Fig: PTC showing linear filling defect in CBD – T-tube remnant

symptom-free for three months; the stent was removed. After this she again developed itching and jaundice. Repeat PTC showed multiple stones in the hepatic duct. These were extracted through the percutaneous route and the choledochoduodenal anastomosis dilated. She was once again symptom-free for two months when she again developed itching and was referred to us.

Clinical examination revealed no evidence of chronic liver disease or cholangitis. Abdominal examination showed a midline suprapubic scar, a right subcostal scar and a midline epigastric scar which was the exit site of the PTBD. There was no hepatosplenomegaly or ascites.

Investigation: hemoglobin 12.7 g/dL, WBC 9500/mm³, total proteins 7.3 g/dL, albumin 4.1 g/dL, alkaline phosphatase 509 IU/L (N 60-150), AST 119 IU/L, ALT 92 IU/L. She was HBsAg negative. Ultrasoundography revealed a dilated biliary system. When we reviewed the second PTC (the first one was not available for review), a linear filling defect was seen in the CBD (Fig).

At laparotomy, the choledochoduodenal anastomosis was undone. A remnant of the latex T-tube, the horizontal limb and part of the vertical limb, was removed from within the CBD along with multiple intrahepatic stones. She underwent a Roux loop hepatico-jejunostomy. Eleven months later, she is asymptomatic.

The breaking of a T-tube during its removal is a rare event. The main point of resistance when a T-tube is pulled is at the junction of the horizontal and vertical limbs, and breaks may occur at this point. Glutting the tube and cutting a V notch at junction are recommendations for easy removal of the T-tube; however, these may weaken the T-tube. Endoscopic removal of retained T-tube has been reported. Use of a Gruentzig balloon dilatation catheter to remove a retained T-tube has also been reported.

PVC tubes harden with time and are associated with a higher incidence of bile peritonitis. Latex or silicone T-tubes have less complications. It is important to carefully examine the T-tube after its removal to ascertain that no portion has been left behind. Interestingly, our patient was totally asymptomatic for four years after surgery and at no time had cholangitis, perhaps because of adequate drainage. Along with hemobilia, a retained T-tube remnant should be remembered as a cause of filling defects in the CBD in a patient who has undergone CBD exploration.

References

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