The differential diagnosis includes liposarcomas and lipomatous hypertrophy of the interatrial septum, which both carry a different prognosis. Because of their tissue-infiltrative process, liposarcomas carry worse prognosis than lipomas. Lipomatous hypertrophy of the interatrial septum is generally considered a benign lesion, and surgical intervention might be required to control recalcitrant atrial arrhythmias. Magnetic resonance imaging has been shown to be superior to computed tomography in delineating the extent and location of lipoma.^{3,4} In our patient such ancillary tests failed to define the true anatomic margins between the RCA and the tumor; missing these anatomic attributes made surgical dissection unsafe because of possible damage to the RCA. Careful intraoperative visualization and protection of the adjoining coronary artery are mandatory to make the operation safer.

When symptoms are present, this case supports the recommendation for prompt surgical excision of these tumors,

which has proved to be effective. Although preoperative serum-level evaluation of testosterone was not performed, we do not know for sure whether hyperandrogenization trophic effects of testosterone have played any role on lipoma formation.

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References

1. McAllister HA, Fenoglio JJ. Tumors of the cardiovascular system. In: Atlas of tumor pathology, second series, fascicle 15. Washington, DC: Armed Forces Institute of Pathology; 1978. p. 44-6.
2. Mullen JC, Schipper SA, Sett SS, Trussler GA. Right atrial lipoma. *Ann Thorac Surg.* 1995;59:1239-40.
3. Araoz PA, Mulvagh SL, Tazelaar HD, Julsrud PR, Breen JF. CT and MRI imaging of benign primary cardiac neoplasms with echocardiographic correlation. *Radiographics.* 2000;20:1303-19.
4. Hananouchi GI, Goff WB. Cardiac lipoma: six-year follow-up with MRI characteristics, and a review of the literature. *Magn Reson Imaging.* 1990;8:825-8.

A simplified technique of full-thickness transabdominal laparoscopic repair of Morgagni hernia

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Morgagni hernia (MH) represents less than 5% of all congenital diaphragmatic hernias.¹ In adults, MH is usually symptomatic, with common symptoms, including pain in the chest or abdomen, obstruction, dysphagia, and rarely gastroesophageal reflux disease or bleeding.² Predisposing conditions, such as chronic cough, constipation, trauma, pregnancy, and obesity, can contribute to the likelihood of symptomatic presentation. Repairs traditionally have been via laparotomy or thoracotomy; however, new technology has resulted in novel techniques for repair being reported, including thoracoscopic, laparoscopic, and even robotic repairs.² Various strategies to deal with the hernia sac and close the defect have been described, and no consensus exists on whether to resect the sac or use prosthetic mesh. We report our experience of laparoscopic MH repair using

a simple technique of transabdominal wall suturing without the use of prosthetic mesh in 2 adult patients.

CLINICAL SUMMARY

Case 1

A 50-year-old man whose chief symptom was intermittent dyspnea on exertion and epigastric pain with vomiting was found to have MH on chest x-ray. The patient's body mass index was 35 kg/m². Computed tomography scan of the chest and abdomen showed a fat-containing MH without evidence of obstruction. Given the symptomatic nature of the hernia, elective laparoscopic repair was offered. The patient tolerated the procedure well and was discharged on postoperative day 3, tolerating a regular diet. On follow-up at 6 and 18 months, the patient remained asymptomatic and there was no evidence of recurrence on computed tomography scan or upper gastrointestinal fluoroscopy.

Case 2

A 34-year-old developmentally delayed man underwent workup for recurrent episodes of dehydration and obstructive symptoms. Diagnosis of MH was confirmed by upper gastrointestinal fluoroscopy and computed tomography (Figure 1). The patient's body mass index was 18 kg/m².

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FIGURE 1. Preoperative computed tomography scan showing Morgagni hernia with small bowel.

He was offered an elective laparoscopic repair of the hernia. The patient tolerated the procedure well and was discharged on postoperative day 5. At 1 month, there was no evidence of recurrence by plain film, and at 2 years, there was no evidence of recurrence by upper gastrointestinal fluoroscopy. The patient remained asymptomatic.

OPERATIVE TECHNIQUE

Pneumoperitoneum was established at a pressure of 15 mm Hg via an open Hasson technique, and additional 10- and 5-mm ports were placed under direct visualization to triangulate around the defect. The dimensions of the hernia in both cases were approximately 50 cm². The hernia sac was resected using a harmonic scalpel. The defect was repaired primarily using 2-0 Surgidac sutures with an Endo Stitch device (Covidien, Mansfield, Mass). The sutures were brought up to the anterior abdominal wall with a laparoscopic suture passer and tied in a “U” fashion in a subdermal position through individual stab incisions (Figure 2).

DISCUSSION

Laparoscopic repair of MH was first reported in 1992,³ and as of January 2010, there have been 54 cases of successful laparoscopic repairs of MH in adults reported in the English literature. The review by Horton and colleagues² reported 46 laparoscopic MH repairs. They noted that surgeons who perform a laparoscopic repair were more likely to place mesh to reinforce the repair (64%) and to resect the hernia sac (69%). Although the reported outcomes were excellent, the small cohort made it difficult to compare primary repair versus mesh repair.

FIGURE 2. Schematic diagram of transabdominal suture technique.

We used a simple transabdominal wall suturing technique that obviated the need for prosthetic mesh. The sutures are tied through subcostal stab incisions, which provide good cosmesis. In both cases, we performed complete resection of the hernia sac because this allowed us to define the fascial edge of the repair more precisely. A similar technique was described by Azzie and colleagues,⁴ but not in adult patients. In addition, resection of the hernia sac eliminates the need for drain placement, a major difference compared with a similar technique reported by La Greca and colleagues.⁵

CONCLUSIONS

Both our adult patients underwent successful repairs and have shown no evidence of recurrence. These results suggest that hernia sac resection is safe and that a primary transabdominal sutured repair without mesh may provide adequate closure of defects less than 50 cm² without risk of recurrence. We hope to evaluate this technique in several more patients and have scheduled follow-up computed tomography to properly assess the durability of these repairs.

References

1. Torfs CP, Curry CJ, Bateson TF, Honoré LH. A population-based study of congenital diaphragmatic hernia. *Teratology*. 1992;46:555-65.
2. Horton JD, Hoffman LJ, Hetz SP. Presentation and management of Morgagni hernias in adults: a review of 298 cases. *Surg Endosc*. 2008;22:1413-20.
3. Kuster GG, Kline LE, Garzo G. Diaphragmatic hernia through the foramen of Morgagni: laparoscopic repair case report. *J Laparoendosc Surg*. 1992;2:93-100.
4. Azzie G, Maoate K, Beasley S, Retief W, Bensoussan A. A simple technique of laparoscopic full-thickness anterior abdominal wall repair of retrosternal (Morgagni) hernias. *J Pediatr Surg*. 2003;38:768-70.
5. La Greca G, Fisichella P, Greco L. A new simple laparoscopic-extracorporeal technique for the repair of a Morgagni diaphragmatic hernia. *Surg Endosc*. 2001;15:99.