An UNUSUAL CASE OF A RARE ANATOMIC VARIATION OF BILLARY DUCTATION DURING CHOLECYSTOMY

Abstract

Injuries to the biliary tract are a major problem in biliary surgery.

The lack of knowledge of the anatomical variations of the biliary tract is the main reason for this in biliary surgery. These are similar to the injuries to the bile ducts that occur during cholecystectomy.

(1) The incidence of these conditions has risen significantly as a result of the development of new surgical techniques.

Laparoscopic surgery has become the "gold standard" in the treatment of gallstones. This is due to surgeons' experience with open cholecystectomy**.**

We present the case of a patient undergoing surgery for cholelithiasis. Intraoperative cholangiography revealed a posterior paramedian duct.

Systematic intraoperative cholangiography candetectanatomical variations in the bile ducts, thusavoiding life-threatening trauma to the bile ducts.

Key words: bile ducts-anatomical variations-intraoperative cholangiography-cholangio-IRM

INTRODUCTION

A thorough understanding of biliary anatomy and its variants is essential in liver surgery.

A known risk factor for intraoperative complications is the presence of anatomical variations in the bile ducts.

It is crucial to identify potentially dangerous anatomical variations during surgery [1; 2]. This requires careful planning and consideration**.**

Magnetic Resonance Cholangiopancreatography remains the preferred examination for diagnosis and therapeutic guidance.ERCP still has its place as it enablesidentification of the type of anatomical variations and, in some cases, allows for their visualization.Perform an appropriate therapeutic procedure. [3].

To evaluate the results of bile duct lesion repair, long-term patient follow-up is essential.

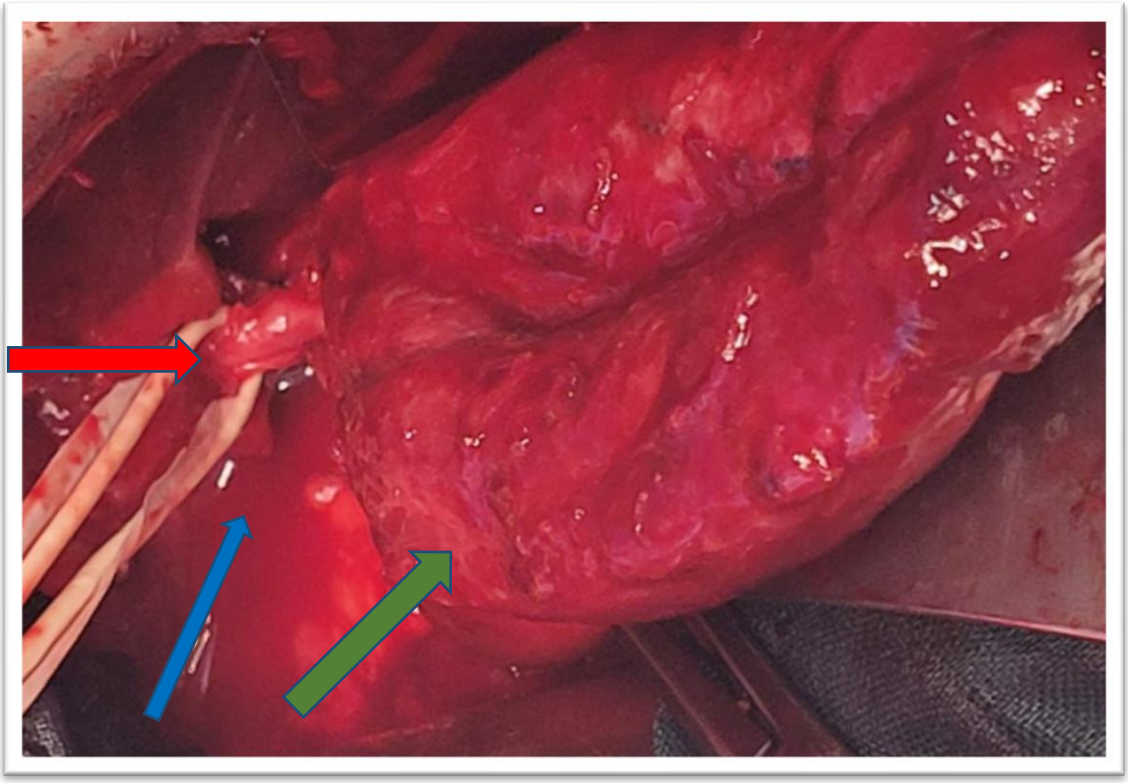
A thorough understanding of bile duct anatomy, lesion mechanisms and an experienced hepatobiliary surgeon are required to prevent such complications.

