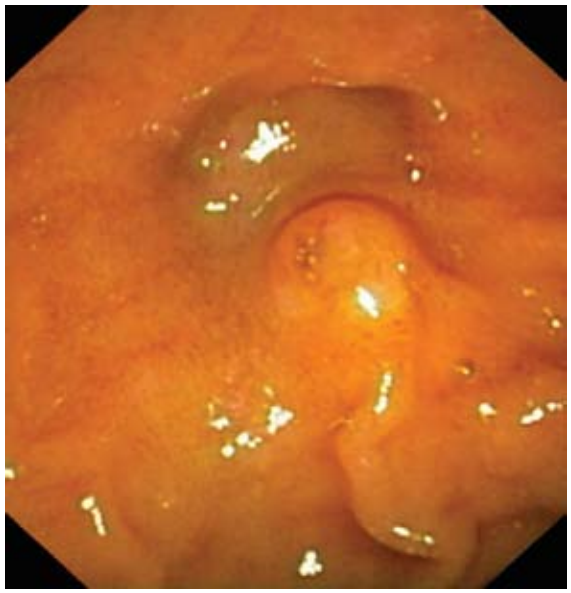
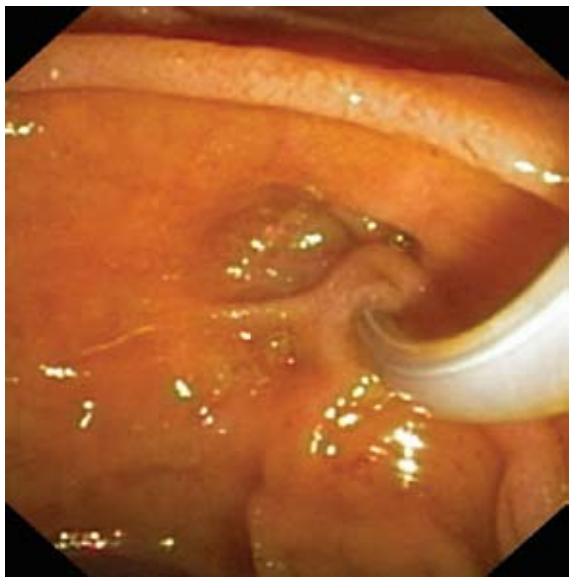
Case 27

Danai Limmathurotsakul, MD.
Rungsun Rerknimitr, MD.





A 56 years old female, presented with high grade fever, jaundice and right upper quadrant pain for 3 days.

ERCP was done and endoscopic views were showed as figure 1-2

The endoscopic showed extraluminal mucosal out pouching of the duodenum arising adjacent to the ampulla of Vater caused upward facing of the ampulla. Successful cannulation was achieved with swing-tip cannula. Cholangiogram found filling defects in common bile duct and gallbladder and dilated biliary tree. Endoscopic biliary sphincterotomy and balloon sweeping were done.

Diagnosis: Periampullary duodenal diverticulum type II, gallstone and acute cholangitis

Discussion

Periampullary duodenal diverticulum (PDD) was defined as the diverticula arising within 2-3 cm. radius of the ampulla[1]. PDD were classified according to the position of the ampulla in 4 types[2], type I: the ampulla located inside the diverticulum, type II: the ampulla located in the margin of the diverticulum and type III: the ampulla located near the diverticulum. About 70-75% of all duodenal diverticulum are periampullary. Prevalence of PDD at ERCP ranged from 5-33% and increased with age[1-3]. PDD was a major cause of failure of ERCP, but success rates of more than 90% have been achieved in specialist centers[1].

References

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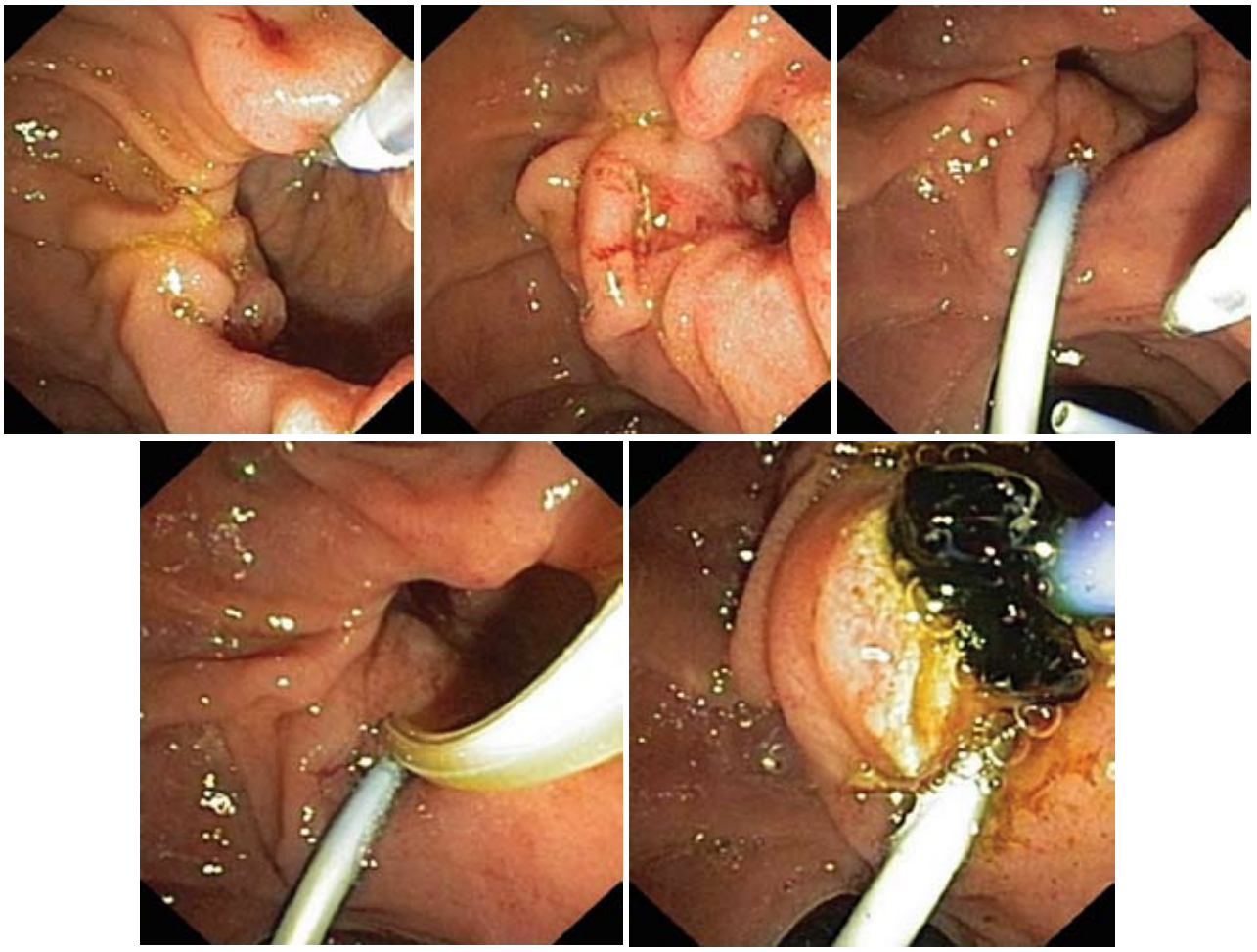
4. Kim MH, Myung SJ, Seo DW, Lee SK, Kim YS, Lee MH, et al. Association of periampullary diverticula with primary choledocholithiasis but not with secondary choledocholithiasis. Endoscopy 1998;30:601-4.

