



## RETRO PANCREATIC POSITIONING OF CHOLEDOCHUS- A DESCRIPTIVE CADAVERIC STUDY

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**ABSTRACT** The infraduodenal course of bile duct [choledochus] was studied in 40 cadavers. The accessibility of retropancreatic bile duct varies depending on its relation with the glandular pancreatic tissue. Observations showed that in majority the bile duct was easily approachable. The results were compared with the available data. There was a gender difference in the present data which showed a freely accessible bile duct more among the males. A detailed description of retropancreatic bile duct was given in this dissection based study.

**KEYWORDS :** bile duct, pancreatic tissue, retro pancreatic position

### Introduction

The study was aimed to describe the course of infra duodenal part of bile duct. Relation of choledochus with the glandular pancreatic tissue was studied in detail to determine the degree of accessibility of retropancreatic bile duct. Ignorance of variations can lead on to fatal surgical complications like unexpected hemorrhage or biliary injury .

### Materials and methods

The study was done in the anatomy dissection hall. 40 specimens were taken for this study. During the dissection for the first M.B.B.S students pancreas was dissected along with the duodenum. Bile duct was incised just above the first part of duodenum. Specimens were put in water and cleaned. On the posterior aspect the bile duct was traced down to the duodenum. While doing this step specimens were grouped based on the following observations.

1. Bile duct was freely accessible or not.
2. Freely accessible bile ducts were sub divided into two based on the presence or absence of a very thin laminar extension given by the pancreatic head .

### Results

The observations were tabulated as following.

**Table-1 Retro pancreatic positioning of bile duct was observed as follows.**

Specimens Studied		Freely accessible		Not Freely accessible	
Sex	No	No	%	No	%
Male	22	15	68	7	32
Female	18	10	56	8	44

**Table-2 Freely accessible bile ducts were grouped as follows**

Specimens Studied		Freely accessible Retro Pancreatic bile duct			
		Completely Free Specimens Studied (Group-I)		Covered by thin pancreatic tissue (Group-II)	
Sex	No	No	%	No	%
Male	15	10	67	5	33
Female	10	07	70	3	30
Total	25	17	68	8	32

### Discussion

The common hepatic duct is formed at the porta hepatis by the union of right and left hepatic ducts. The cystic duct joins with this and forms the common bile duct(CBD) .This CBD descends along the free margin of the lesser omentum<sup>[1,2,3]</sup>. The course of CBD can be divided into supra, retro and infra duodenal parts<sup>[1,2,3]</sup>. In the infra duodenal course it is placed behind the head of pancreas and the arteries supplying the head of the pancreas .So this part is described as the retro pancreatic part of CBD.

Due to the axial rotation and differential growth of the second part of duodenum the hepato-pancreatic bud rotates around the duodenum [anti-clockwise]to reach the posterior aspect of dorsal pancreatic bud

<sup>[4]</sup>. This explains the position of the terminal part of choledochus and its relation with the pancreatic tissue.

Retro pancreatic course of the pancreas is having a variable course . In majority it is freely accessible either being covered by loose areolar tissue or it passes through a tunnel formed by thin pancreatic lamina. In some cases the choledochus at this level will show thick glandular tissue covering. This type of glandular extensions will make the approach of choledochus difficult. These variations are not described in majority of the commonly used text books. The retro pancreatic choledochus is often subjected to operative explorations for impacted gall stones or strictures. Case reports of these surgeries give a description of the choledochus in that patients. Apart from that studies showing the prevalence of different positions of retro pancreatic choledochus are rare. Smanio reported no sex difference in his study among the freely accessible group<sup>[5]</sup>. But the present study results showed freely accessible bile duct more in males.

Connection between gall stones or cholelithiasis and chronic inflammation of the pancreas might exist, because pathological pancreatograms are more frequent in gallstone patients than in other persons, and chronic pancreatitis is frequently associated with cholangiographic evidence of biliary obstruction<sup>[6]</sup>.

Gall stones or sludge in gall bladder or bile duct system can induce relapsing inflammation, obvious or occult, in local area, such as bacterial cholecystitis, cholangitis, papillitis, and so on. Also, the prolongation of necrosis, abscess, or pseudocyst after acute gallstone pancreatitis can lead to chronic inflammation of the pancreas<sup>[7,8]</sup>.

### Summary

This study described the retro pancreatic part of bile duct and its variable relation with the head of the pancreas. Clinical study reports related to this region propose the need of more clinically correlated studies. Moreover such studies may become important in choosing the method of approach for diagnostic and surgical approach of this region.

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