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Indications

- Inadequate fascia for autogenous tissue repair of direct inguinal hernia.
- Recurrent inguinal hernia repair. Mesh is frequently used when a recurrent inguinal hernia is approached through the groin.
- Prosthetic mesh repairs are used by some surgeons for virtually all inguinal hernias. Advocates of the repair shown here in a modified form cite speed, simplicity, and minimal dissection as major advantages to the surgeon; decreased pain and immediate return to normal activities are advantages to the patient. Current data support the use of a mesh repair for virtually all elective primary herniorrhaphies.

Preoperative Preparation

- Perioperative antibiotics.

Pitfalls and Danger Points

- Failure to identify, reduce, and repair all hernias. A missed indirect hernia sac is a common cause of recurrence.
- Failure to secure the mesh adequately. Mesh can curl or migrate. When this happens, it may fail to produce the desired effect or may be palpable in the subcutaneous tissues of a slender patient.
- Infection.

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Operative Strategy

This repair is performed through a short incision with minimal dissection. Direct and indirect sacs must be identified and reduced. A piece of mesh is then sutured in place in an onlay fashion, reinforcing the floor and creating a new internal ring. Several kinds of mesh are available.

The procedure may be done under local or regional anesthesia.

Documentation Basics

- Findings
- Presence of incarceration
- Presence of strangulation
- Type of mesh used and exact details of placement and fixation

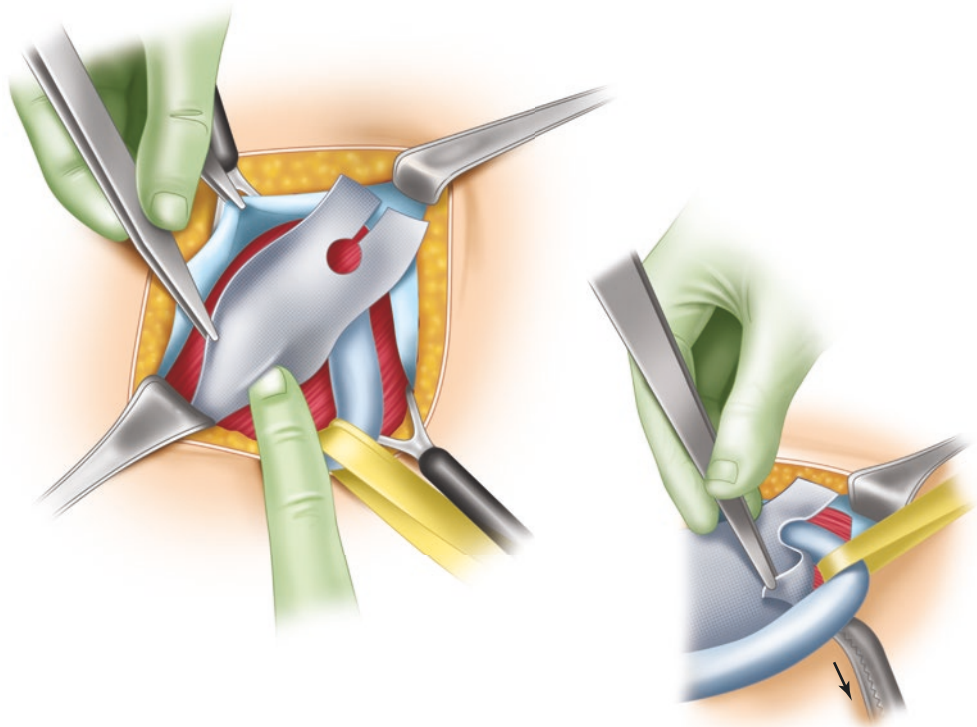
Operative Technique

Incision

Center a small skin line or nearly transverse incision over the medial third of the inguinal ligament and external inguinal ring (see Fig. 109.1).

Dissection and Identification of Direct and Indirect Sacs

The groin structures are exposed, and the external oblique aponeurosis is identified as described in earlier chapters. Incise the external oblique aponeurosis in the direction of its fibers, preserving the ilioinguinal nerve. Encircle the cord and its posterior mesentery (which contains the genitofemoral nerve). Perform just enough dissection to encircle the

