



SNS COLLEGE OF ALLIED HEALTH SCIENCES
SNS Kalvi Nagar, Coimbatore - 35
Affiliated to Dr MGR Medical University, Chennai



DEPARTMENT OF RADIOGRAPHY AND IMAGING TECHNOLOGY

COURSE NAME : CONTRAST AND SPECIAL RADIOGRAPHY PROCEDURES

II YEAR

UNIT : 3

TOPIC : T-TUBE CHOLANGIOGRAPHY

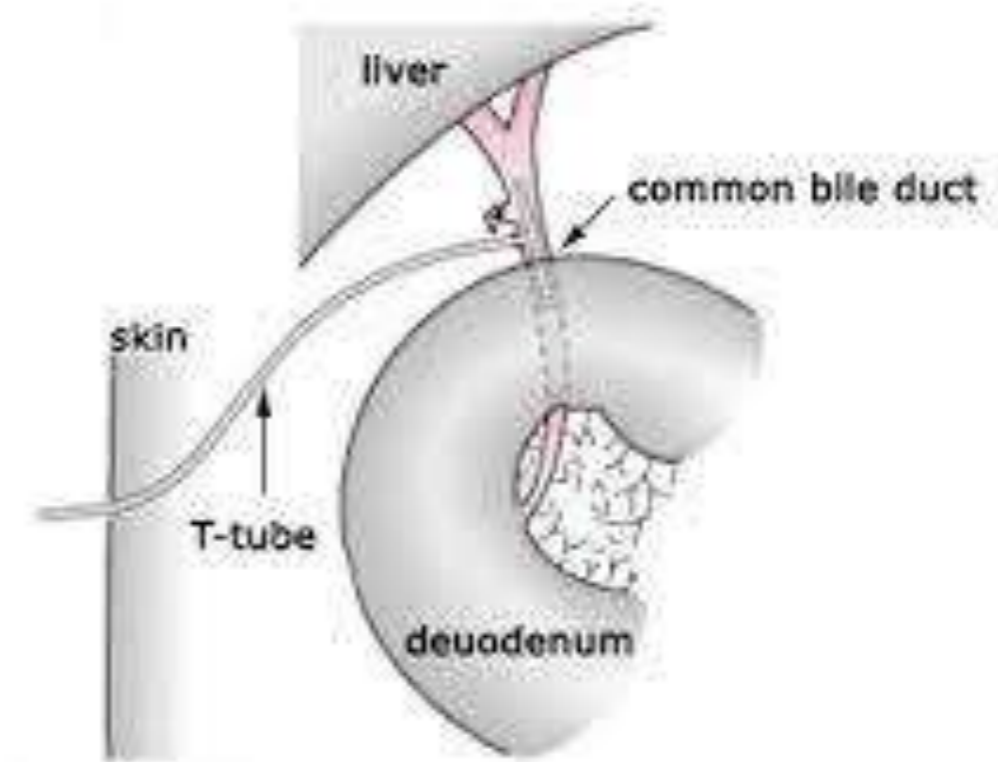


INTRODUCTION



T-tube cholangiography is also known as delayed or post-operative cholangiography. This examination is performed after the cholecystectomy (surgical removal of the gallbladder).

If the surgeon suspects residual stone in the biliary tract and operative cholangiography was not executed, then the T-tube cholangiography will be performed. For this procedure, the surgeon places a T-tube catheter into the common bile duct and extends it outside from the patient's body. After the placement, the T-tube catheter is then clamped off. This examination is performed in the radiology department after the 10th post-operative day.

