

# Kumar Cholangiography\*

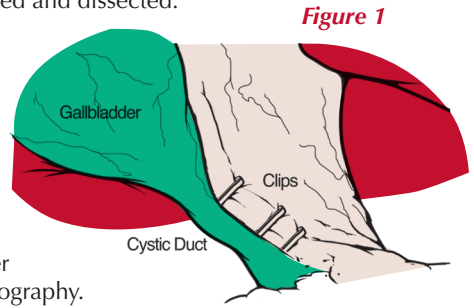
## Prevention of Common Bile Duct Injury by Cystic Duct Marking

The concept is to mark the site of clipping of The Cystic Duct with radio-opaque clips and confirm this fact by Cholangiography.

**Step 1:** The (assumed) Cystic Duct is identified and dissected.

**Step 2:** It is Marked by placement of radio-opaque Clips upon

- The fibro-aereolar tissue around the Cystic Duct
- OR
- Upon the Cystic Artery (Figure 1)



**Step 3: Confirmation by Cholangiography:**

This Cholangiography has to be other than the usual Cystic Duct Cholangiography. Because, if the Common Bile Duct has been mis-identified as the Cystic Duct and Cystic Duct Cholangiography is attempted, the injury of the "mistaken ductotomy," of the Common Bile Duct, will result.

### Kumar Cholangiography\* is Better: (Figure 2)

- The Kumar Clamp\* is a 5mm grasper. It is applied thru the right mid-subcostal port and is used as a grasper for traction at the infundibulum during dissection of the Cystic Duct.
- Cystic Duct is then milked towards the gallbladder to eliminate stones / sludge.
- The Clamp has long atraumatic jaws. It is re-applied completely across the lower part of the body of the gallbladder. (Figure 2)
- The Kumar Catheter\* is then advanced thru the Clamp channel. It carries a short 19 ga needle to puncture the Hartmann's pouch of the gallbladder for biliary access, and dye injection.

