Necrotizing pancreatitis after removal of prophylactically placed pancreatic stent

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Dear Editor,

A 62-year-old woman with hypertension presented with complaints of dull aching, non-radiating intermittent pain with mild-to-moderate intensity in the right upper quadrant since 1 month. She had undergone a cholecystectomy for calculous cholecystitis 6 months previously. Initial ultrasound revealed choledocholithiasis (single small calculus) with dilated CBD of 8 mm. Her liver function test results were normal. ERCP was performed with placement of a plastic stent in the CBD with retrieval of sludge from the CBD. There was inadvertent cannulation of the pancreatic duct twice. A 5-Fr 5-cm pancreatic stent that was straight with flanges on the inner end was placed. The patient did not have pain over the next 5 days and exhibited good oral intake. She underwent pancreatic stent removal on day 5 after ERCP. Subsequently, on the night of the stent removal, she presented with severe epigastric pain radiating to the back with multiple episodes of vomiting and was admitted. Her serum amylase level was 1200 IU/mL and lipase level was elevated at 1232 IU/mL. In view of acute pancreatitis, she was kept nil per orally and started on IV hydration. Other laboratory investigations were normal with no organ failure. In view of persistent severe pain, contrast-enhanced CT revealed the presence of an acute necrotic collection of 2.3 cm in the body of the pancreas with the rest of the pancreas appearing bulky with peripancreatic stranding. The patient was managed conservatively and with enteral nutrition. She showed improvement during the next 10 days with decreased abdominal pain and improved oral intake.

Post-ERCP pancreatitis (PEP) is the most common serious adverse event associated with ERCP, occurring in 9.7% of all ERCPs (1). Various risk factors are attributed to the development of PEP, including young age, female gender, normal bilirubin level, previous recurrent pancreatitis or PEP, difficult cannulation, pancreatic cannulation, injection, or sphincterotomy (2). Prophylactic pancreatic stent placement is one of the foremost strategies to reduce the incidence of PEP. The absolute risk difference of pancreatitis after pancreatic stent placement is 13.3%, with number needed to treat being 8 for preventing one episode of PEP (3). Pancreatic stent placement is associated with complications such as duct damage due to stent, stent migration, occlusion, and malposition (4). In a previous study, removal of prophylactically placed pancreatic stent was associated with pancreatitis in 7 of 230 (3%) cases (5). Placement of 5-Fr stent, stent with an internal flange, and pancreatitis after previous ERCP were factors associated with pancreatitis after stent removal. Additionally, stent removal after 14 days was associated with increased rates of pancreatitis but did not reach statistical significance. Our patient had a 5-Fr stent with internal flanges placed; however, stent removal was performed on day 6 after ERCP.

This case demonstrates that pancreatitis can occur after removal of prophylactically placed pancreatic stent. However, such reports should not deter the placement of pancreatic stents for prevention of PEP. In conclusion, endoscopists should closely monitor patients for development of pancreatitis after removal of pancreatic stents. Longer stents placed for longer durations are associated with increased risks; therefore, short-term placement (5-7 days) is optimal.

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