Case Presentation

A 72-year-old veteran with known history of hypertension, peripheral vascular disease, cholecytitis status-post laparoscopic cholecystectomy complicated by biliary leak with subsequent biliary stenting x two, prior polysubstance abuse, status-post laparoscopic cholecystectomy complicated by biliary leak with subsequent biliary stenting x two, and gastric bypass surgery for morbid obesity is presented. He was initially managed conservatively for spontaneous passage through the ileocecal valve. However, once the patient became acutely symptomatic, he underwent an endoscopyallowing for control of bleeding and resolution of the patient's hematochezia. The patency of biliary stents is highly variable, largely dependent on the type of stent placed and indication for stenting. In general, self-expanding metal stents (SEMS) are patent for longer than plastic stents (PS), with covered stents patent for longer than uncovered stents. Patency for PS is usually less than 4 months and between 6-12 months for SEMS. Generally, there is higher risk for complication with PS compared to SEMS but no difference in mortality at one month. As such, most PS are removed or exchanged within 1-3 months and most SEMS within 3-6 months. Common complications of biliary stenting include migration, pancreatitis given manipulation, and obstruction of the biliary stent (stone vs. sludge) leading to cholangitis. Commonly, stents placed can become dislodged and pass through the gastrointestinal (GI) tract spontaneously. Once they transverse the ileocecal valve, most stents pass spontaneously. Here, we report a unique case of a lower GI bleed secondary to plastic biliary stent dislodgement within a diverticulum five years post placement.

Discussion

There are 40 published cases involving foreign bodies and sigmoid diverticular disease. To our knowledge, only 10 of these cases presented with biliary stent migration causing sigmoid diverticula entrapment or perforation. The persistence of a biliary stent for greater than 3-6 months significantly increases the risk of complication, especially with PS. The risk of post-operative stent migration is estimated between 5-10% and increases depending on the time the stent is in place. PS migrate more frequently than SEMS (10% compared to 1%, respectively). Fortunately, most displaced stents pass spontaneously, and those that have not passed are successfully retrieved via endoscopic measures with greater than 90% efficacy. Only a minority of cases require surgical intervention. Accordingly, it is extremely uncommon for a stent to remain for five years.

We speculate this patient had recent stent dislodgement, leading to common bile duct occlusion and resultant cholangitis. After localization of the biliary stent in the sigmoid colon on CT, the patient was initially managed conservatively for spontaneous passage through the ileocecal valve. However, once the patient developed hemodynamically significant GI bleed, endoscopic retrieval of the displaced stent became paramount. After endoscopic stent retrieval, intravenous fluids, and blood transfusion, the patient became hemodynamically stable. This case underscores the importance of encouraging and adhering to post-stenting follow-up. As time elapses post-stenting, the risk and severity of complication increases and can have deleterious consequences. Thus, every effort should be made to avoid loss to follow-up to prevent life-threatening complications of biliary stent complications.

References

2. Ahmad MA, Barkun JS, Barkun AN. Management of suspected stones in the common bile duct. CMAJ. 2012 May 15;184(8):884-92