Case 28

Danai Limmathurotsakul, MD.
Rungsun Rerknimitr, MD.

A 64 years old female, presented with fever with chills, jaundice and right upper quadrant pain for 2 days. She had been undergone laparoscopic cholecystectomy because of symptomatic gallstone for 3 years.

ERCP was done and endoscopic views were showed as figure 1-5



The endoscopic showed extraluminal mucosal out pouching of the duodenum containing the ampulla of Vater caused awkward facing of the ampulla. The cannulation was successful after submucosal saline injection and pancreatic duct stenting. Cholangiogram found filling defect in common bile duct and dilated biliary tree. Common bile duct stone was removed after endoscopic biliary sphincterotomy.

Diagnosis: Periampullary duodenal diverticulum type I, primary choledocholithiasis and acute cholangitis

Discussion

Periampullary duodenal diverticulum (PDD) was associated with primary choledocholithiasis[1-3], and increased risk of recurrent choledocholithiasis even in cholecystectomised patient[3]. The proposed pathogenesis was a combination of incompetent sphincter of Oddi and duodenal bacterial overgrowth in and around PDD[3]. Presence of PDD did not alter the success rate of cannulation or increase post-endoscopic retrograde cholangiopancreatography[2], but some special techniques may required to facilitate the cannulation in some patients.

References

1. Kim MH, Myung SJ, Seo DW, Lee SK, Kim YS, Lee MH, et al. Association of periampullary diverticula with primary choledocholithiasis but not with secondary choledocholithiasis. Endoscopy 1998;30:601-4.

2. Tham TC, Kelly M. Association of periampullary duodenal diverticula with bile duct stones and with technical success of endoscopic retrograde cholangiopancreatography. Endoscopy 2004;36:1050-3.

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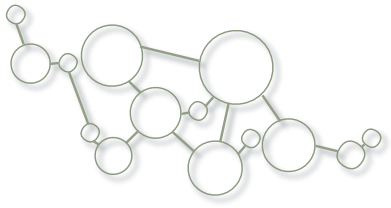
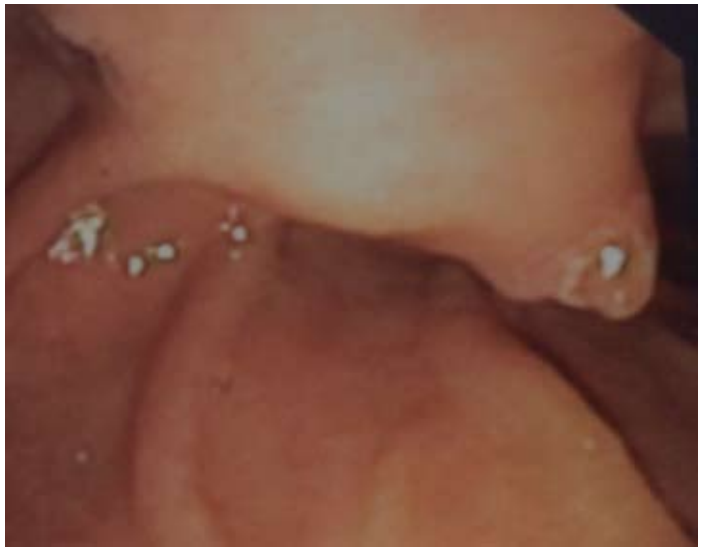


Case 29

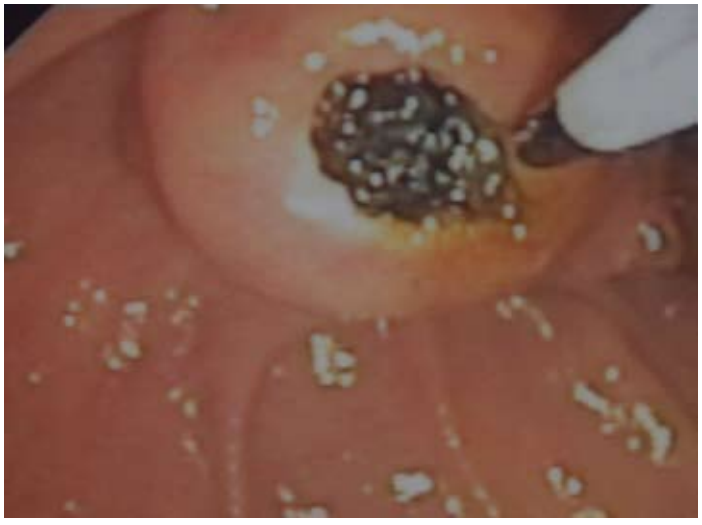
Boonlert Imraporn, MD.
Rungsun Rerknimitr, MD.

