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Laparoscopic Repair of Complex Scrotal Hernia

The videos associated with this chapter are listed in the Video Contents and can be found on the accompanying DVDs and on Expertconsult.com. 

The repair of complex scrotal hernias presents a unique challenge for the general surgeon. Use of the preperitoneal space offers several advantages during repair. The tissue planes are often relatively clean, the anatomy is easily appreciated, and the mesh may be placed posterior to the defect, which offers a mechanical advantage over anterior placement. The laparoscopic approach is able to fully utilize these advantages. The laparoscopic transabdominal preperitoneal (TAPP) approach to complex scrotal hernia repair also offers the advantages of being able to inspect bowel viability and to reduce the hernia contents and sac under direct visualization. Some controversy surrounds laparoscopic repair of these complex hernias. Discussion of this controversy is beyond the scope of this chapter; we believe that the laparoscopic TAPP repair is a safe, effective therapeutic option for complex scrotal hernias.

OPERATIVE INDICATIONS

Traditionally, the presence of an inguinal hernia was an indication for surgery in a patient able to tolerate anesthesia, regardless of whether the patient was symptomatic. The patient who presents with a large complex scrotal hernia, however, will probably have symptoms, for example, pain or intermittent bowel obstruction. These types of hernias also have an increased likelihood leading to life-threatening complications. Consequently, although repair of these hernias is still elective, surgical repair should be considered sooner rather than later. We prefer the laparoscopic TAPP approach for such hernias. Contraindications for a TAPP repair include the inability to tolerate a general anesthetic, the presence of infection, and moderate coagulopathy. Previous lower abdominal surgery may be considered a relative contraindication for a TAPP laparoscopic repair.

PATIENT PREOPERATIVE EVALUATION, PREPARATION, AND POSITIONING

The preoperative TAPP patient should undergo the required evaluation for general anesthesia. Aspirin and other nonsteroidal anti-inflammatory medications should be stopped 1 week before surgery. Shaving of the groin area should be done immediately before surgery. All patients should receive a single dose of first-generation cephalosporin, or equivalent antibiotic, to

cover skin flora before incision in accordance with accepted guidelines.

The patient is placed in the supine position with both arms tucked. For large incarcerated scrotal hernias, placement of a Foley catheter is generally recommended. The video monitor is placed at the foot of the bed. The surgeon may stand on the same side as the hernia or the opposite side of the bed depending on preference. The assistant and camera operator stand on the side opposite of the surgeon.

TROCAR PLACEMENT

We prefer to access the abdomen using the open Hasson technique. A curvilinear incision is made inferior to the umbilicus, a 10-mm trocar is placed and the pneumoperitoneum is established. Two additional 10-mm trocars are then placed lateral to the rectus abdominis muscle at the same level as the infraumbilical port (Fig. 29-1).

OPERATIVE TECHNIQUE

The patient is placed in Trendelenburg position to allow displacement of the small intestine and omentum from the lower abdomen, and the hernia defect is identified (Fig. 29-2). Using gentle traction, the hernia contents are reduced. External pressure on the scrotum may be used to facilitate the reduction. With large incarcerated scrotal hernias, the bowel can often become very adherent to the cord structures and sac. Care must be taken to avoid iatrogenic injury to the bowel wall and cord structures during reduction. Reduction of the sac should be attempted without performing intestinal adhesiolysis because the lysis of these adhesions only increases the chance for bowel injury. After the bowel is returned to the abdomen, the hernia sac is evaginated into the abdominal cavity with steady pressure elevating the peritoneum away from the anterior abdominal wall. This maneuver can be facilitated by inserting a grasper into the inguinal defect and grabbing the end of the hernia sac. With large hernias, the sac can be very adherent to the cord, making reduction difficult. If unable to fully reduce the sac, at this point it is better to open the peritoneum and complete the mobilization and reduction from the preperitoneal space. The peritoneum is opened above the inguinal ring using hook electrocautery from the median umbilical ligament to a point about 10 cm laterally.