Case presentation

We present the case of a 60-year-old hypertensive type II diabetic who presented to the Mohamed V Military Training Hospital emergency department in Rabat with symptoms of liver failure, infectious syndrome and right hypochondrial tenderness. The patient's white blood cell count was 18000. The C-reactive protein was 320, and the rest of the medical examination was normal. After an emergency abdominal ultrasound and CT scan, the patient was diagnosed with multiple gallbladder stones. A large stone was embedded in the neck and the wall was thickened to 6 mm.

Admitted to the operating theatre, the patient underwent a laparoscopic procedure and intraoperatively, while dissecting the gallbladder from its bed, we discovered a slippage of the right posterior duct. cholangiography

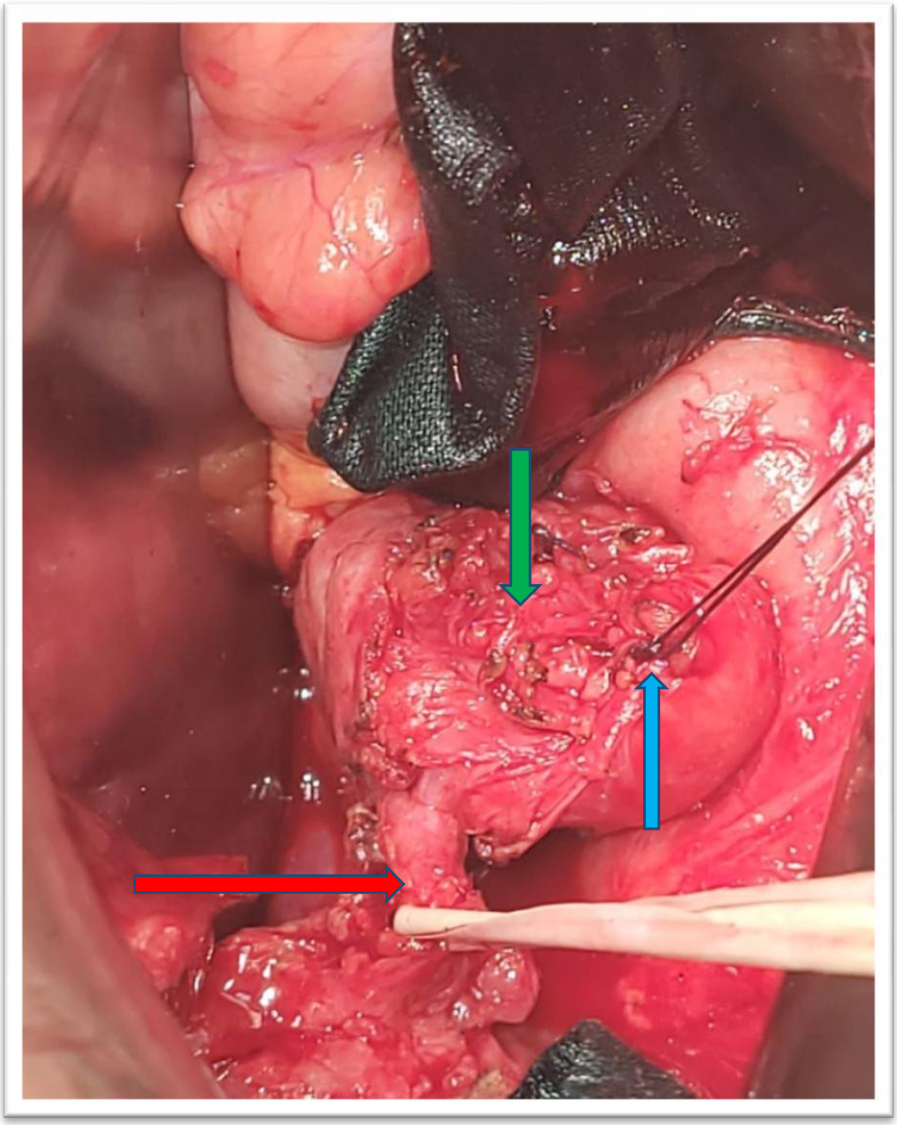
(**PICTURE**1), whichwerespected and put on lakeuntil the end of the procedure with identification, clipping and section of the cystic pediclewithoutanatomical variation at thislevel. Furthersurgerywasstraightforward.



