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Various lesions in duodenum not covered elsewhere are included in the miscellaneous territory and described in this chapter. Endoscopic and clinical findings are presented as needed. These lesions may be related with specific clinical situations such as systemic illness like Henoch-Schönlein purpura or portal hypertension. Local abnormalities such as diverticulum or angiodysplasia will be also discussed. Parasite infestations such as ascariasis may be diagnosed in duodenum.

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17.1 Duodenal Diverticulum

Duodenal diverticulum is a pouch of the duodenal wall. Extramural diverticulum, which is very similar to colonic diverticulum, is quite common up to 6 % of the population and usually is located near the ampulla of Vater (Figs. 17.1 and 17.2). Extramural diverticulum may be single or multiple. Great majority of duodenal diverticula are asymptomatic. Some patients may experience nonspecific abdominal

discomfort, which can be worse or brought on by eating and relieved by vomiting, belching, or assuming certain posture. Complications, such as jaundice, cholangitis, acute pancreatitis, ulceration, bleeding (Fig. 17.3), and perforation, can be caused by obstruction or inflammation. Foreign body can be impacted in the diverticular sac causing nonspecific symptoms (Fig. 17.4). Second type of duodenal diverticulum is intramural diverticulum. It protrudes into the duodenal lumen so it looks like a mass with communicating hole.