A 50 year-old woman developed acute fever with chills, right upper quadrant pain and jaundice for 2 days. Liver function tests showed pattern of cholestasis and ultrasound demonstrated biliary obstruction.

ERCP was done and side-view endoscopic findings were shown as figures.



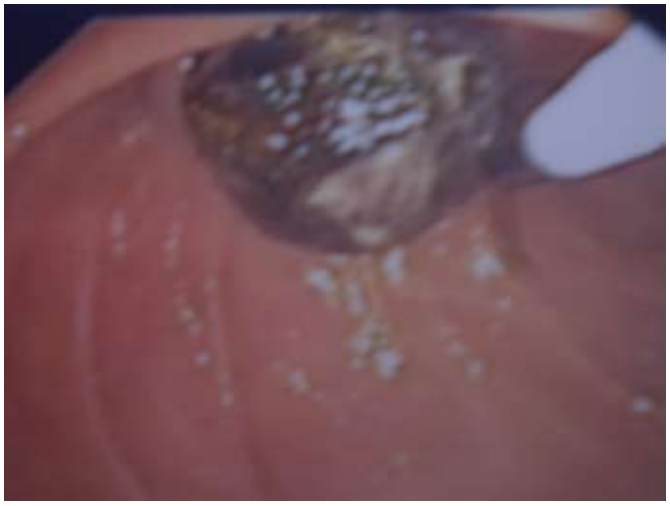
A



B

Endoscopic findings showed bulging of ampulla of Vater (picture A). Impacted stones were found at opening of ampulla (picture B).Her diagnosis was acute cholangitis with impact CBD stone.

Impact stones were removed by needle knife sphincterotomy and shown as picture C.



C

Discussion

Choledocholithiasis may be passed from gallbladder stones or may form de novo in the ducts. The majority of de novo bile duct stones are softer brown pigmented stones. 95% of patients with ductal stones have gallbladder stones. In case of cholangitis, antibiotics and ERCP with stone extraction are required. In this case, the bile duct can not be cannulated and entered due to impaction of stone at the opening. A needle knife is used to cut into the duct. However, the safety of this technique is operator dependent and complications including bleeding, perforation or incomplete cut occur commonly in inexperienced hands.

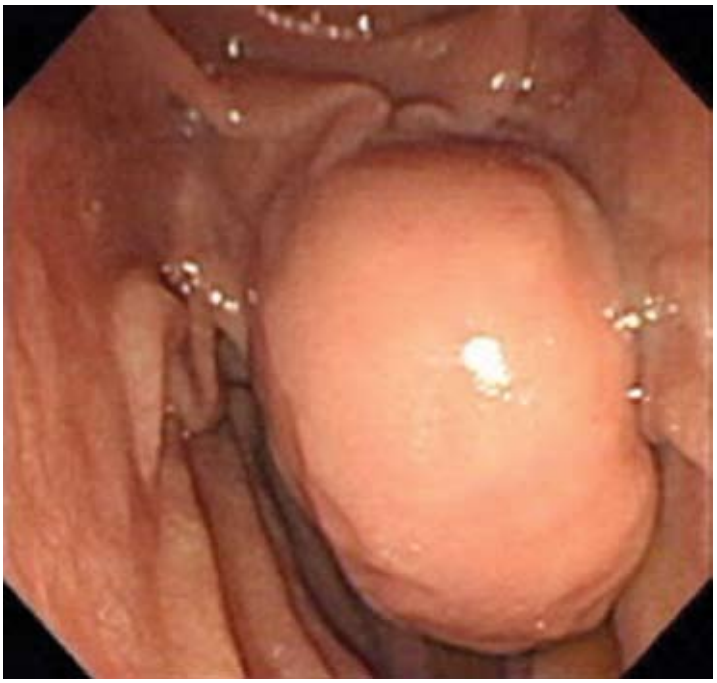
Case 30

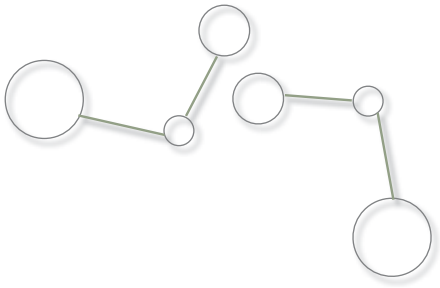
Boonlert Imraporn, MD.
Rungsun Rerknimitr, MD.

A 30 years old female patient, presented with history of episodic nausea and moderate epigastric discomfort for 20 years. Precipitating factors included meals, stress, and prolonged driving. She had neither weight loss nor bowel habit change. Abdominal ultrasound showed a dilation of the distal common bile duct with a maximum diameter of 20 mm.

Intrahepatic bile ducts were not affected, and liver and pancreas parenchyma were normal.

