catheter, you should try not to make any sudden movements, for example getting up out of a chair without remembering the bag, and you should make sure that it can move freely with you.
- The catheter should be checked regularly to ensure that it is draining properly and has not become blocked.
- You should drink plenty of fluids and eat normally.
- If you have any problems after the procedure, please speak to the staff on the ward.

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

Patient Information

For information about the effects of X rays and information about radiology departments visit the NHS website:

<https://www.nhs.uk/conditions/x-ray/>

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

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

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