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Obstructive Jaundice a Complication of Laparoscopic Cholecystectomy

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SUMMARY

Laparoscopic cholecytectomy is still in its infancy in Pakistan but its complications have already begun to surface. We present a case of obstructive jaundice as a complication of laparoscopic cholecystectomy. A 40 year old lady underwent laparoscopic cholecystectomy for symptomatic cholelithiasis. The procedure was complicated by per-operative bleeding for which open operation was carried out to secure haemostasis. Post-operatively, she developed symptomatic and biochemical evidence of obstructive jaundice. Ultrasound of the biliary tree, ERCP and PTC confirmed partial obstruction due to a stricture at the junction of cytic duct with common hepatic duct. She underwent hepatico-jejunostomy, Roux-en-y loop which was followed by symptomatic and biochemical improvement.

INTRODUCTION

Laparoscopic cholecystectomy is carried out with the laparoscope fitted with a colour television camera, which provides a colour picture on two monitors with resolution down to 1-2 mm. The gall bladder is held and dissected with grasping forceps introduced through the right flank and a diathermy probe inserted through the epigastrium just by the side of the xiphisternum

The cytic duct and the cystic artery are secured with titanium clips and the gall bladder removed through the umbilical incision. Three (or sometimes four) small punctures in the abdomen are then closed with adhesive strips without skin sutures. The procedure is much less painful post-operatively than when an incision is employed with the open operation. It has better cosmetic results and is no more risky than the open operation in expert hands. Moreover, hospital stay is reduced to only one or two days. Occasional complications are biliary stricture and bleeding. This case presented with both.

CASE REPORT

A 40 year old lady presented to Shaikh Zayed Postgraduate Medical Institute on 26th May, 1992 with a four month history of itching, anorexia, nausea, vomiting, tiredness and jaundice. She is a known diabetic and underwent laparoscopic cholecystectomy on 15th January 1992 for symptomatic cholelithiasis. The procedure was complicated by per-operative bleeding for which open operation was carried out to secure haemostasis. Post-operatively she felt generally unwell, developed jaundice within one week following surgery and continued to have symptoms until she presented at our institute.

On examination at the time of admission she had deep jaundice with widespread scratch marks. She was afebrile with normal vital signs. Abdominal examination showed the scars of laparoscopic cholecystectomy and a right subcostal scar. There was no organomegaly, rest of the systemic examination was unremarkable.

Her laboratory data are shown in Table 1.

Table 1:

	Pre-op.	*Post-op.*
Total Bilirubin	16.2 mg/dl	0.8 mg/dl
Alk. Phosphatase	650.0 iu/l	293.0 iu/l
ALT	166.0 iu/l	33.0 iu/l
AST	113.0 iu/l	28.0 iu/l
Total Protein	8.2 g/dl	8.1 g/dl
Albumin	4.1 g/dl	3.9 g/dl

Her haematolgical and rest of the biochemical indices were within normal range except blood glucose which was 171 mg/dl.

Ultrasound of abdomen showed dilated intra and extra-hepatic ducts with sudden tapering of common hepatic duct. There was an area of fluid collection at the site of cystic duct.

HIDA Scan showed partial biliary obstruction. Endoscopic retrograde cholangio pancreatography (ERCP) showed normal pancreatic duct but the commmon bile duct could not be cannulated (Fig. 1).

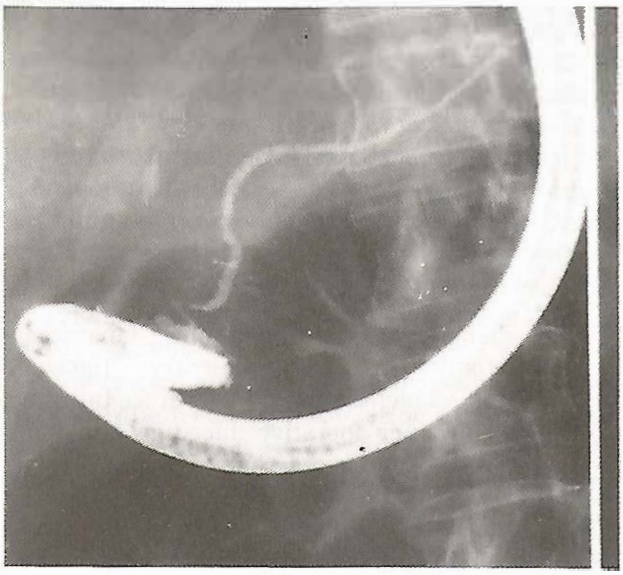

Fig. 1: ERCP showing normal pancreatic duct.