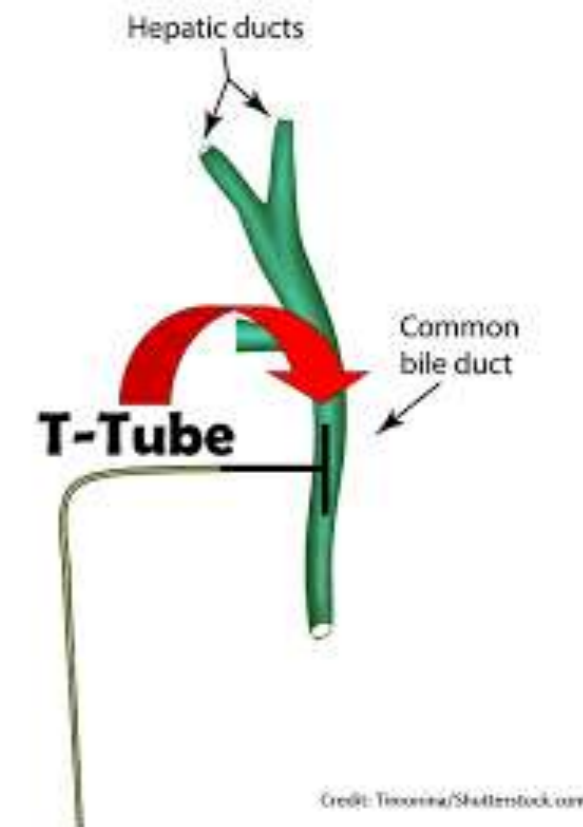




T-TUBE PLACEMENT

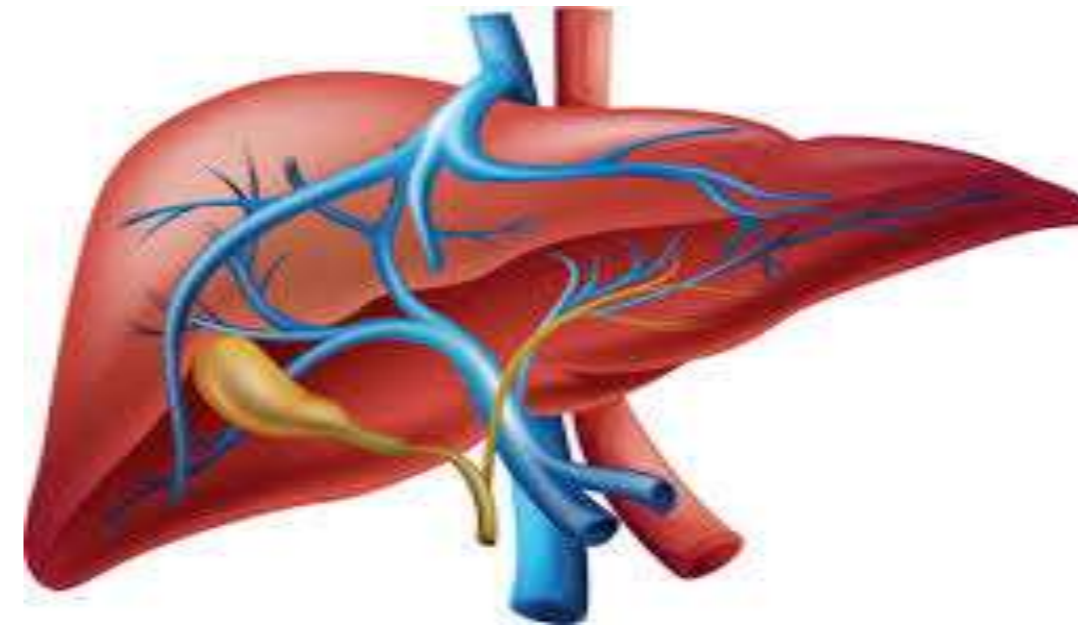
