Unusual cause of pain in abdomen after laparoscopic cholecystectomy

Portal vein thrombosis (PVT) can result due to early or late cirrhosis, tumors of the liver and gall bladder, or due to tumors of the surrounding organs, and intraabdominal inflammatory conditions like pancreatitis, diverticulitis and appendicitis. Spontaneous PVT develops without any local cause, as this occurs in hematological disorders. We report a case of PVT following laparoscopic cholecystectomy.

A 36-year-old woman with past history of epigastric and right hypochondrium pain underwent an uneventful laparoscopic cholecystectomy for gallstone disease. Ten days after surgery, she complained of persistent central abdominal colicky pain. Abdominal sonography did not show any abnormalities, except for absence of gall bladder. Liver biochemistry showed total bilirubin 0.7mg/dL, SGOT 38 U/L and SGPT 25 U/L, with mildly elevated serum amylase 149.8 IU/L (ULN 96 IU/L). Upper GI endoscopy was normal. CT scan of the abdomen (Figure) showed the presence of acute thrombus in the portal vein and splenic veins extending up to the superior mesenteric vein with no bowel wall thickening. A diagnosis of post-laparoscopic cholecystectomy acute portal vein thrombosis was made.

Figure: CT scan of the abdomen showing portal vein thrombosis
Doppler USG showed no flow within the portal vein and its branches; splenic vein flow was normal with intermittent flow within the SMV suggestive of partial thrombosis.

Her coagulation profile showed the antithrombin III level 72% (normal 80-120), protein C 63% (normal 70-130), and protein S level 35% (normal 55-123), suggestive of hypercoagulable disorder.

The patient was started on heparin therapy and continued on warfarin 5 mg once daily. Her abdominal symptoms resolved completely. Abdominal doppler USG done 5 months later showed that the intrahepatic portion of the portal vein was replaced by a cavernoma and the extrahepatic portion of portal vein showed partial flow, and few peri-portal collaterals. Splenic vein was normal. Superior mesenteric vein also showed partial resolution of thrombosis. All the 3 hepatic veins and IVC were normal. There was no ascites.

Portal vein thrombosis following laparoscopic procedures has been reported in recent years. The most likely cause of this complication includes changes in coagulation status, splanchnic hemodynamics, and portal venous blood flow, all of which could be related to carbon dioxide absorption and increased intra-abdominal pressure.2,3

In patients undergoing laparoscopic surgery, heparin prophylaxis has been advised by some surgeons to avoid these complications especially if a past history of hypercoagulable disorders is present.4

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References


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