Percutaneous transhepatic cholangiography (PTC) showed partial obstruction at the site of the surgical clips applied at the confluence of cystic duct and common hepatic duct. It also showed leakage of dye in the adjacent area. (Fig. 2a, 2b)

Laparotomy was carried out on 31st May, 1992 and Hepatico-jejunostomy, Roux-en-y loop, was done.

Post-operative recovery was uneventful with complete resolution of symptoms and biochemical improvement.

DISCUSSION

Laparoscopic cholecystectomy is becoming more and more popular all over the world both among the patients as well as the surgeons[1]. This procedure does have some complications[2], like haemorrhage

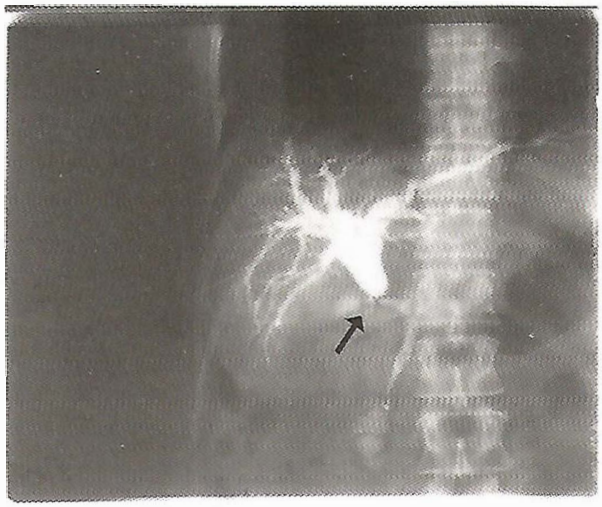

Fig. 2a: PTC showing stricture of common hepatic duct with some extravasation of contrast, caused by metalic clip applied on laparoscopic cholecystectomy.

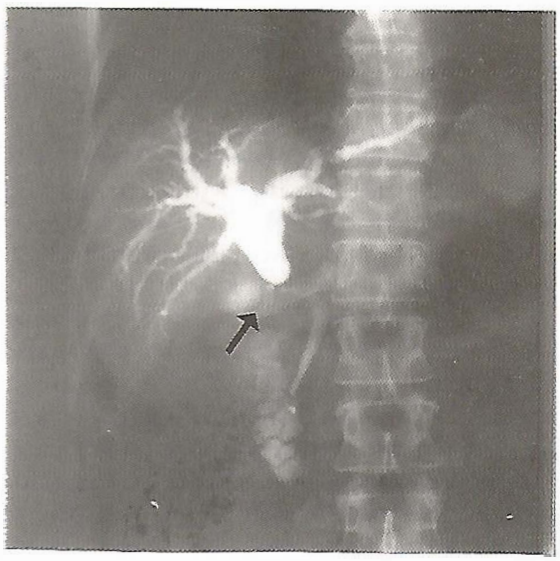

Fig. 2b: Clips applied during laparoscopic cholecystectomy causing stricture of common hepatic duct seen on PTC.

and damage to the common bile duct as highlighted in our case. There is in addition, risk of biliary peritonitis due to leakage from the cytic duct stapling. Open cholecytectomy has the advantage that per-operative cholangiography can be performed easily, but with the laparoscopic method it is difficult and carried out in only a few centres[3,4].

Laparoscopic cholecystectomy should be carried out in hospitals where adequate facilities such as ERCP and PTC are available. Pre-operative ERCP is commonly performed in the setting of past history of jaundice, elevated alkaline phophatase and dilated biliary tree on ultrasound where a timely diagnosis of biliary tree abnormality will obviate many post-operative complications[5]. Post-operative ERCP is performed to deal with the complications through retrieval of retained stones after papillotomy, dilatation of strictures or stent placement.

There is certianly going to be a learning curve during which complications are bound to occur and it is hoped that ultimately laparoscopic cholecystectomy will become a safe and cost effective procedure.

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