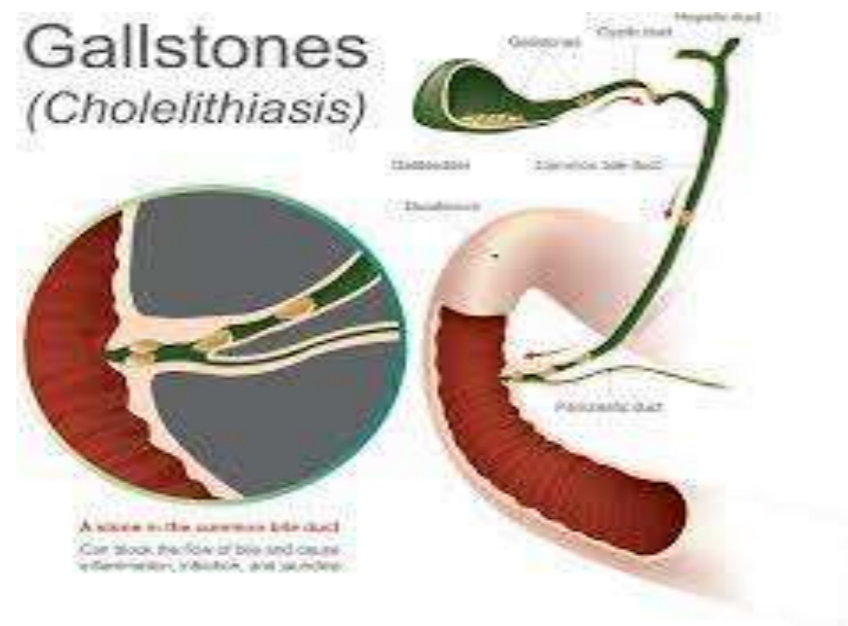
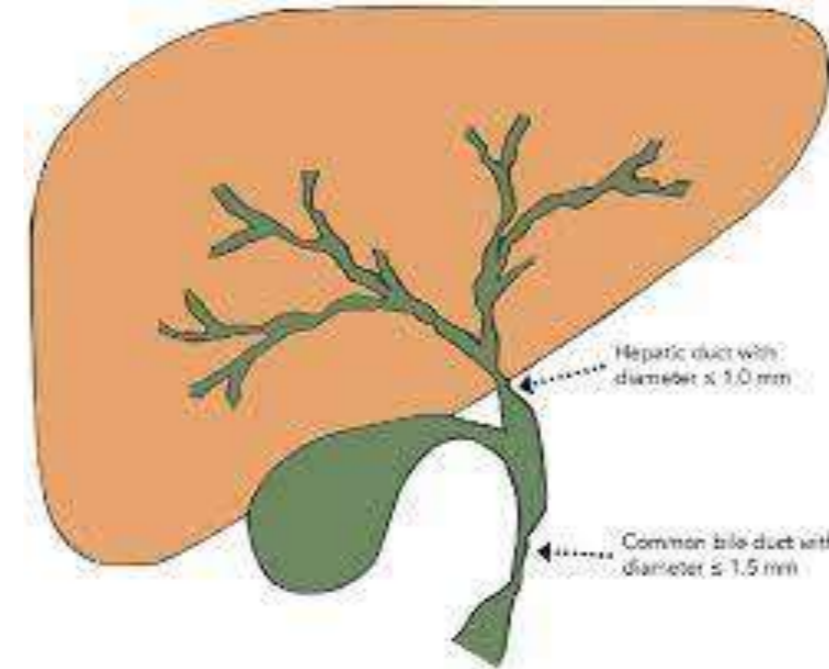