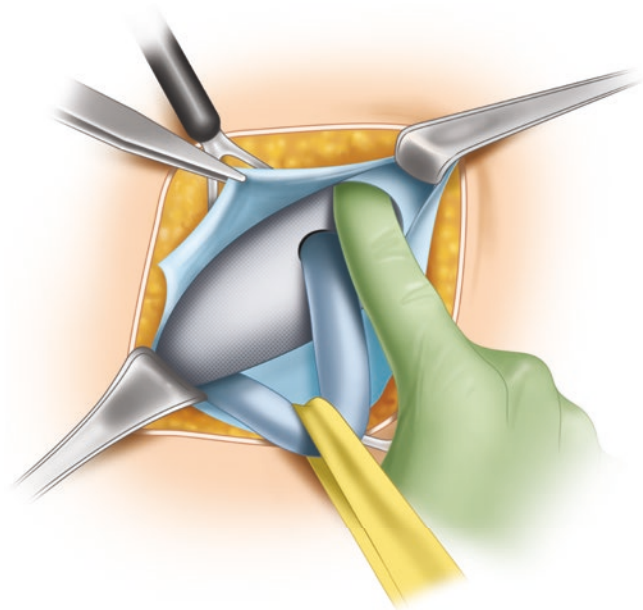
Fig. 108.1

cord. Do not divide the cremaster muscle. Simply incise it in the direction of its fibers to allow careful inspection of the cord structures.

An indirect sac, if present, is found anteromedial to the cord structures. Trace the cord structures back to the internal ring, with the cord on traction to ensure that the leading edge of any indirect sac is seen. Visualization of the peritoneal lappet, a crescentic thickening of normal peritoneum created by traction on the cord, is positive proof that adequate dissection had been performed.

If an indirect hernia sac is found, separate it from the cord structures all the way to the internal ring. This high dissection allows the sac to be simply inverted into the peritoneum.

Assess the strength of the floor of the inguinal canal by palpation. If a direct hernial defect is present, circumferentially incise the fascial defect with electrocautery and reduce the hernia with the attached portion of sac into the preperitoneal space.

**Fig. 108.2**

Placement of Patch

Insert the precut patch so it covers the floor of the canal with the cord coming through the hole and the incision and tails of the mesh extending laterally to the internal ring (Figs. 108.1 and 108.2). Tuck it carefully into place. It should lie in a flat, stable position covering the floor of the inguinal canal (Fig. 108.3). Secure it in position with interrupted sutures of

3-0 Prolene. Carefully place sutures medial to the pubic tubercle, and laterally to secure the two tails together. Then, tack the lateral part to the aponeurosis of the internal oblique muscle, inferiorly to the inguinal ligament, and superiorly to the conjoint tendon.

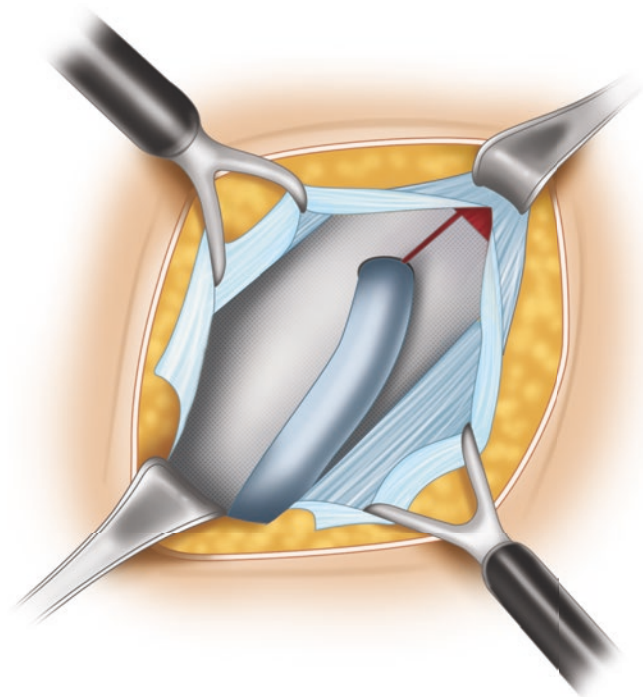


Fig. 108.3

Closure

Close the external oblique and remaining layers in the usual fashion.

Postoperative Care

- Patients are allowed to lift up to 25 lb immediately. They may resume heavy manual labor after 2 weeks.

Complications

- *Infection* has been rare in most series.
- *Mesh migration* into adjacent structures (femoral vein, spermatic cord), a theoretic concern, has not proven to be a significant problem. Rutkow and Robbins, in a 1998 review, were unable to find any documented cases.
- *Pain*.

Further Reading

- Amato B, Moja L, Panico S, Persico G, Rispoli C, Rocco N, Moschetti I. Shouldice technique versus other open techniques for inguinal hernia repair. *Cochrane Database Syst Rev.* 2009;7:CD001543.
- Lichtenstein IL, Shulman AG, Amid PK, et al. The tension-free hernioplasty. *Am J Surg.* 1989;157:188.
- Reinbold WM, Nehls J, Eggert A. Nerve management and chronic pain after open inguinal hernia repair: a prospective two phase study. *Ann Surg.* 2011;254:163.
- Rosenberg J, Bisgaard T, Kehlet H, Wara P, Asmussen T, Juul P, Strand L, et al. Danish hernia database recommendations for the management of inguinal and femoral hernia in adults. *Dan Med Bull.* 2011;58:C4243.