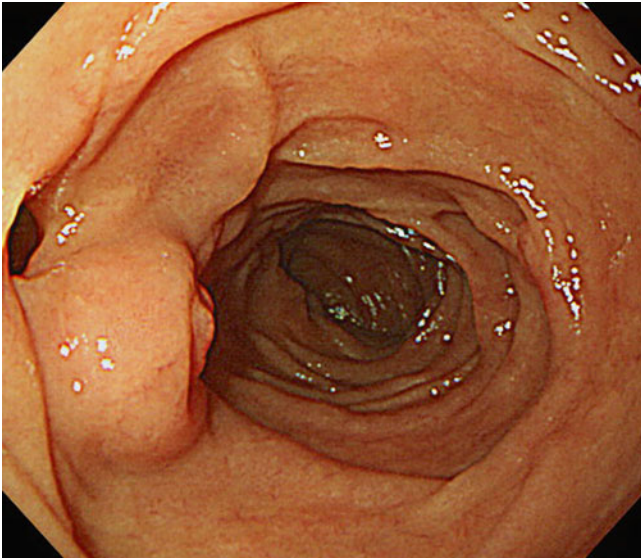


Fig. 17.1 Periampullary duodenal diverticulum with small opening

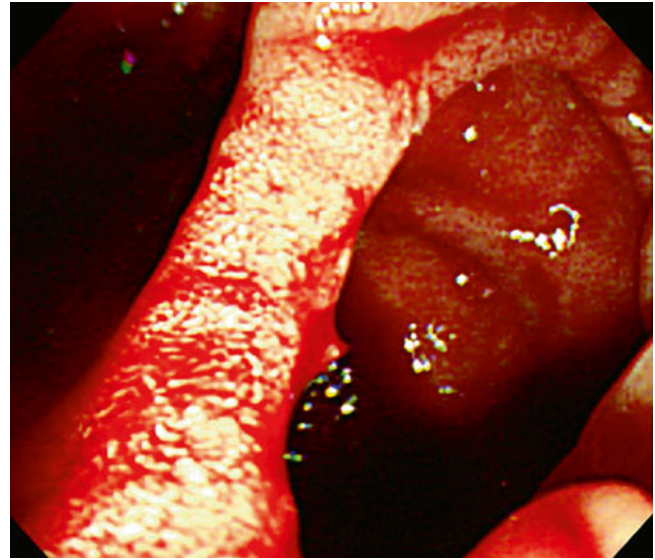


Fig. 17.3 Bleeding from periampullary duodenal diverticulum

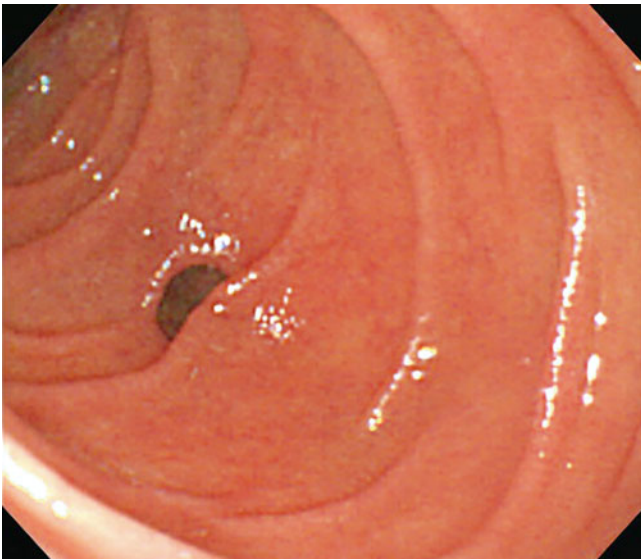


Fig. 17.2 Duodenal diverticulum at the opposite aspect of the ampulla of Vater



Fig. 17.4 Foreign body (cotton gauze) impacted in the periampullary duodenal diverticulum

17.2 Angiodysplasia

Duodenal angiodysplasia is a collection of small arteries that have come to the surface (Fig. 17.5). It may cause recurrent and low-grade bleeding, although massive hemorrhage is also possible. However, in most cases, angiodysplasia is found

incidentally. In endoscopy, angiodysplasia is a 5–10 mm, cherry red, arborizing, ectatic vessels, sometimes radiating from a central vessel. There may have a surrounding halo. There are many treatment modalities for bleeding angiodysplasias. Ablation treatment using argon plasma coagulation apparatus is simple and effective (Figs. 17.6 and 17.7).

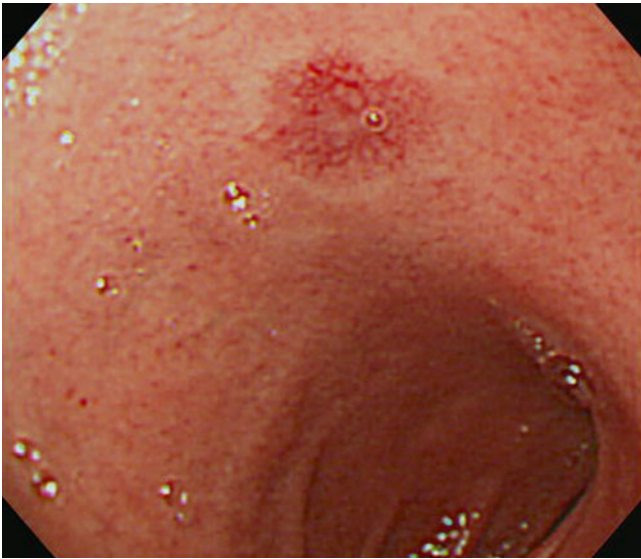
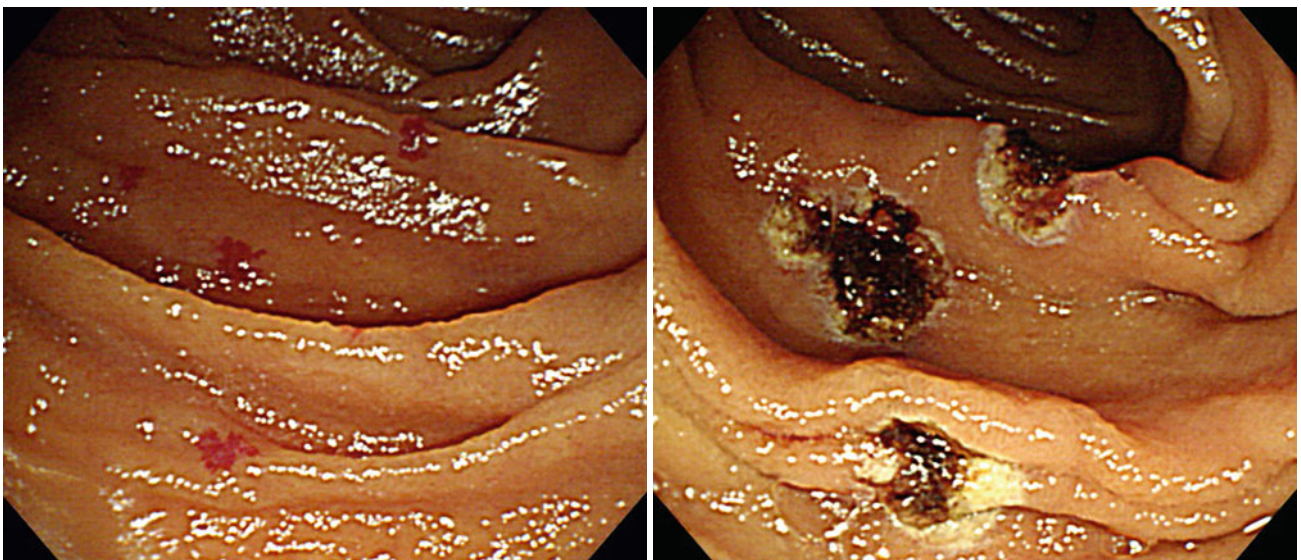


