

The total number of extrahepatic biliary anomalies were 81 out of 150 cases (incidence 54%), and these divided into vascular (40%), ductal (12%), and GB anomalies (2%), (Table2).

Vascular anomalies

The incidence of vascular anomaly is high (40%), The commonest was the accessory cystic artery (18%), though not much less common is the anterior transposition of the cystic artery, or the right hepatic artery (16%), while the incidence of the caterpillar hump right hepatic artery was much less (6%).

Ductal anomalies

The incidence of ductal anomalies was much less than that of arterial anomalies (18 cases = 12%), The commonest is a long cystic duct with or without low fusion with common hepatic duct (CHD) occurring in 8 cases (5.3%), while other ductal anomalies like short cystic duct, high

fusion of cystic duct with CHD or right hepatic duct (RHD), and accessory hepatic ducts were found in (3 cases = 2%), (3 cases = 2%), and (4 cases = 2.7%) of patients respectively.

Regarding the accessory hepatic ducts, all of them arose from the right lobe of the liver and drained either into the neck of GB (one case) or the CHD (3 cases). The length and diameter of these ducts were extremely variable.

Gallbladder anomalies

In this study, there were only three cases (2%), and these included Phrygian cap (2 cases), and the other interesting case which is not reported in textbooks or other studies, in this case the GB fundus passed through the liver substances from the inferior (visceral) surface to protrude out at the anterior surface, making a hole in the liver (Table 2).

Table 2. Extrahepatic biliary anomalies in cholecystectomies and its several subtypes

Anomalies		No. (%)	Total
Vascular anomalies	Accessory cystic artery	27 (18)	60 (40)
	Anterior cystic artery or anterior right hepatic artery	24 (16)	
	Caterpillar hump right hepatic artery	9 (6)	
Ductal anomalies	Long cystic duct	8 (5.3)	18 (12)
	Short cystic duct	3 (2)	
	High fusion of cystic duct with common hepatic duct	3 (2)	
	Accessory hepatic ducts	4 (2.7)	
Gallbladder anomalies	Phrygian cap	2 (1.3)	3 (2)
	Gall bladder fundus pass through the liver	1 (0.7)	
Total		81 (54)	

Associated anomalies

The number of patients in whom vascular, ductal, and GB anomalies actually coexist is small, only 5 cases (3.3%).

Relation of the cystic artery with the Calot's triangle

The cystic artery was found inside the Calot's triangle in 144 cases (96%), while in 6 cases (4%) outside and in these cases they were found inferior to the cystic duct.

Operative technique

Included laparoscopic cholecystectomy were successfully done in 117 cases out of the total 150 cases of cholecystectomy (78%), while the rest 33 cases (22%) done by conventional open cholecystectomy.

The number of the anomalies recognized by laparoscopic cholecystectomy was 64 out of total 81 anomalies, while other 17 cases recognized by conventional open cholecystectomy.