Discussion

Cavernous hemangiomas most commonly affect the skin and liver,[1] with the first report of adrenal involvement published in 1955.[2] Adrenal hemangiomas remain rare, with fewer than 40 reported cases. Cavernous adrenal hemangiomas, usually unilateral, become apparent in the sixth to seventh decade of life, with a 2:1 female-to-male predilection.[1] These lesions usually become apparent as incidental radiological findings or as a result of nondescript pressure- and mass-related symptoms. Instances of adrenal hyperfunction are almost nonexistent, with only 1 reported case of adrenocortical hypersecretion.[3] Clinically significant hemorrhage is extremely rare; no instances of spontaneous bleeding have previously been reported.

In the few reported cases, distinct radiographic features have helped distinguish cavernous hemangiomas from more common adrenal neoplasms. In up to two-thirds of cases, plain radiographs show speckled calcification throughout the entire neoplasm.[4,5] Contrast-enhanced CT has displayed a characteristic peripheral patchy enhancement and highly dense peripheral rim.[1] Angiography reveals peripheral pooling of contrast that persists well into the venous phase of the study.[5]

Although the massive hemorrhage that occurred with this case is unusual, there are other indications for resection of this rare neoplasm. The most common reported indications for elective resection are to relieve mass-effect-type symptoms and to exclude malignancy.[1] As the differential diagnosis of these lesions include hemangiosarcoma and hemangioblastoma as well as hemangioma, most would agree that these lesions should be resected to exclude malignancy.

Spontaneous hemorrhage appears to be an unusual complication, not previously reported, but whose prevention can be listed as another indication for elective resection of these rare neoplasms.

Competing interests: None declared.

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Management of perforated duodenal diverticula

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Duodenal diverticula are relatively common pseudodiverticula of the small intestine.[1] Frequently asymptomatic, they may become clinically evident only upon perforation or inflammation. With only about 110 reports of perforations of duodenal diverticula over the past 2 decades,[2] the optimal management of duodenal diverticula perforations remains uncertain. We describe 2 approaches to the management of this condition.

Case 1

Patient A, a 58-year-old woman, arrived in acute distress, febrile and tender in the right upper abdomen. A computed tomographic (CT) scan showed periduodenal inflammation and edema surrounding the second portion of the duodenum, associated with air/fluid collections posterior to its first and second portion. Edema was noted in the right retroperitoneum, extending from the posterior duodenal fluid collection (Fig. 1, overleaf). A perforated duodenal diverticulum was diagnosed, and a surgical repair was scheduled.

After entering her peritoneal cavity we mobilized the hepatic flexure, exposing the second portion of the duodenum. The duodenum was kocherized, and the second and third portions mobilized over to the midline. We found the decompressed diverticulum plastered to the posterior wall of the duodenum and the head of the pancreas. Her diverticulum was dissected back to its origin, and reduced. The remaining 7-mm defect in the duodenal wall was closed in a transverse fashion with interrupted 3.0 Vicryl sutures. To complete the repair, we mobilized a tongue of greater omentum off the right colon and patched it over the repair.

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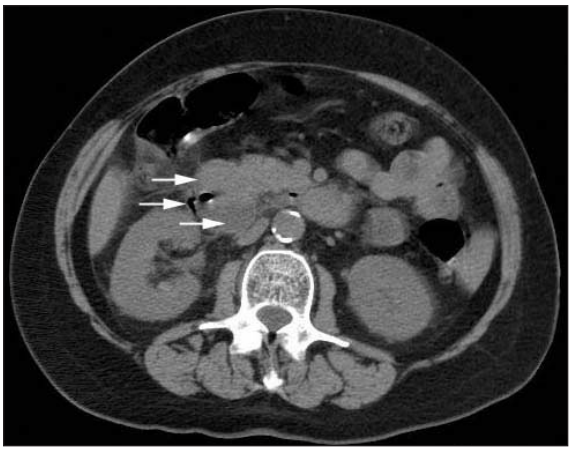

FIG. 1. Abdominal CT (without contrast medium) of patient A, showing periduodenal inflammation, thickening of the duodenal wall and the presence of retroperitoneal collections of air and fluid.

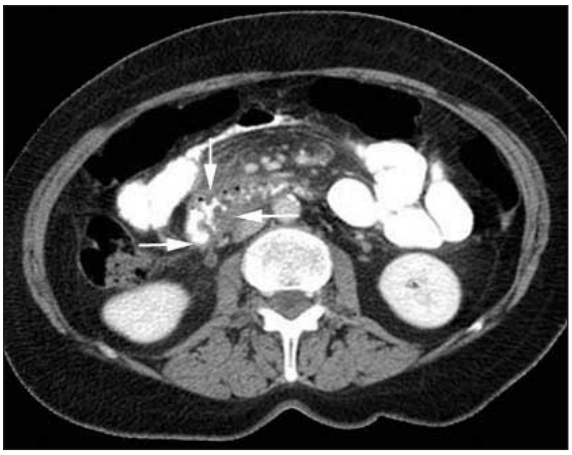

FIG. 2. Abdominal CT (with contrast medium) of patient B, showing periduodenal inflammation, air within the thickened duodenal wall and the presence of retroperitoneal collections of air.

Case 2

Patient B, a woman 61 years of age, was admitted with epigastric pain 24 hours after a colonoscopy with duodenal mucosal biopsies. She was in mild distress but afebrile; superficial palpation of the right upper abdomen disclosed tenderness. CT assessment of the abdomen revealed a collection of gas and fluid in the retroperitoneum. The collection was medial to the second part of the duodenum, which appeared thickened and inflamed (Fig. 2). The diagnosis was perforation of a duodenal diverticulum. The patient was treated successfully with a 4-day course of intravenous imipenen (500 mg every 6 h) followed by a 7-day course of oral cephalexin (500 mg every 6 h) and metronidazole (500 mg every 8 h).

Discussion

The mortality rate of duodenal diverticula perforation is high, and its management controversial. The most common approach has been surgical,[3] with a few reports of conservative management with antibiotics.[4] Our approach was directed by the clinical and radiological findings. Patient A was in acute distress at presentation, and radiological signs suggested retroperitoneal involvement, prompting surgical management. In contrast, patient B was in mild distress, and described some symptom improvement with analgesia.

In summary, the clinical presentation can be used as a guide to management. Nonoperative treatment should be considered for patients who present with mild symptoms and whose leak is shown by CT to be contained. But if these patients deteriorate clinically, they must undergo surgical intervention.

Competing interests: None declared.

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