Endoscopic Retrograde Cholangiopancreatography (ERCP)

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What is an ERCP?

ERCP stands for endoscopic retrograde cholangiopancreatogram. This is a procedure which allows clinicians to examine the tubes that drain bile from the liver into the bowel (bile duct and gall bladder) and the pancreatic duct into the bowel. The procedure may be diagnostic or therapeutic.

ERCP gives information about the bile ducts and the pancreatic ducts. It may show, for example, narrowing, obstruction or gall stones. Diagnostic ERCP may not show the precise nature of the obstruction. Sometimes a biopsy or brushings are taken.

Therapeutic ERCP

In a therapeutic ERCP, the endoscopist will undertake minor operations such as sphincterotomy, stent insertion or stone removal. Sphincterotomy involves a small cut at the lower end of the bile duct. Almost all of the ERCPs undertaken at Queen Elizabeth Hospital Birmingham are therapeutic.

ERCP is usually carried out under sedation: this means you will be relaxed but not completely asleep. In some cases, you may be able to go home when you have recovered from the procedure. You must not drive. You will need someone to take you home and be with you.

ERCP is unsuccessful in about 5% of cases. This may be for a variety of reasons; you may be asked to return for a further attempt.

The procedure

A flexible tube (an endoscope), about the thickness of your little finger, is passed down through the mouth, down the gullet, through the stomach and into the duodenum. Through the endoscope, the endoscopist will pass small tubes through which dye can be injected into the duct. Other tubes can be inserted to make the cuts or remove the stones as required.
Procedures

**Stent insertion:** A stent is a very small tube that is passed down through the endoscope into the bile duct or pancreatic duct. This is used to allow the bile or pancreatic juices to flow past an obstruction to the bile ducts.

**Sphincterotomy:** For sphincterotomy a wire, through which an electric current is passed, is used to cut the sphincter (like a valve) at the bottom of the bile duct. This is used to allow a stent to be inserted or to widen the sphincter to allow for the removal of gallstones.

**Gallstone removal:** If there are gall stones in the bile ducts, these can be crushed with a wire basket known as a ‘lithotripter’. Sometimes the stones can be grasped and removed, usually after a sphincterotomy.

If you are taking tablets containing Aspirin or Clopidogrel (Plavix), you should stop taking these for 14 days before the procedure. You should discuss with your doctor if you have any concerns about stopping this medication.

Risks and complications

As with all procedures, there are some risks. The vast majority of people who undergo ERCP have no serious complications. The main side effect is some abdominal discomfort because of the air that has been put into the stomach. Significant problems occur in about 5-10 out of every 100 examinations. After therapeutic ERCP the risk of death is between 1 in 200 to 1 in 500 procedures.
and is usually related to complications arising in patients with significant underlying heart or lung disease.

**Pancreatitis:** Pancreatitis results from inflammation of the pancreas. This may be relatively mild and involves only mild abdominal pain. Sometimes (perhaps 5% of cases), this will be more severe and requires you to stay in hospital for several days until the pancreatitis resolves. Only very rarely is pancreatitis severe enough to require an operation.

**Sphincterotomy:** During a sphincterotomy a small cut is made. In about 1% of cases, this is associated with bleeding. Whilst this often settles spontaneously, and requires little more than a blood transfusion, in rare cases, an operation is required to stop the bleeding.

**Cholangitis:** Infection of the bile ducts may occur after ERCP. This requires treatment with antibiotics. It occurs in less than 1% of cases and may be more common if a stent has been put in or if there is a stone which cannot be removed. A puncture or perforation of the bowel wall, or bile duct is a rare problem that can occur with ERCP.

Finally, other complications can occur but are extremely uncommon. The consultant responsible will discuss these risks with you prior to the procedure.

**What can I expect?**

Generally you will be given an appointment to attend pre-screening before the procedure date where your blood will be taken to check your blood clotting is within the normal range, you will complete a health screening questionnaire and will be screened for MRSA.

Once you have arrived on the ward, a doctor will explain the procedure to you and will ask you to sign a consent form. This will ensure that you understand the procedure, its purpose, its implications and the potential problems. If you have questions or worries, please ask the doctors who will be pleased to answer
you as fully as possible. It is important that you consume no food or drink for six hours before the procedure. If you are a diabetic or if you are taking any medication, it is important that you discuss your tablets with the doctor. Do not stop taking any tablets unless the doctor specifically ask you to do so. If you are allergic to any medication, or could be pregnant, it is important to inform the doctors. During the Procedure the doctors will check your blood to make sure it is clotting normally.

**During the procedure**

You will be asked to remove any false teeth, spectacles or contact lenses. You will be asked to lie on the X-ray table on your left hand side with your left hand behind your back. A nurse will stay with you throughout. A mouth guard will be placed between your teeth in order to protect your teeth or gums during the procedure. You will be given an injection in order to make you relaxed but you will not be completely asleep for this procedure. The doctor may put a peg on your finger to monitor your pulse and the amount of oxygen in the blood. You may also be given some oxygen through a tube which will be placed around your face. When you become sleepy the doctor will pass the tube through your mouth and stomach into the duodenum.

The procedure may take anything from a few minutes to more than one hour.

**After the procedure**

After the procedure you will rest in the endoscopy suite or X-ray department before returning to the ward. The nurses will monitor your pulse and blood pressure before you return to the ward. The amount of time they will do this for depends on the procedures that have been carried out.

Once the nurses are satisfied that you have recovered completely from the procedure, they will stop doing the monitoring.
Depending on the clinical situation, you may be allowed home. If you have had any sedation it is essential that you do not drive or operate machinery for at least 24 hours.

Anyone going home on the day of the ERCP should have somebody to take them home and to look after them overnight. If, when you get home, there are any concerns at all you should contact the hospital on one of the contact numbers on the leaflet.

If, within a day of going home, you feel very unwell, you should either contact your GP or telephone the number given to you at the time of discharge or ask to speak to the liver medical registrar via switch 0121 627 2000.

**What are the alternatives?**

The alternative procedures to deliver the same type of treatment are an operation or for the bile duct to be approached through the skin and liver. Both approaches have higher risk of complications.

If you wish to make a complaint or have any concerns about any aspect of the service, you can contact the Patient Advice & Liaison Service (PALS) for advice on 0121 371 3280 or email PALS@uhb.nhs.uk.

**Contact numbers**

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<tr>
<th>Service</th>
<th>Phone Number</th>
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<tbody>
<tr>
<td>Ambulatory Care Ward</td>
<td>0121 371 3100</td>
</tr>
<tr>
<td>Liver Outpatients Department</td>
<td>0121 371 4414</td>
</tr>
<tr>
<td>Liver Pre-screening</td>
<td>07909 687 519</td>
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<tr>
<td>Booking Coordinator</td>
<td>0121 627 2209</td>
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The Trust provides free monthly health talks on a variety of medical conditions and treatments. For more information visit www.uhb.nhs.uk/health-talks.htm or call 0121 371 4323.