



Case Report

Complete migration of a biliary stent into the gallbladder

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Biliary stents become very important tools in the hands of gastro-intestinal endoscopists. They solve a lot of problems, but they are not free of complications. During insertion of a biliary stent in a sixty-five-year-old female patient it broke. It broke in a place which makes its retrieval very difficult. Trial of retrieval led to pushing of the stent deep into the common bile duct. It lies just below the mouth of the cystic duct, which should have made a warning for a rare migration. Later the stent was seen in the vicinity of the gallbladder during ERCP. Cholecystectomy was done and the stent was found inside it.

Keyword: Biliary stent migration, biliary stent in gallbladder, Biliary stent, Complication of biliary stent, Breaking of biliary stents.

INTRODUCTION

Endoscopic Retrograde Cholangiopancreatography (ERCP) is nowadays considered a therapeutic tool for some kinds of obstructive jaundice, especially stone extraction and stenting. Diagnosis of the biliary tree problems is taken over by Magnetic Resonance Cholangiopancreatography (MRCP). Biliary stents problems are numerous including block, bleeding, misplacement, displacement, infection and fracture. The complication rate was said to be 8-10% and the commonest complication is stent block (Chien-tzu, 2013). In this case report a rather rare migration is described.

CASE REPORT

A sixty-five-year-old female patient was referred by her doctor for ERCP to remove a biliary stone. In addition to dilatation of the biliary tree and a small stone, the ampulla was found to be stenosed. The ampulla was dilated and the stone was removed. A ten cm long, plastic, 7 Fr. stent was selected for insertion to ensure drainage of the biliary tree. During pushing of the stent it broke at the duodenal side exactly at the lip of the ampulla. An

attempt to insert a balloon to retrieve the stent led to its more insertion. A forceps was used to grasp the stent and remove it. This also led to further insertion of the stent into the common bile duct. The deeper tip of the stent was noticed to be just below the cystic duct.

The patient was followed up. Her jaundice cleared and she became asymptomatic. A month later she came complaining of right hypochondrial discomfort with no fever or jaundice. On clinical examination her abdomen was soft and there was no guarding or tenderness in the right hypochondrium. Ultrasound revealed an elongated gallbladder with a vague object inside it. ERCP was done to locate the stent. The common bile duct was found to be still dilated and the stent was seen in the area of the gallbladder Fig (1).

The patient was referred to surgery. Cholecystectomy and choledochoduodenostomy was done to prevent further obstructive jaundice, in this old patient, as the ampulla was found stenosed previously. The stent was found inside the gallbladder when it was removed and opened. On follow up the patient remained in good health.

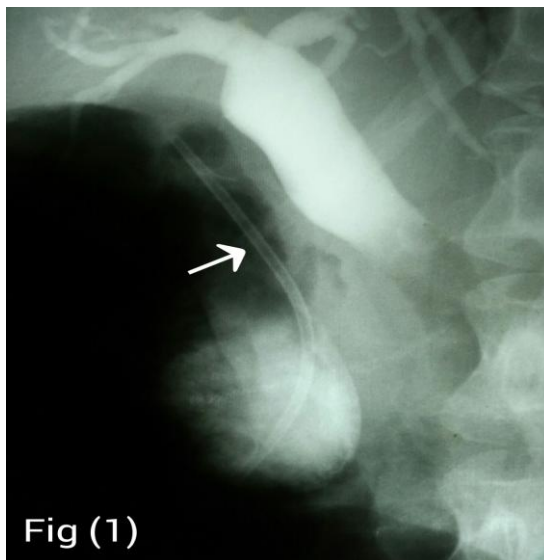


Figure 1. Stent in the gallbladder

DISCUSSION

Migration of a biliary stent deeper (proximal) into the biliary tree or outside (distal) to the intestines is a known complication. The incidence of distal migration is said to be more common than the proximal especially when there is stenosis of the ampulla (Johanson JF, 1992). In this case, inspite of stenosis of the ampulla, the stent migrated proximally. This could be explained by the breaking of the part of the stent which carries the flap that anchors the stent to the ampulla and prevents its migration proximally. Breaking of the stent could be because of bad stent material and/ or design. Migration of plastic stents is reported to be more common than the uncovered metallic stents (ASGE evaluation report, 2012). The covered metallic stents have the same migration rate as plastic stents, because of embedding by tissue growth in the stent.

Migration of biliary stents to the gallbladder is also a known complication as reported by Gleeson (F. C. Gleeson, 2008) who also reported a success in removing the stent by a snare. In the present condition a snare was not used as insertion of any device beside the stent led to its further deeper migration. It was not attempted to remove the stent from the gallbladder as surgery was decided to remove the gallbladder and solve the problem of ampullary stenosis for good in this old patient.

The failure to see the stent clearly by ultrasound may be due to biliary mud distorting the image or may be to machine or operator deficiencies. Multi Detector Computerized Tomography (MDCT) is claimed to be better than other imaging techniques in detecting biliary stents and their complications (Orlando, 2012).

CONCLUSION

Biliary stent technique becomes common since 1980 and it is here to stay. Whatever complication that occur, the benefit is far greater. Care and training in stent placement, early detection of its complication and better stent design and material are the points which should be discussed to improve the outcome. In this case the stent broke, which I think, is the main cause of its migration. Pushing the stent deep inside the common bile duct and the possibility of putting its tip at the opening of the cystic duct are also causes for its migration to the gallbladder. Good stent material and better technique might have prevented this complication in this case.

Conflict of interest: The author declares that there is no conflict of interest.

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