PICTURE1: -redarrow: posteriorparamedian duct

-bluearrow: main bile duct

-green arrow:gallbladder



PICTURE2: -Redarrow: posteriorparamedian duct

-green arrow: main bile duct

-bluearrow:cysticduct

PICTURE 3: -redarrow: gallbladder

-black arrow:gallstone

DISCUSSION

Intraoperative cholangiography should be systematically conducted during every cholecystectomy procedure. Damage during surgery can be prevented by identifying anatomical variations in the bile ducts.

In a study of 250 intraoperative cholangiograms, the presence of anatomical variations, mainly of the right bile ducts, was observed in 12% [4].

Right bile duct anomalies were found in 9% of cases in another study by Taourel et al [5].

Tsutsumi and colleagues conducted a review of the Anglo-Saxon literature [6] and analyzed 12 cases, identifying one case by cholangiography during retrograde papillary catheterization [6].

We discovered an anatomical anomaly in the right bile duct. Specifically, the posterior right bile duct was displaced and intimately attached to the posterior surface of the gallbladder. We carefully dissected the gallbladder to isolate the hepatic duct, which was in an unusual position.

In the literature, 16% of cases were reported to have right lateral duct slippage [7], and 12.4% of cases were reported to have right segmental duct slippage [3], while our study reported 4 to 16% of cases to have right common duct slippage [7,8].

Based on our observation, paramedian duct tends to slip, Taourel et al [5] reported 6.5% incidence of abnormal right hepatic duct, Puent et al's study of 3,845 intraoperative cholangiograms [9] support our findings.

Effective management of main bile duct injuries depends on timely diagnosis, surgeon expertise, and the patient's overall health [10].

Immediate repair of bile duct injuries is generally associated with better outcomes [11].

However, if the injuries go unnoticed, or if the surgeon lacks experience in bile duct surgery, the outcome may be less favorable [12].

For bile duct repair, it is advisable to drain the patient and refer him to a specialized surgeon. Currently, the treatment of main bile duct injuries requires a multidisciplinary approach and relies on patient preparation, as well as endoscopic and surgical means[13].

One potential complication that can arise during a cholecystectomy is injury to the bile duct, particularly if an anatomical variation is discovered. Anastomotic fistulas are also a concern [14].Complications with a court date to be cited:Hemorrhagic accidents and Intra-abdominal septic complications [15];The Late complication: 1-2%. Gastrointestinal reflux into the biliary tract. Intrahapatic calculi, intestinal obstruction, and cholangitis are associated with highermorbidity[16].

Common bile duct injury during cholecystectomy threatens to complicate an otherwise straightforward procedure.

This is made all the more worrying by the fact that many of these incidents can be avoided. Nothing more is needed to prevent these kinds of surgical mishaps than a careful attention to Details, and a rigorous adherence to well-established rules of biliary surgery[17].

CONCLUSION

Biliary surgery can be complicated and can lead to serious events or complications, and it is important to be precise and to avoid potential pitfalls in order to ensure the best possible outcome.

Intraoperative cholangiography enables us to identify any variations in the anatomy of the bile ducts and prevent potentially life-threatening trauma to the patient's bile ducts.

Ethical Approval:

As per international standard or university standards written ethical approval has been collected and preserved by the author(s).

Consent

As per international standards or university standards, patient(s) written consent has been collected and preserved by the author(s).

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