

Case Report

Double cystic duct

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ABSTRACT

Anatomical variations of the cystic duct may be encountered during cholecystectomy. Anatomical variations of cystic duct are known to occur in 18 to 23%. This is a case report of a female who underwent whipple's procedure for a periampullary carcinoma. An H-type double cystic duct anomaly was an incidental finding. Surgeons must be aware of the possible extra-hepatic biliary anomalies to minimize the risk of complications.

Keywords: Double cystic duct, H-type, Anomalies

INTRODUCTION

Anatomical variations of the cystic duct often occur and may be encountered during cholecystectomy.¹ A double cystic duct is extremely rare; only nine cases have been reported.²

CASE REPORT

A 40 years old lady, presenting with obstructive jaundice and diagnosed to have a periampullary malignancy was taken up for whipple's procedure. On laparotomy, the lesion was confirmed to be operable. The cystic duct was identified, ligated and divided (Figure 1A). Further dissection revealed another tubular structure exiting from the gall bladder to the common bile duct (Figure 1B). The accessory cystic duct was ligated and divided and a routine cholecystectomy followed by pancreaticoduodenectomy was performed. The gross pathological examination of the specimen confirmed two separate cystic ducts exiting the gallbladder (Figure 2).



Figure 1A: Cystic duct 1.



Figure 1B: Cystic duct 2.



Figure 2: Resected specimen showing both cystic ducts.

DISCUSSION

Anatomical variations of the cystic duct are known to occur in 18 to 23% of cases.³ Following cystic duct varieties are quoted in literature.¹

- Cystic and common hepatic duct is in parallel.
- Low confluence of the cystic duct.
- Insertion of the cystic duct in the left and right hepatic ducts.
- Anterior, posterior spiral types of insertion of cystic duct on left side of common hepatic duct.
- Parahepatic duct insertion into the cystic duct.
- Absent or short cystic duct (length >5mm).
- Cystic duct hypertrophy with a diameter of >5mm.
- Double cystic duct.
- Right hepatic duct emptying into the cystic duct.
- Hepaticocystic duct, in which the common hepatic duct enters the gall bladder.

A double cystic duct anomaly is extremely rare. Double cystic duct has been classified into three types.⁴

- i. Y- Type: Two cystic ducts join to form a common channel.
- ii. H-type: Accessory duct enters separately into the right, left or common hepatic duct (as seen in our case).
- iii. Trabecular type: Accessory cystic duct enters the substance of liver directly.

Biliary variations that may give an appearance of a double cystic duct.⁵

- Drainage of segment VI into the cystic duct.
- Drainage of right posterior sector duct into the cystic duct.
- Drainage of distal right posterior sector duct into the gall bladder.
- Drainage of proximal right posterior sector duct into the body of gall bladder.

CONCLUSION

Surgeons must be aware of the possible extra-hepatic biliary anomalies to minimize the risk of complications. Diagnostic accuracy relies on a clear understanding of the normal anatomy and anatomical variants of the cystic duct and imaging features of calculus disease.

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