Bile is necessary for the digestion of fat. The bile is produced in the liver and stored in the gall bladder. The bile flows through the common bile from the liver to the gall bladder and gall bladder to the small bowel. Unusually the stone of the gall bladder moves into the common bile duct and obstructs the flow of bile. This can lead to jaundice. After the cholecystectomy, if the surgeon suspects residual stone in the biliary tract or for the healing purpose of the common bile duct, then the surgeon places a T tube in the common bile duct to drain the bile. The T-tube is looked like the English letter T. The top part of the tube is placed in the common bile duct, while the end part is extended outside from the patient's body.



INDICATION

- Suspect biliary duct stenosis.
- Suspected obstruction.
- Suspected stone in ducts.
- Evaluation of biliary tract.
- Suspected strictures.
- Suspected dilation and lesions in biliary tract.

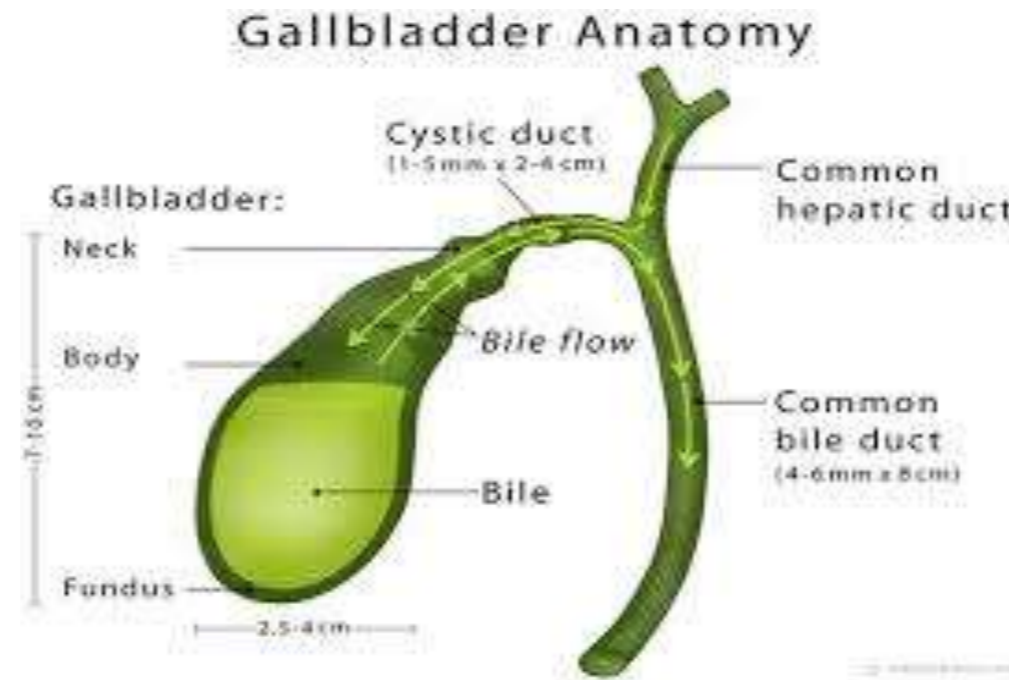




CONTRAINDICATION



- Severe infection of biliary tract.
- Hypersensitivity to Iodine.
- Suspected pregnancy.





PATIENT PREPARATION



- Women should inform about any possibility of pregnancy. Pregnant women should not have a radiologic examination because of the risk of radiation exposure to the unborn baby.
- The patient is instructed to remove all the metallic objects and metallic jewelry from the body.

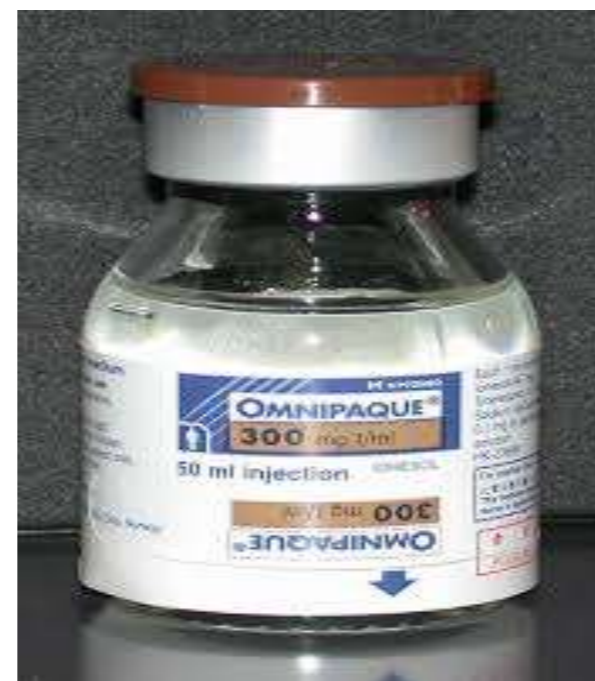




EQUIPMENT



- X-ray machine with fluoroscopic unit and spot film device.
- T tube catheter.
- Contrast media water soluble Iodinated nonionic or ionic 10 ml – 20 ml.
- Normal saline.
- Syringe.
- Gloves.
- Sterile towel.
- Gauze.
- Lead apron.





