



Post laparoscopic cholecystectomy gastro intestinal bleed.

Rajbhandari A¹, Bhomi KK¹, Pradhan GB¹, Shrestha S¹, Bhattachan C L¹

¹Nepal Medical College Teaching Hospital

ABSTRACT

Post laparoscopic gastro intestinal bleed accounts for less than 1 % of laparoscopic complications. Here we present a 26 year female who presented with gastro intestinal bleed after 2 weeks of undergoing laparoscopic cholecystectomy. CT scan of abdomen revealed pseudo aneurysm of anterior branch of right hepatic artery. She underwent embolization which revealed pseudo aneurysm of cystic artery and GI bleeding stopped thereafter. She presented 1 month later and had to undergo Laparotomy with the findings of a subphrenic and pelvic collection.

Key words: *laparoscopic cholecystectomy, gastro intestinal bleed, cystic artery aneurysm*

CORRESPONDENCE

Dr. Ashish Rajbhandari

Lecturer

Department of Surgery

Nepal Medical College Teaching Hospital, Jorpathi, Kathmandu, Nepal

e-mail:ashish_rajbhandari@hotmail.com

CASE HISTORY

A 26 year female had undergone laparoscopic cholecystectomy and was discharged on the 2nd post operative day. She presented to the emergency 2 weeks later with episodes of hematemesis and melena for 2 days. On examination she was markedly pale, icteric and had features of shock with a pulse rate: 126/min and blood pressure of 86/60 mm hg. Her abdomen was mildly distended with generalized tenderness on deep palpation. Her hemoglobin was 3.5gm%, total serum bilirubin: 5.2 gm%, direct bilirubin: 3.4gm%, SGPT: 66u/l, SGOT: 56u/l, ALP; 160 u/l. She was resuscitated with fluids and multiple blood transfusions in ICU. USG abdomen revealed minimal free fluid in Morrison's pouch with normal Common Bile Duct /Intra Hepatic Bile Duct. Upper Gastro Intestinal Endoscopy and colonoscopy were also normal. She underwent CT scan of abdomen which revealed pseudo aneurysm of anterior branch of right hepatic artery. (Fig. 1, 2)

She underwent embolization which revealed pseudo aneurysm of the cystic artery. There was no further bleed. Repeat USG revealed free fluid in abdomen and aspiration of 1 L of hemorrhagic fluid was done. She was later discharged without further events. She presented 1 month later with mild abdominal fullness and distension. The USG revealed 2 loculated collections in right sub diaphragmatic (10X 15 cm) and hypo gastric region (20X 27 cm). 500 ml of blood stained fluid was aspirated. She subsequently underwent Exploratory Laparotomy with findings of thick walled cavity in pelvis with about 2300 ml thick blood mixed fluid with clots and 600 ml collection in right sub phrenic space. The post operative period was uneventful.

DISCUSSION

Laparoscopic cholecystectomy is regarded as the gold standard treatment for symptomatic cholelithiasis. The incidence of biliary and vascular injuries is: 0.3- 1 %.¹ Hepatic and cystic artery pseudo aneurysms are rare but serious complications related with laparoscopic cholecystectomy. The first reported case of cystic artery pseudo aneurysm complicating laparoscopic cholecystectomy was by Bergey.²

Though the pathogenesis remains unclear, direct vascular injury, erosion due to clip encroachment and diathermy

shorting on clips and associated infection are likely to be precipitating factors.³ Bile has been shown to cause damage to the vascular wall and therefore delay the healing of injured arteries leading to pseudo aneurysm formation. Failure to deal with bile leak and secondary infection may also result in pseudo aneurysm formation.⁴

The classical triad of upper gastrointestinal bleeding, pain in the right upper quadrant and obstructive jaundice described by Quincke is present in 32% of patients.⁵ GI bleeding is the first sign of presentation.⁴ The bleeding may be intermittent or if recognized late maybe massive. The mortality rate could be as high as 50%.⁶ Patients have presented as late as 1 year after the procedure.⁷