Fig. 17.5 Angiodysplasia of the duodenal bulb



Figs. 17.6 and 17.7 Multiple angiodysplasias of the second part of the duodenum, before and after ablation treatment using argon plasma coagulation apparatus

17.3 Duodenal Varix

Duodenal varix can develop in patients with portal hypertension and rarely cause bleeding. Because duodenal varices are not so prominent as esophageal varices, high index of suspicion is required to detect them (Fig. 17.8).

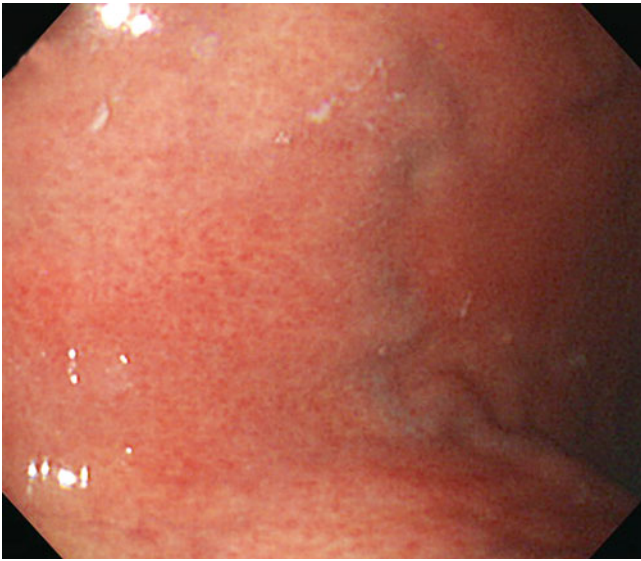


Fig. 17.8 Duodenal varix in a patient with hepatic cirrhosis

17.4 Henoch-Schönlein Purpura

Henoch-Schönlein purpura is a vasculitis syndrome. It most commonly affects children. The classic triad of symptoms is a palpable purpura, abdominal pain, and hematuria that typically begin after an upper respiratory

infection. Gastrointestinal symptoms include abdominal pain, vomiting, diarrhea, intestinal obstruction, and intussusception. In endoscopy, the bowel wall may be edematous, and there are multiple variable-sized erosive/ulcerative lesions with normal intervening mucosa (Figs. 17.9 and 17.10).