PRE-PROCEDURE INVESTIGATIONS



The pre-procedure investigations must be reviewed by the radiologist, which includes-

- Abdomen x-ray report.
- Blood Urea.
- Previous biliary tract investigation reports.
- Previous history and medication.





PROCEDURE



- On the day of the examination, the technologist should describe the whole procedure to the patient and obtain written consent from the patient, for permission of procedure.
- The patient is asked to remove clothing and wear a hospital gown.
- The patient is placed in the supine position on the fluoroscopic table.
- An intravenous line is inserted into the patient arm. If necessary, sedative medication is given through line to make the patient relax.
- The scout film of the abdomen is taken then the patient is turned in the right posterior oblique. The oblique position displays the vertebrae away from the biliary tract.
- Afterward, the clamp of T-tube is removed and dilute contrast media in the ratio of 1:3 is injected slowly from the end of T tube under the fluoroscopic guidance. During the injection of contrast media, the technologist should ensure that no air bubbles should be introduced with contrast media because air bubbles may give the shadow of radiolucent stones. The dilute contrast media reduces the biliary duct spasm and gives a better visualization of small stones.



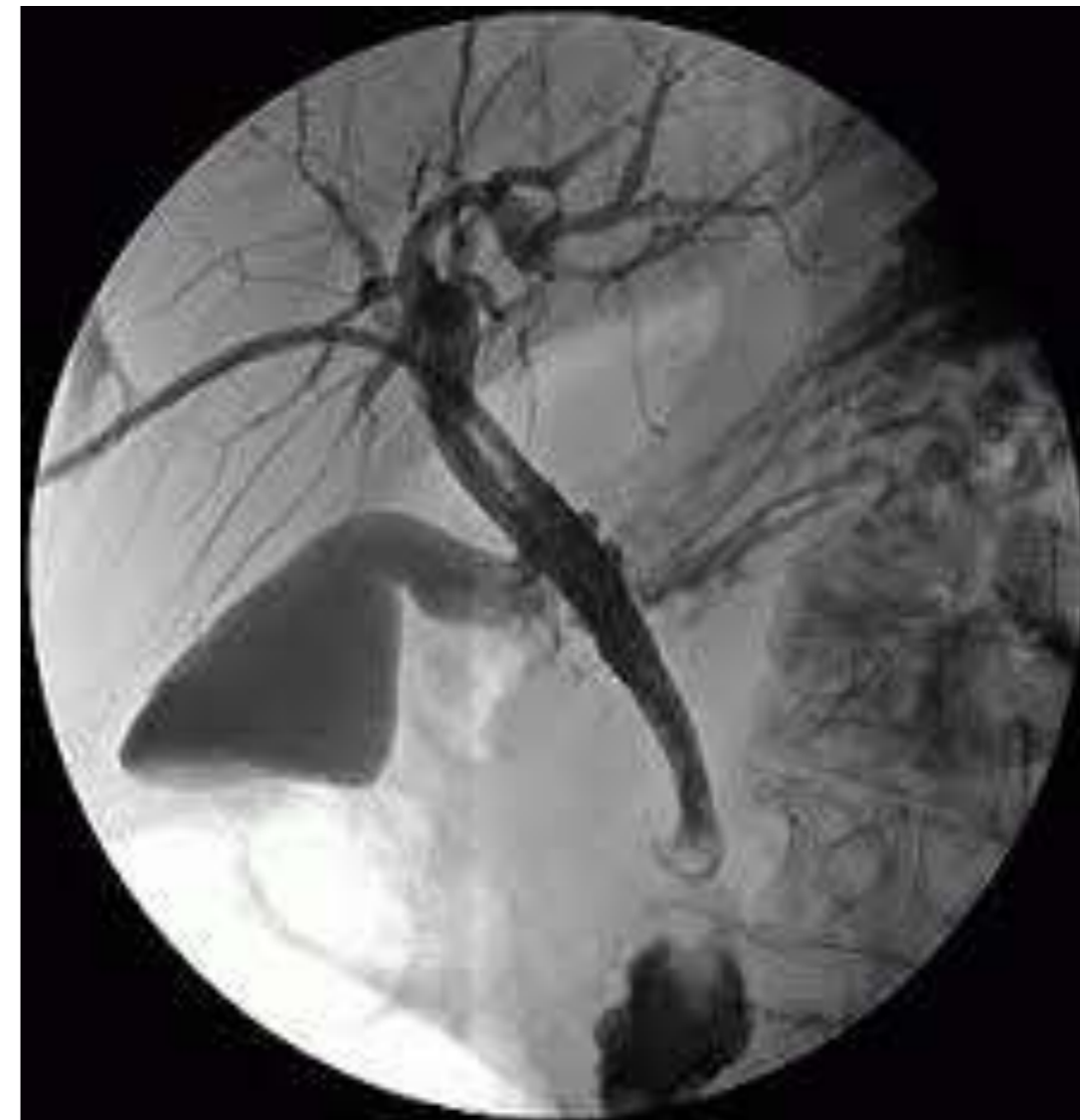
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- The radiologist observes the patency of the duct, leakage from the duct and other abnormalities under the fluoroscopy.
- Whenever the duct fills with the contrast media, the radiographs are taken in various positions like ; **Right Posterior Oblique (RPO), Left Anterior Oblique (LAO) and Abdomen Standing (PA position)** for evaluation of residual stone and abnormalities.



