Endoscopic Retrograde Cholangiopancreatography (ERCP)

What is an ERCP

Endoscopic Retrograde cholangiopancreatography, or ERCP, is a specialized technique used to study the ducts of the gallbladder, pancreas and liver. Ducts are drainage routes: the drainage channels from the liver are called bile or biliary ducts.

During ERCP, your doctor will pass an endoscope through your mouth, esophagus and stomach into the duodenum (first part of the small intestine). An endoscope is a thin, flexible tube that lets your doctor see inside your bowels. After your Doctor sees the common opening to ducts from the liver and the pancreas, your doctor will pass a narrow tube called a catheter through the endoscope and into the ducts. Your doctor will inject a contrast material (dye) into the pancreatic or biliary ducts and will take X-rays. During the procedure air is blown into the intestine and you may feel bloated afterwards.

The liver produces bile, which flows through the ducts, passes or fills the gallbladder and then enters the intestine (duodenum) just beyond the stomach. The pancreas, which is 15cm to 20cm long, sits behind the stomach. This organ secretes digestive enzymes that flow into the intestine through the same opening as the bile. Both bile and enzymes are needed to digest food.

What preparation is required?

You should fast for at least eight hours (and preferably overnight) before the procedure to make sure you have an empty stomach, which is necessary for examination.

You should talk to your doctor about medications you take regularly and any allergies you have to medications, or intravenous contrast material. Although an allergy doesn’t prevent you from having an ERCP, it’s important to discuss it with your doctor prior to the procedure.

Also, be sure to tell your doctor if you have heart, lung conditions or other medical illnesses.

What are possible complications of ERCP?

Depending on the individual and the type of procedures performed, ERCP does have a 5 to 10% risk of complication. In rare cases severe complications may require prolonged hospitalization. There is a small chance of life threatening complications.

Mild to severe inflammation of the pancreas is the most common complication and may require hospital care, even surgery. Bleeding can occur when the papilla has to be opened to remove stones or put in stents. This bleeding usually stops on its own, but occasionally, transfusion may be required or the bleeding may be directly controlled with endoscopic therapy or surgery.

A puncture or perforation of the bowel wall or bile duct is a rare problem that can occur with therapeutic ERCP. Infection can also result, especially if the bile duct is blocked and bile cannot drain. Treatment for infection requires antibiotics and restoring drainage. Finally, reactions may occur to any of the medications during ERCP but fortunately these are usually minor.
The Procedure

An ERCP is performed in theatre under a general anaesthetic. After being given a light general anaesthetic you will be placed on your stomach. A thin tube is inserted through the endoscope to the main bile duct entering the duodenum. Dye is then injected into this bile duct and/or the pancreatic duct and X-ray films are taken. If a gallstone is found, steps may be taken to remove it. If the duct has become narrowed, an incision can be made using electrocautery (electrical heat) to relieve the blockage.

Additionally, it is possible to widen narrowed ducts and to place small tubing, called a stent, in these areas to keep them open. The examination takes about one hour, after which the patient is taken to recovery area.

ERCP is a technically difficult procedure and repeat ERCP procedures may occasionally be required.

Benefits

An ERCP is performed primarily to identify and/or correct a problem in the bile duct or pancreas. This means the test enables a diagnosis to be made upon which specific treatments can be given. If a gallstone is found during the examination, it can often be removed, eliminating the need for major surgery. If a blockage in the bile duct causes yellow jaundice or pain, it can be relieved. Thanks to ERCP these kinds of procedures may help you avoid surgery.

Be sure to discuss any specific concerns you may have about the procedure with your doctor.