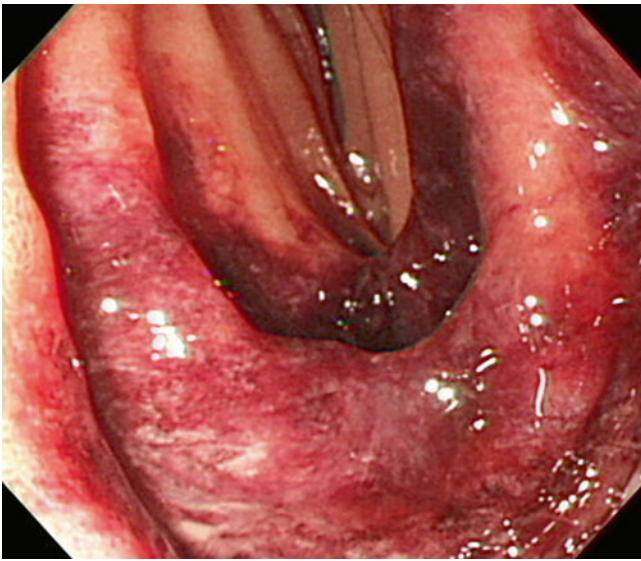


Fig. 17.9 Hyperemic and edematous mucosa in Henoch-Schönlein purpura



Fig. 17.10 Erosive duodenitis seen in Henoch-Schönlein purpura

17.5 Duodenal Lymphangioma

Duodenal lymphangioma is a benign tumor of the lymphatic system. In endoscopy, it is a small, polypoid lesion with whitish discoloration (Fig. 17.11). Milky fluid may come out after a biopsy (Fig. 17.12).



Fig. 17.11 Duodenal lymphangioma

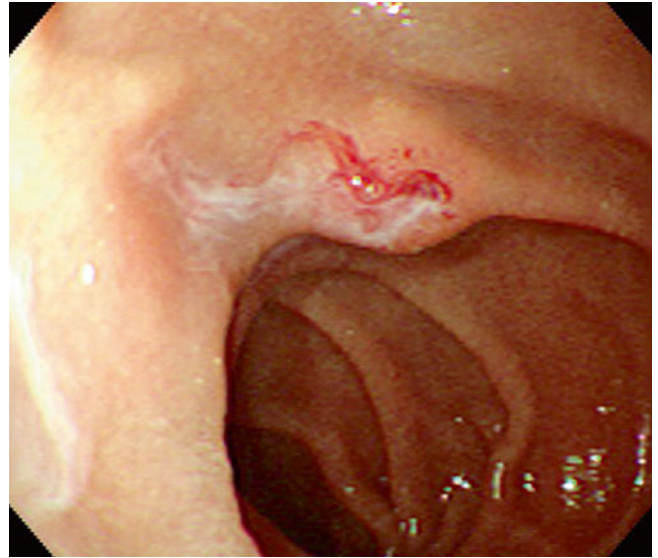


Fig. 17.12 Milky fluid from duodenal lymphangioma after a forceps biopsy

17.6 *Ascaris lumbricoides*

Duodenal parasites are uncommon. *Ascaris lumbricoides* can be found in the bile duct or in the duodenal

lumen. It is a 20–30-cm, gray to white, long, tubular worm, which can move very quickly. Endoscopist can remove the living worm with a biopsy forceps (Figs. 17.13 and 17.14).

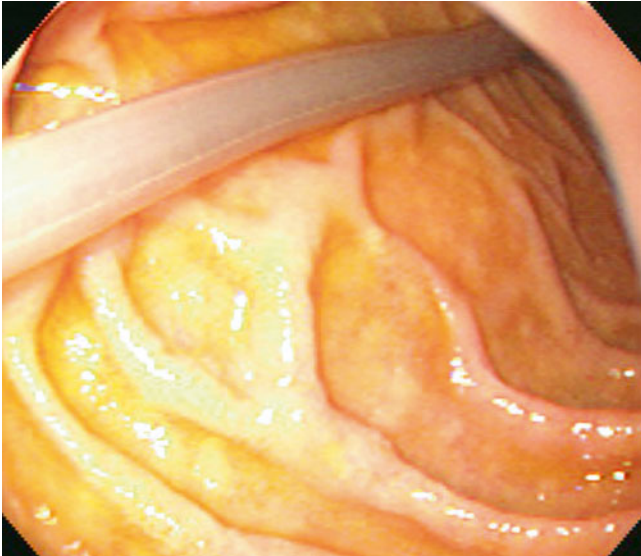


Fig. 17.13 *Ascaris lumbricoides* worm in the duodenal lumen



Fig. 17.14 *Ascaris lumbricoides* worm removed using a biopsy forceps