INTRODUCTION
Stent migration occurs in about 5 - 10% of patients undergoing biliary stenting.1 Complications from biliary stenting are rare. One of the late complications of long-term biliary stenting includes stent dislocation and migration,2 which in turn can lead to visceral obstruction, depending on the site of dislodgement.2

The risk of stent migration is greater in benign biliary strictures than in malignant strictures. Multiple biliary stent placements decrease the frequency of migration. Increasing indications for stent insertion have contributed to a growing number of reports relating to unusual distal intestinal complications.3

The presently reported cases describes one such event with preceding events and endoscopic retrieval.

CASE REPORT
A 75 years old female was admitted with obstructive jaundice, secondary to an impacted 1.7 cm size stone in distal CBD. Cholangiogram obtained during ERCP revealed dilated biliary system with large, immobile stone at the lower end of CBD. A large size sphincterotomy was performed and stone extraction using biliary balloon / dormia basket attempted which was unsuccessful as the stone was impacted in distal CBD. Therefore, a plastic biliary stent of 9 cm/8.5 french size was inserted successfully to secure the biliary drainage. Patient improved clinically and discharged home on ursodeoxycholic acid. Four weeks later, she presented to emergency department with signs of cholangitis. An emergency ERCP was performed. The stent had migrated up completely into the left intra hepatic duct. In this session, the stone was extracted and biliary drainage secured. Migrated stent was removed later on by another ERCP procedure.

Full Length Migration of Plastic Biliary Stent into the Left Lobe of Liver and Its Endoscopic Retrieval

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ABSTRACT
An elderly female was admitted with obstructive jaundice, secondary to an impacted 1.7 cm size stone in distal CBD. Cholangiogram obtained during ERCP revealed dilated biliary system with large, immobile stone at the lower end of CBD. A large size sphincterotomy was performed and stone extraction using biliary balloon / dormia basket attempted which was unsuccessful as the stone was impacted in distal CBD. Therefore, a plastic biliary stent of 9 cm/8.5 french size was placed successfully to secure the biliary drainage. Patient’s condition improved clinically after placement of stent and jaundice decreased, so she was discharged home on ursodeoxycholic acid with the plan to repeat ERCP for stone removal after 8 weeks.

Four weeks later, she was presented to the emergency department with fever, rigors and worsening of jaundice and appeared toxic due to cholangitis. ICU admission was made with support of intravenous antibiotics and fluids. An emergency ERCP was performed on the same day. The previously placed stent was not seen in place and scout fluoroscopy revealed its migration up to its full length into the left intrahepatic duct. Endoscopic attempts to remove the stent were not made this time as the patient was appearing toxic. Stone appeared to be mobile this time. Careful extension of the previous very large sphincterotomy was made and stone was extracted by a balloon and taken out from the gut using basket to avoid the occurrence of possible stone induced ileus. Pus was also drained. Patient showed a dramatic clinical improvement after stone removal.

After one week duration, a plane X-ray of abdomen was taken which was giving a false impression of stent migration into the stomach as the proximal end of stent was seen in the gastric air bubble (Figure 1). For this reason, an upper GI endoscopy was performed to remove the stent from stomach but nothing was found in stomach.

A CT scan of abdomen was performed to localize the stent. It was reported that the stent had migrated completely in the left intrahepatic duct (Figure 2).
Proximal migration of a biliary or pancreatic stent is an infrequent event but its management can be technically challenging. It incidence rates of 5.2% and 7.5% were observed for proximal and distal pancreatic stent migration, respectively. Stent migration can lead to serious complications and produce significant morbidity and mortality.

In choledocholithiasis with dilated common bile duct, short and large size stent are the main risk factors for proximal migration of stent. Retrieval of a proximally migrated stent requires experience with different endoscopic devices. Moreover, distal migration needs attention because it can cause severe complications.

In this case, the stent migration was proximal completely into the left intrahepatic duct, and the possible risk of migration was significantly dilated CBD 2.5 cm with large round stone of approximate 1.7 cm size, which after the release became mobile and pushed the stent upward in the left intrahepatic duct. Such a case is rare, as the literature was searched thoroughly but nothing was found similar to this case. Removal of the stent by ERCP was very challenging and use of new endoscopic equipment such as use of cholangioscope and Soehendra type stent retrieval device may be helpful for such a migrated stents.

DISCUSSION

First introduced in 1979, endoscopy-guided plastic biliary stent insertion has a well-established role in a wide variety of obstructive biliary and pancreatic disorders. Over the past decade, the use of this modality has increased in prevalence and utility. Despite the overall safety of this modality, on rare occasions, these stents may migrate from the biliary tract. Over 80% of proximally migrated bile duct and pancreatic duct stents may be extracted endoscopically. Few patients may require surgery.

REFERENCES