Side-view esophagogastroduodenoscopy was done and showned as figure





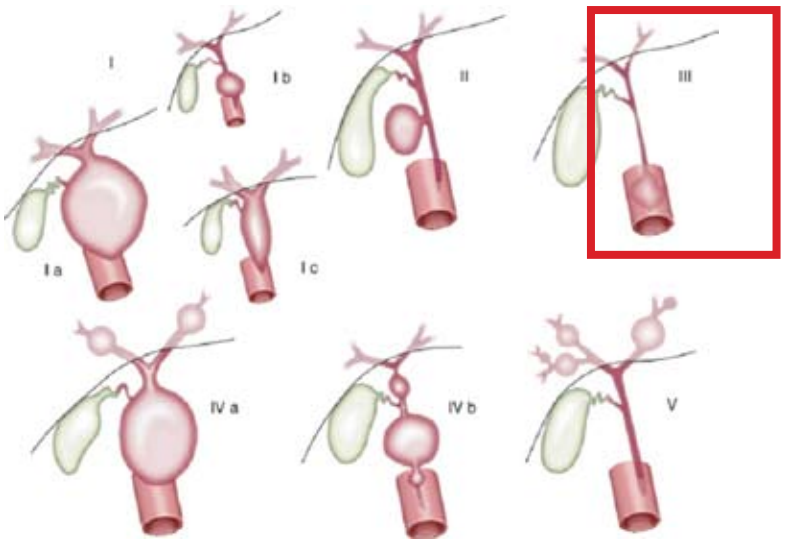
Endoscopic findings: a large cystic mass with normal appearing mucosa at the second part of duodenum.

Discussion

Choledochocele was suspected and further ERCP was done and proved the diagnosis.

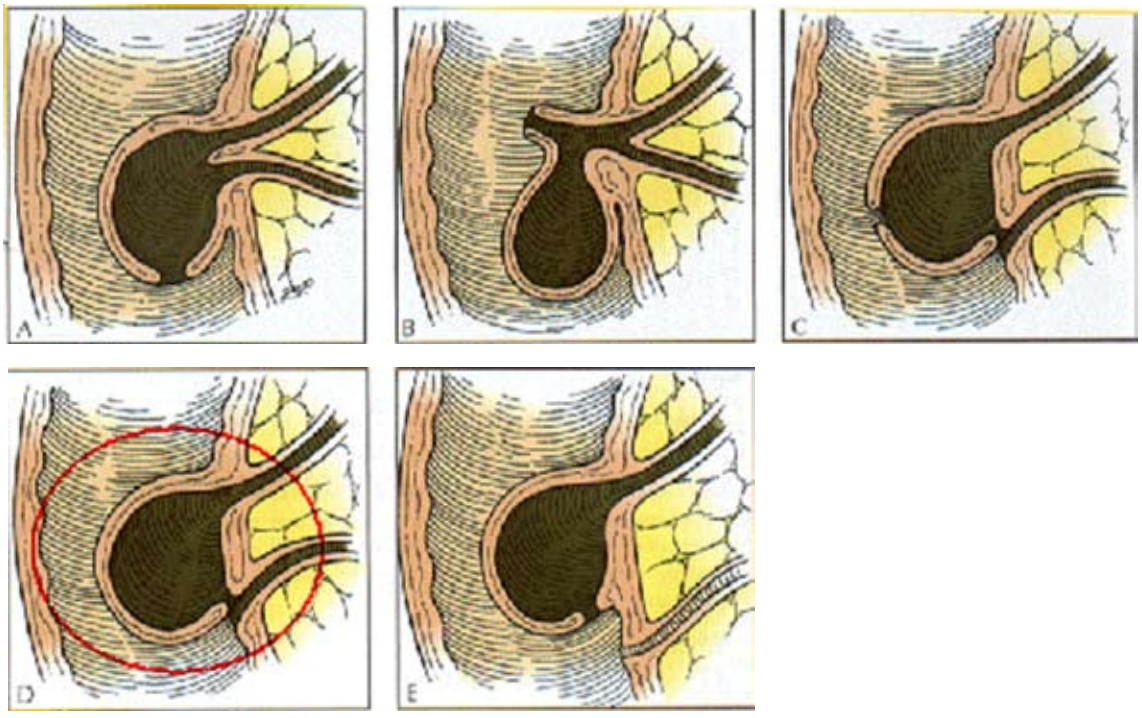
Choledochal cysts are congenital anomalies of the biliary tract that manifest as cystic dilatation of the extrahepatic and intrahepatic bile ducts. The incidence rate of choledochal cysts is 1 in 13,000 to 15,000 in Western countries and as high as 1 in 1,000 in Japan. These cysts are not familial and females are more commonly affected than males.

The classification proposed by Todani and colleagues is cited frequently[1]. This patient had type III or choledochocele which is cystic herniation of the intramural segment of the common bile duct protruding into the duodenal lumen. Choledochocele is observed in only 4% of total cases so that it is quite rare disease[2]. It can be accompanied by choledocholithiasis[3]. In a collection of 85 cases from the world literature[4], associated lithiasis was found in 43%.



Classification of choledochal cyst proposed by Todani and colleagues.

Choledochocele can classify to 5 types as figures.[5] Types A and B are the most common.



The clinical presentation are variable: asymptomatic, abdominal pain, gut obstruction, bleeding and perforation[3,4]. Investigation to confirm diagnosis include ultrasound, CT, MRCP and ERCP.

In contrast to other forms of choledochal cysts that require surgical treatment, it is now agreed that choledochocele should be treated preferably by endoscopic sphincterotomy, because of low complication rates in comparison to the surgical treatment[8].