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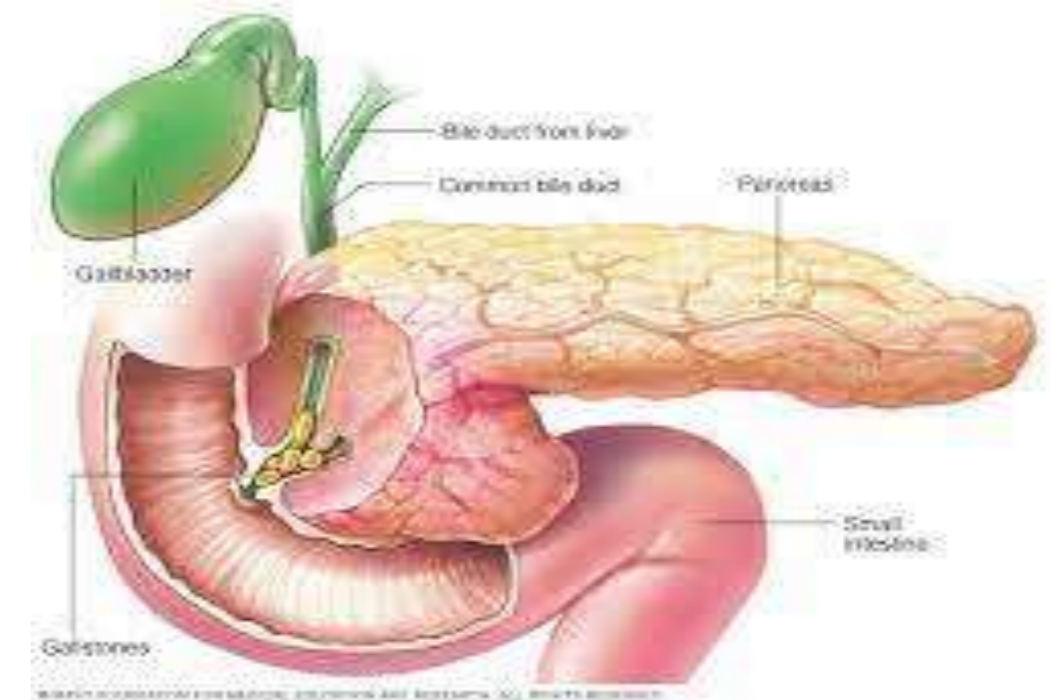




COMPLICATION



- Pain in abdominal.
- Vomitting.
- Inflammation of pancreas.
- Puncture in the bile duct.





AFTERCARE



- After completion of the procedure, the catheter will be clamped off.
- The patient will be allowed to leave the examination room.







THANK YOU