

More than two structures in Calot's triangle A postmortem study

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Abstract

Background: Large laparoscopic cholecystectomy series often fail to report the rate at which a third structure is encountered in Calot's triangle.

Methods: During a 6-month period, the liver and hepatoduodenal ligament of 90 consecutive human cadavers underwent corrosion casting (n 4 50), postmortem arteriography (n 4 20), and postmortem cholangiography (n 4 20).

Results: Third structures within Calot's triangle were arteries (0.6–5.7 mm diameter) in 36.2% (early division of the right hepatic artery, 8.6%; caterpillar hump right hepatic artery, 12.9%; liver branch of the cystic artery, 10%; double cystic arteries, 5.7%), bile ducts (0.3–1.6 mm diameter) in 5.7% (small-caliber sectoral ducts, 1.4%; right posterior hepatic ducts, 4.3%), and veins (0.9–1.6 mm diameter) merging with the portal vein in 4% of the specimens.

Conclusion: Knowledge of the aforementioned anatomy is critical to surgeons facing more than two structures within Calot's triangle during laparoscopic cholecystectomy.

Key words: Anatomy — Complications — Laparoscopic cholecystectomy