References

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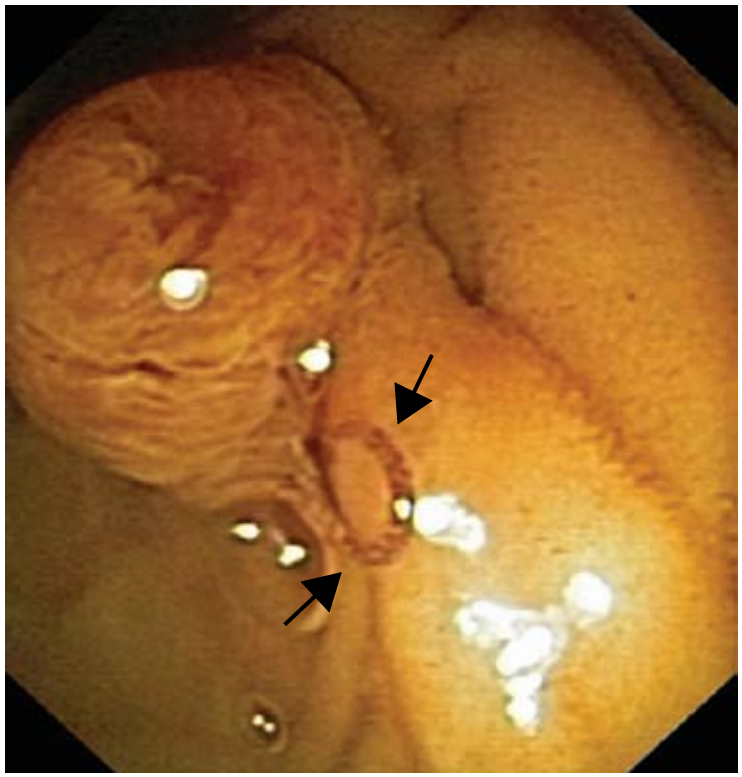
Case 31

Nopavut Geratiornsupuk, MD.
Rungsun Rerknimitr, MD.

A 44 year-old-female presented with fever, jaundice and right upper quadrant abdominal pain for 2 days. Ultrasound showed common bile duct dilatation with CBD stone. Acute cholangitis was diagnosed.

ERCP was done. After passed scope to ampulla finding was showed as figured.

The arrow showed the post bloody meal by a hook worm near major papilla parasite.



Discussion

Hookworm infections are common in the tropics and subtropics. The species of hookworm which produce human disease vary geographically[1] : *Ancylostoma duodenale* causes infection in Mediterranean countries, Iran, India, Pakistan, and the Far East. *Necator americanus* infects humans in North and South America, Central Africa, Indonesia, islands of the South Pacific, and parts of India.

Hookworm eggs hatch in the soil to release larvae that mature into infective larvae. Percutaneous larval penetration constitutes the principal mode of human infection, although infections with *A. duodenale* may also be acquired by the oral route[2]. From the skin, larvae pass to the lungs. At

about 8 to 21 days after infection, larvae, like the larvae of Ascaris, cross from the pulmonary vasculature, enter the airways, ascend the tracheobronchial tree to the pharynx, and are swallowed. In the small intestine, the larvae mature into adult worms. Adults attach to the mucosa and feed, continually consuming blood and serum proteins.

The potential manifestations reflect the four phases of hookworm infection[3]: Dermal penetration by infecting larvae, Transpulmonary passage, Acute gastrointestinal symptoms and Chronic nutritional impairments.

Hookworm infections should be treated with mebendazole (100 mg. orally BID for three days or 500 mg. once). Alternative agents include pyrantel pamoate (11 mg./kg. per day for three days, not to exceed 1 g./day) or albendazole (400 mg. once). These two drugs are available in the United States but not approved for hookworm treatment by the Food and Drug Administration. In comparison, ivermectin, which is effective for many helminthic parasitic infections, is ineffective for hookworm[4,5].

References

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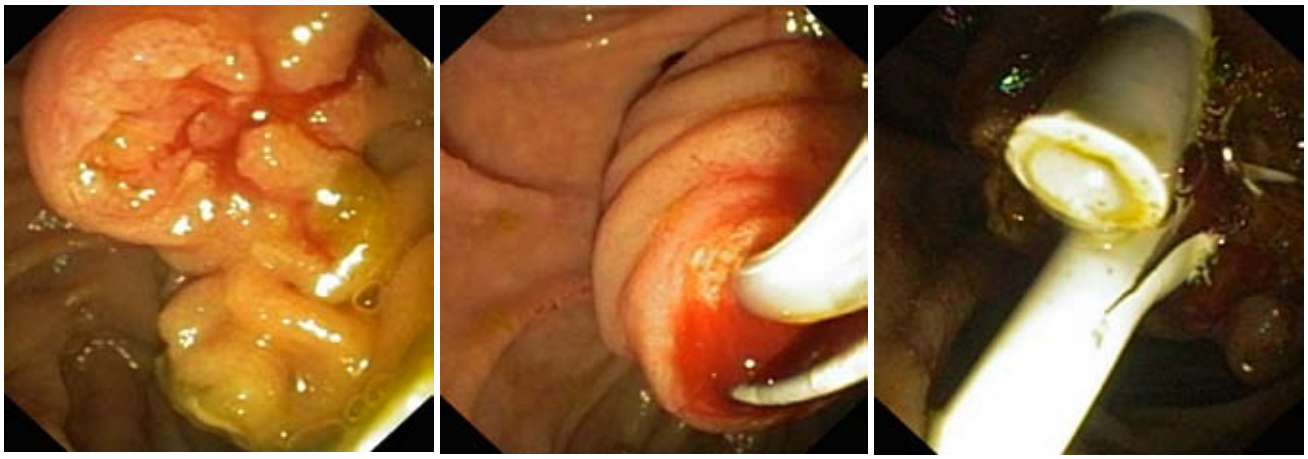
Case 32

Phonthep Angsuwatcharakon, MD.
Rungsun Rerknimitr, MD.

A 71 years old male, presented with progressive painless jaundice for 2 months. Computerized tomography scan revealed dilated biliary tree and pancreatic duct.

ERCP was done and endoscopic views were showed as figure 1-3.



