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IMAGE

Cystic duct clip migration into the common bile duct

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A 74-year-old man presented with an acute episode of pancreatitis and cholangitis. He had intermittent right upper quadrant attacks of pain in previous 2 years with fever. An elective laparoscopic cholecystectomy for biliary colic was done 3 years earlier. The surgery had been uncomplicated and operative cholangiogram was normal with placement of three metallic clips on the cystic duct.

Computed tomography (CT) cholangiogram was performed to exclude a common bile duct stone and showed a surgical clip within the bile duct (Fig. 1a). Subsequently, an urgent endoscopic retrograde cholangiopancreatography (ERCP) was performed confirming an intra-ductal clip (Fig. 1b). This was successfully removed following a sphincterotomy. The clip was partly encased within a stone. No bile duct injury was noted. The patient made a full recovery and was symptom free at follow up after 12 months.

The proposed mechanism of clip migration is erosion of the bile duct due to pressure effects exerted by subtle clip movement and migration along the paths of least resistance. The migrated clip acts as a nidus for stone formation with ensuing biliary obstruction post cholecystectomy. Jaundice and cholangitis are the most common symptoms at presentation in patients with migrated clips. The occurrence of pancreatitis is less common [1].

A recent literature review identified 80 reported cases (of which 69 were analyzed) of either clip migration or clip related stones [2]. The median time to recognition was 2 years after surgery and a majority of cases were managed successfully with ERCP [2]. Interestingly, 29% of these reports were associated with bile duct strictures, implying that bile duct injuries are probably associated with such cases.

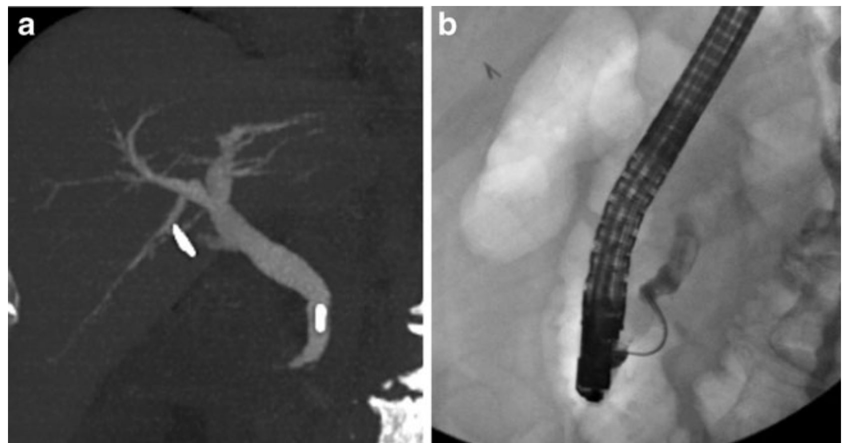

Fig. 1 **a** Computed tomography cholangiogram showing a metallic clip within the distal bile duct without evidence of any other abnormality. Other clips can be seen on the cystic duct stump. **b** Endoscopic retrograde cholangiogram demonstrating the distal clip in the bile duct, partly encased within a stone

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