Answer

Foramen of Winslow Hernia

Figure 1. Computed tomographic scan of the abdomen showing the cecum behind the stomach. Note that the bowel is posterior to the portal triad, entering and exiting through the foramen of Winslow.

Figure 2. The terminal ileum and cecum are in the lesser sac, but the appendix has been retrieved with forceps. The Crile clamp is passing behind the bowel through the foramen of Winslow.

Approximately 170 cases of hernia of the foramen of Winslow have been reported since Blandin’s initial case report in 1834.2-5 The foramen is bounded by the lesser omentum and portal triad anteriorly, the peritoneum covering the vena cava posteriorly, the caudate lobe of the liver superiorly, and the duodenum inferiorly. Hernias through this aperture account for 8% of all internal hernias.6 The most commonly involved organs are the small intestine (53%-63%), cecum (25%-30%), and transverse colon (7%).2,7 Rare cases involving a Meckel diverticulum,8 small-bowel diverticulum,9 and gallbladder10,11 have been reported.

Several predisposing factors that may contribute to their development are an abnormal size of the foramen, abnormal length of the mesentery with intestinal hypermotility, failure of the secondary fusion of the ascending colon to the posterior abdominal wall, a common mesentery for the entire intestine, acute alterations in intra-abdominal pressure (especially postprandially), and distal intestinal obstruction.2,11,12 Since all humans have a foramen of Winslow, it is surprising that herniation is so rare. Spontaneous herniation into the lesser sac may also occur through the gastrohepatic ligament, a defect in the gastrohepatic omentum, or a congenital defect in the transverse mesocolon.2

Clinically, pain is most frequently acute and mid-epigastric, although in some patients it is chronic or colicky.2,6 Patients are most comfortable bending forward or lying with the trunk and hips flexed, as this opens the foramen.2,13 Typical manifestations of acute bowel obstruction, such as nausea and vomiting, are not prominent features. Physical and laboratory findings are rarely helpful: peristalsis is present, a palpable mass is rare, and peritoneal irritation is unusual because the stomach isolates the lesser sac. As clinical findings usually are nonspecific to make a definitive diagnosis, surgery may be delayed.

Careful inspection of the supine, lateral, and erect abdominal radiographs is helpful. As described initially by Cimmio, a circumscribed collection of gas medial to the lesser curvature, displacing the stomach laterally and anteriorly, is frequently present.3-6 Placement of a nasogastric tube can differentiate hernia contents from the stomach.4 Accurate preoperative diagnosis, historically elusive, should be possible with the increased use of CT. Characteristic findings include a thin-walled retrogastric collection that partially fills with contrast, the absence of the cecum or ascending colon in the right side of the abdomen, and mesentery or bowel posterior to the portal triad in the foramen of Winslow.

As with any incarcerated hernia, urgent operative repair is indicated. Frequently, the intestine can be reduced with gentle traction or by entering the lesser sac and applying pressure to the incarcerated segment of the bowel.2,4,11 Occasionally, the foramen will need to be enlarged by performing a generous Kocher maneuver.11 Rarely should needle decompression of the bowel be necessary. A nonviable bowel should be resected. The foramen does not need to be closed following reduction since no recurrences have been reported, but complications of closure, such as portal vein thrombosis, have.2,6,9,11 The reported mortality rates of 36% to 49% are primarily due to delays in definitive treatment.2,12

REFERENCES