The endoscopic showed: Polypoid mass with irregular, erythematous and edematous mucosa at periampullary region, 1 cm in diameter. Biliary cannulation was obtained by double guide-wire cannulation technique. Cholangiogram and pancreatogram revealed **"**double-duct sign**"** with common duct obstruction. The stents were placed successfully in both bile duct and pancreatic duct.

Diagnosis: Periampullary cancer

Discussion

Periampullary cancer may cause difficulty in biliary cannulation if the anatomy of the ampulla was distorted. The double guide-wire technique was used to improve success rate of the cannulation without the excess complication[1]. The first guide-wire was inserted to pancreatic duct, which was straighter and easier to access than bile duct, then the wire was left in pancreatic duct. The second guide-wire was inserted via the same scope channel and canulated to bile duct, with the aid of the first guide-wire straightening the bile duct[1].

Reference

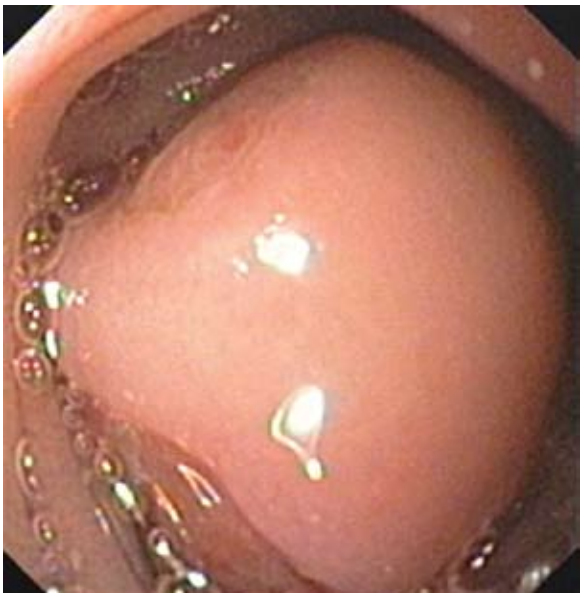
1. Maeda S, Hayashi H, Hosokawa O, Dohden K, Hattori M, Morita M, et al. Prospective randomized pilot trial of selective biliary cannulation using pancreatic guide-wire placement. Endoscopy. 2003;35:721-4.

Case 33

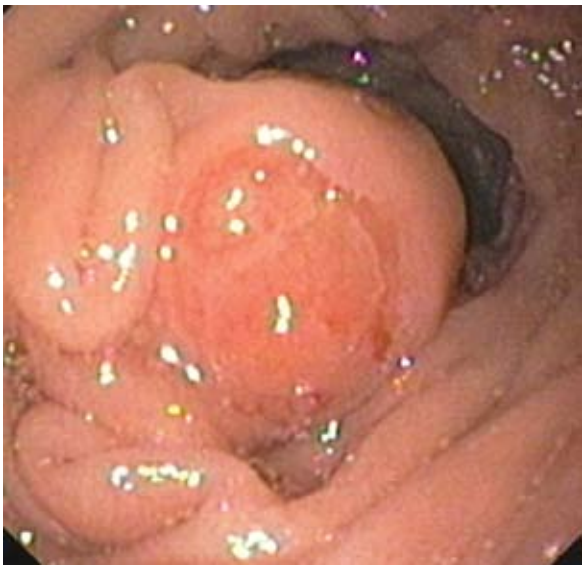
Bancha Ovartlarnporn, MD.

A 45 year-old woman presented with epigastric burning pain and discomfort for 2 months. Physical examination was unremarkable. Gastroscopy showed a tumor mass at the second part of duodenum. (figure 1A, 1B) EUS showed ampulla lesion with the extension not beyond the duodenal wall and the CBD was not involved. (figures 2A, 2B) Ampullectomy was done and histology showed tubulo-villous adenoma. (figure 3A, 3B and 3C)

