

# **Percutaneous Transhepatic Biliary Tract Dilatation for Choledoscopic Removal of Intrahepatic Stones**

*Information for patients*

## **Introduction**

- Dilatation of a pre-existing tract created by a previous percutaneous transhepatic biliary drainage (PTBD) procedure is performed, so that the tract can be used for removal of stone inside the liver or in the common bile duct with a choledochoscope inserted through the tract.
- The procedure starts with PTBD, with the drainage catheter revised to internal-external drainage so that the percutaneous catheter can be closed and drainage of bile is directed back to the intestines.
- It is usual to wait for 4 to 6 weeks so that the PTBD tract can mature.
- Technical successful rate is about 95%.
- The procedure will be performed by a radiologist with special training in the Department of Radiology under image guidance.
- After the procedure, a big-bore catheter will be left in place to keep the tract open.
- Subsequent removal of stone is performed by a surgeon using a choledochoscope through the tract created by this procedure.

## **Procedure**

- It is performed under aseptic technique. Local anaesthesia and intravenous drugs for pain relief and sedation will be given before and during the procedure. Occasionally, general anaesthesia may be used.
- The vital signs including your blood pressure, pulse and oxygenation status will be monitored throughout the entire procedure.
- A guidewire is then inserted through the PTBD catheter into the biliary system. A balloon catheter and then plastic dilators will be passed over the guidewire to dilate the tract.
- Eventually a big-bore catheter with multiple side holes is directed into the biliary system along the dilated tract and the guide wire is withdrawn. The position of the catheter is confirmed by contrast injection.
- The catheter is secured at the skin insertion site.
- After the procedure, you should stay in bed for a few hours and your vital signs will be monitored.
- Average duration for the procedure will be about 30 to 60 minutes depending on the complexity.
- If you have fever or other complications, you will have to stay in hospital for more than 1 day. An appointment for stone removal will be given to you as soon as possible.

## **Potential complications**

- Common complications include infection of the bile ducts (cholangitis), bile leakage, catheter dislodgment and wound infection (overall about 40 to 50%). They are usually mild and can be readily treated.
- Sepsis (fever > 39 degree Celsius) (7%).
- Hemobilia (bleeding into biliary system) (3%).
- Acute pancreatitis (1.5%).
- Pleural effusion (1.5%).
- Injury to other organs e.g. kidneys and bowel loop – rare.
- Perforation of duodenal diverticulum – rare. (diverticulum seen in up to 6% of barium studies of duodenum.
- Death (1.7%).
- The overall adverse reactions related to iodine-base non-ionic contrast medium is below 0.7%. The mortality due to reaction to non-ionic contrast medium is below 1 in 250000.

## **Disclaimer**

This leaflet has been prepared by the Hong Kong Society of Interventional Radiology.

This leaflet is intended as general information only. Nothing in this leaflet should be construed as the giving of advice or the making of a recommendation and it should not be relied on as the basis for any decision or action. It is not definitive and the Hong Kong Society of Interventional Radiology Limited does not accept any legal liability arising from its use. We aim to make the information as up-to-date and accurate as possible, but please be warned that it is always subject to change as medical science is ever-changing with new research and technology emerging. Please therefore always check specific advice on the procedure or any concern you may have with your doctor.

Prepared in 2010. Version 2.0