Early recognition is the key to management. Patients with hematemesis or melena following laparoscopic cholecystectomy should prompt an urgent Endoscopy and if no cause is identified, abdominal CT and hepatic angiography should be performed. Definitive treatment with radiological embolization is the treatment of choice. The complications of embolization include rupture of aneurysm during coil embolization; extension thrombosis of right hepatic artery, hepatic necrosis and delayed CBD stricture due to ischemia⁸. When there is compression of the bile duct or a fistula or failure of embolization, operation is needed to repair or ligate the artery involved.⁹ Madanur conducted a study at Kings College at London. Out of 86 patients referred with bile duct injury and leak, 4 were of pseudo aneurysm. Out of them, three patients were treated with coil embolization with success and a fourth patient required emergency laparotomy secondary to a rupture of pseudoaneurysm.⁴

References

1. Fullarton GM, Bell G. Prospective audit of the introduction of laparoscopic cholecystectomy in the west of Scotland. West of Scotland Laparoscopic Cholecystectomy Audit Group. *Gut* 1994; 35:1121 - 6.
2. Bergey E, Einstein DM, Herts BM. Cystic artery pseudo aneurysm as a complication of cholecystectomy. *Abdom Imaging*. 1995 Jan -Feb; 20(1):75 - 7
3. Otah E, Cushin BJ, Rozenblit GN *et al*. Visceral artery pseudo aneurysms following pancreatoduodenectomy. *Arch Surg* 2002; 137:55 - 9

4. Madanur MA, Battula N, Sethi H, *et al.* Pseudoaneurysm following laparoscopic cholecystectomy. *Hepatobiliary Pancreat Dis Int.* 2007 Jun; 6(3):294 - 8.
5. Siablis D, Tepetes K, Vasiou K *et al.* Hepatic artery pseudoaneurysm following laparoscopic cholecystectomy: trans catheter intra arterial embolization. *Hepatogastroenterology.* 1996; 43:1343 – 6
6. Stanley JC, Zelenock GB. Splanchnic artery aneurysms. In: Rutherford RB editor. *Vascular surgery.* Philadelphia: Saunders; 1989:973 -5
7. Heyn J, Sommers S, Schmid R, Hallfeld K, Schmidbauer S. fistula between cystic artery pseudoaneurysm and cystic bile duct cause of acute anemia one year after laparoscopic cholecystectomy. *J Laparoendosc Adv Surg Tech A;* 2006 Dec 16; (6):609-12
8. Pistorius GA, Walter P, Hildebrandt U *et al.* Pseudoaneurysm of the hepatic artery. A rare complication after laparoscopic cholecystectomy. *Langenbecks Arch Chir* 1994; 379: 291-3.
9. Siablis D, Tepetes K, Vasiou K, *et al.* Hepatic artery pseudoaneurysm following laparoscopic cholecystectomy: transcatheter intraarterial embolization. *Hepatogastroenterology.* 1996; 43:1343 – 6

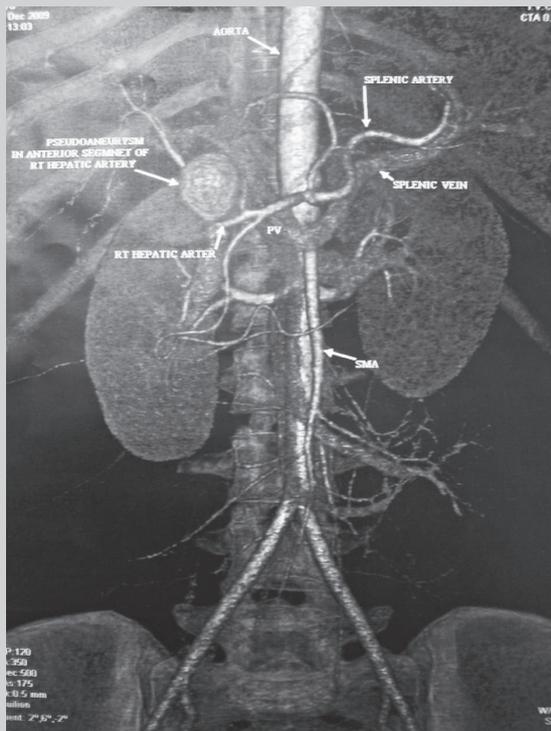


Figure 1: CT scan - pseudo aneurysm of anterior branch of right hepatic artery.



Figure 2: CT scan - pseudo aneurysm of anterior branch of right hepatic artery.