Figure 1A. and 1B. showed mass at the ampulla at endoscopy

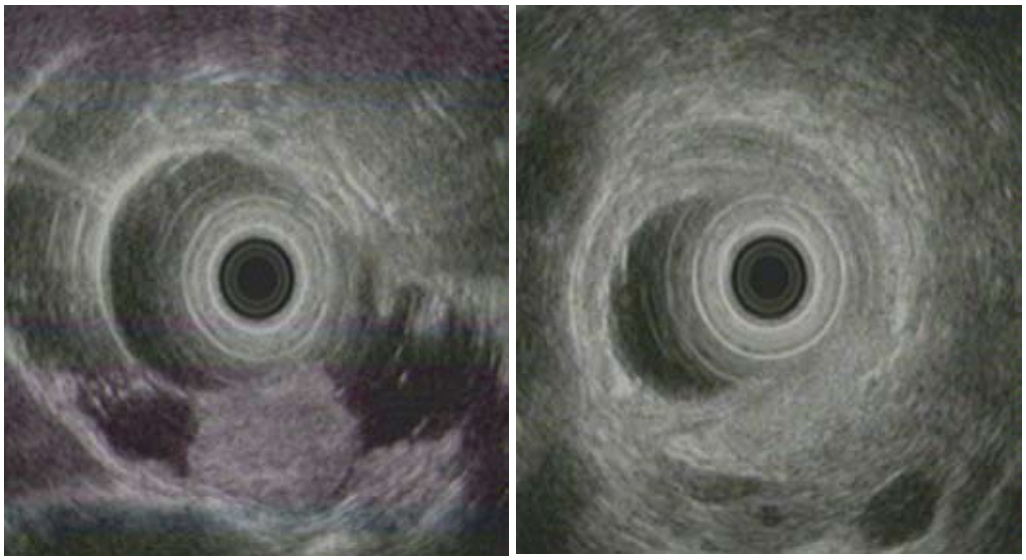


1A



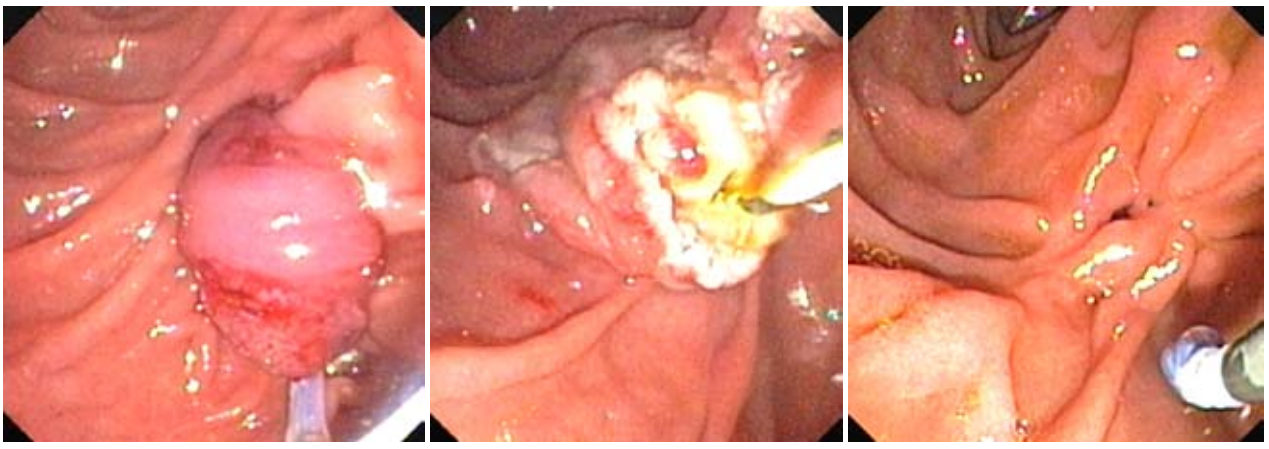
1B

Figure 2A. Tumor confined to the duodenal wall and the muscularis propia was intact by EUS. And 2B. showed the CBD was not involved by the lesion.



2A 2B

Figure 3A. Tumor was gasped by snare, 3B. Immediately post ampullectomy, 3C. Six weeks after ampullectomy.



3A 3B 3C

Case 34

Saeksit Osatakul, MD.
Bancha Ovartlarnporn, MD.

A 14-year-old boy presented with a 7-year history of spontaneously passing a bloody mucus from his anus of 4-5 times a day and occasionally there were streaks of the bloody mucus present on the formed stool. There was no history of abdominal pain, diarrhea, constipation, tenesmus, fever, rectal prolapsed, anorexia, or weight loss. Several times he had received treatment for infectious colitis as well as ulcerative colitis without any improvement. The patient appeared well. His body weight was 75 kg and height was 156 cm. The general physical examination was normal. The blood count, serum chemistry, ESR, and urinalysis were normal. The stool culture was negative for enteropathogenic bacteria.

Colonoscopy was performed and identified an irregular, sessile mass like lesion with a rubbery consistency found extending along the thickening erythematous rectal mucosa 10 cm. above the anal verge (Fig1). The rest of the colon was normal. EUS of the whole mass revealed a hypo echoic, inhomogeneous mass and a cystic lesion of 5X8 mm. in size within the submucosa. was seen (Fig 2). The muscularis propria of the rectal wall was well preserved. Histological study made from the surgical section showed superficial ulceration of the mucosa with slightly reactive atypia of the epithelium as well as infiltration of lymphocytes and plasma cells and vascular proliferation. The muscularis mucosa were hypertrophied. The submucosal layer showed fibrosis that had been expanded by mucous-containing cysts which were devoid of an epithelial lining (Fig. 3)

The final diagnosis was colitis cystica profunda

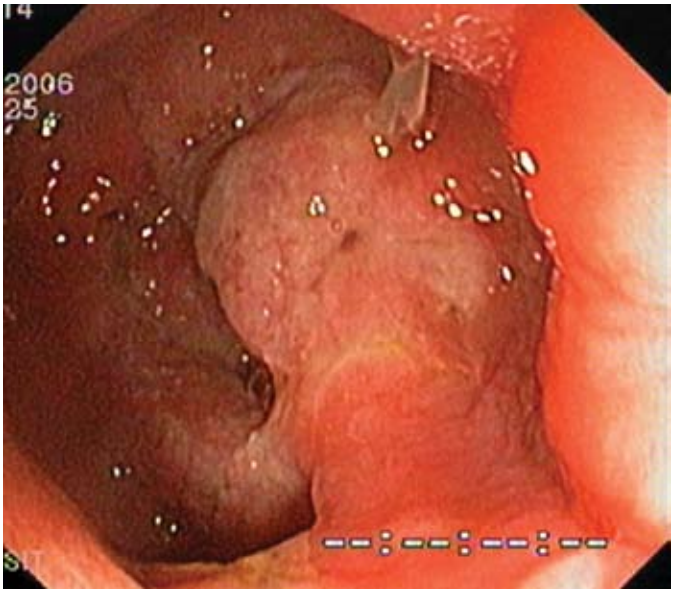


Figure 1. Endoscopic view showing a sessile mass with an irregular surface at the rectum. Some areas of the lesion are covered by thick mucus.

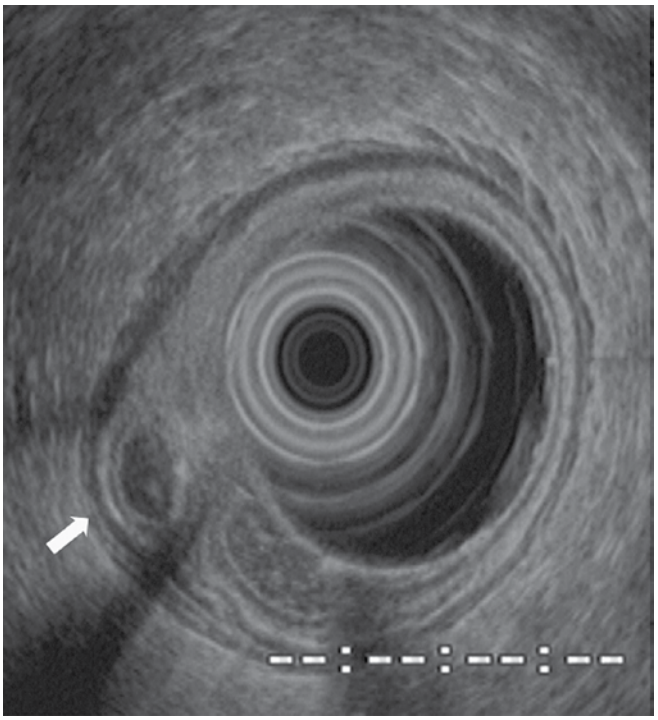


Figure 2. EUS image revealing a submucosal hypoechoic cyst in the submucosa (arrow). The muscularis propria is intact.

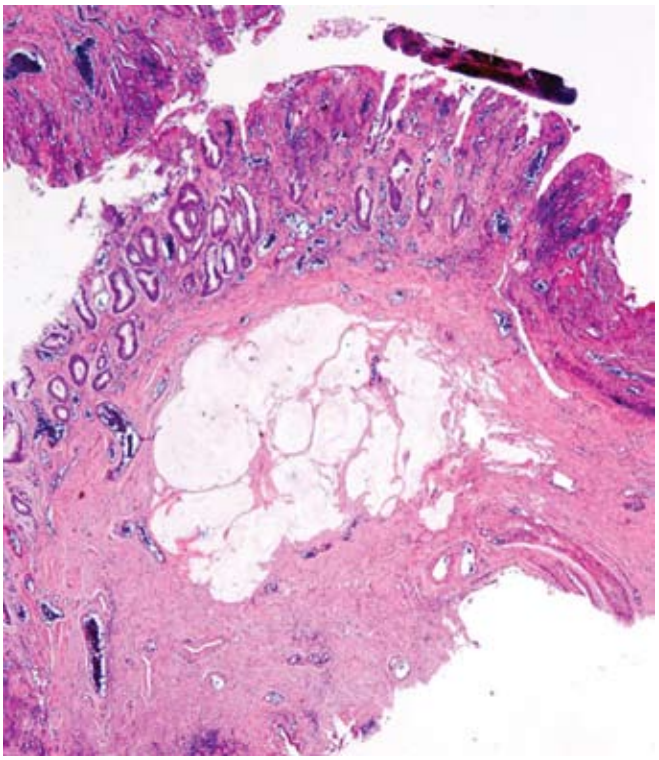


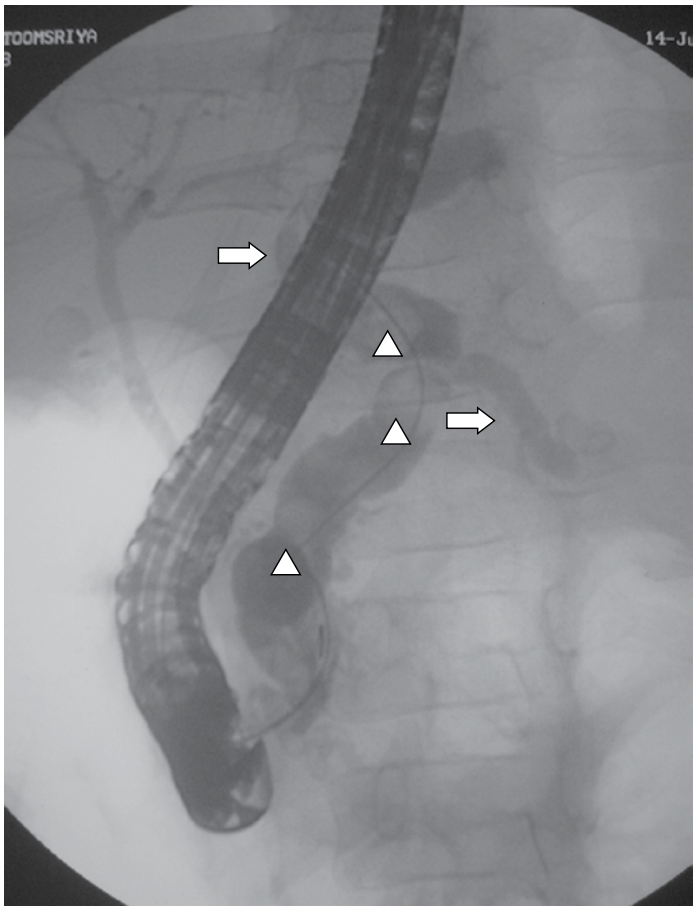
Figure 3. The surgical biopsy revealing a thickening of the muscularis mucosae, mucosal ulceration, and a mucous-filled cyst in the submucosa.

Case 35

Danai Limmathurotsakul, MD.
Rungsun Rerknimitr, MD.

A 10- year-old boy presented with new onset of progressive ascites. His serum ascetic albumin gradient was 0.5 g/dL. The ascites contained very high amylase level. Pancreatic ascites as a diagnosis was entertained.

ERCP was done as shown.



Cholangiogram was normal. Pancreatogram showed a very large and dilated pancreatic duct containing three pancreatic stones (arrow head). The pancreatic tail showed bifid configuration (arrow). This is compatible with bifid pancreas. This patient underwent distal pancreatectomy to to cure the leak.

Discussion

Bifid pancreas is a rare congenital anomaly of the pancreas. In symptomatic cases, chronic pancreatitis and pancreatic flare up have been reported (1-2). However, there is no suggestion for asymptomatic bifid pancreas established yet.

References

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