

REPAIRING A INGUINAL HERNIA WITH LAPAROSCOPY:

Laparoscopic repair of the Inguinal Hernia:

To this date the laparoscopic repair of inguinal hernias have a tumultuous beginning in the surgical arena. Laparoscopic repair has had to compete with the recent technique considered the best for this type of repair as opposed to the conventional Lichtenstein repair.

In the beginning, some of these laparoscopic repairs, such as the "plug and patch" and the IPON did not show good results and were abandoned. In 1996 and 1997, only 2 types of laparoscopic repairs have shown to be viable with excellent results as compared to the Lichtenstein. These are extra peritoneal Laparoscopic Repair (EXTRA) and the Trans abdominal Preperitoneal Repair (TAPP).

It must be noted that the most notable critique about the TAPP procedure is that it is an intra-abdominal procedure with a potential significant morbidity. For this reason the TEP procedure that prevents intra-abdominal access was developed. In many studies, the proportion of morbidity in these 2 Laparoscopic repairs is minimal and/or similar to other open repairs.

The most persuasive argument to use this procedure is the same argument that is used for laparoscopic procedures: the post- op benefits for patients; that is to say less post-op pain, decrease of incapacity and small incisions. Nonetheless, it continues to be a new procedure with a limited long term follow up and analysis.

During the early 90s, the original TAPP was developed. This original technique was modified on various occasions. Later, the TEP technique was introduced for patients that had suffered major surgery previously in the lower stomach.

Instructions:

All patients with possibilities of general anesthesia are candidates for this repair. The age does not constitute a problem for the procedure. The previous intra-abdominal surgical procedures are not counter indicated. The surgeon decides based on the need of an extensive enterolysis if this is the best procedure for the patient, or if a TEP technique must be used. It has been shown that best indicative for this technique is the presence of recurrent inguinal hernias and bilateral inguinal hernias. We recommend all the inguinal-femoral hernias including slight defects, unilateral that might be repaired using this technique.

Technical consideration: Understanding Anatomy:

* The anatomy of the inguinal-femoral area seen through a telescope differs radically from the anatomy observed through an open wound. It is important that the laparoscopic surgeon be familiar with the anatomical structure of this region. Since all the anatomical references are covered with the peritoneum in the TAPP technique, the peritoneum has to be severed first and lower the inferior flap to expose the region adequately.

Our recommendations for correct and safe procedure of a laparoscopic treatment of inguinal hernia; requires that the following structures be clearly identified:

- Cooper Ligament
- The Epigastric Vessels
- El Spermatic Cord or Round Ligament
- El Femoral Channel and the Iliac Vessels

Additionally, the anatomical laparoscopic distinction between directs inguinal hernia and indirect and femoral must be understood correctly. Before the surgeon tries to repair a inguinal or femoral hernia with laparoscopic procedures, he must memorize and be familiar with the following diagrams.

The techniques: TAPP Repair – TEP Repair. Technical notes:

Variations in the insertion of the Prosthetic Mesh: Although we have been accustomed to all types of mesh for this repair, the best mesh was found to be made of prolene. The most commonly used size is 15cm x 15cm. Recently, we have been using a woven mesh measuring 6 inches x 6 inches. As described previously, we can use two different variations to insert this mesh.

The first is by wrapping it around the spermatic cord and the other consists in placing an “onlay” or super positioning. To this date, there is no difference in the results.

Inserting the Prosthetic Mesh:

Some doctors place the mesh over the inguinal region without staples. We believe that the graft must be joined with staples or tacks to the fascia and to the Cooper ligament. Differing from other doctors, that use the Multifire Endo Hernia or Protack Instrument, we routinely use 4 to 8 staples to complete a normal repair. Under no circumstance the mesh must not be inserted using tension.

Various studies show that the staples must not be placed laterally to the epigastric vessels because the risk of injuries increases to the genital-femoral nerve and the femoral-cutaneous nerve. Some doctors do not agree with this theory, and routinely insert staples laterally. We believe that the incidence of complications will increase when applying pressure to the abdominal wall when the staples are placed.

Inguinal Hernias without a Defined Peritoneal Pouch:

In a study of 1282 repairs, nine patients with inguinal hernias were found without evidence of a peritoneal pouch at the time of the laparoscopy. It is essential that even when a peritoneal pouch does not show, a peritoneal incision must be made and the entire peritoneal area explored without the peritoneal cover. An inguinal hernia can be present without a visually defined peritoneal pouch at the time of the laparoscopy.

Post op Care:

All patients are instructed to return to their physical activities when they return home, which usually happens the same day. In summary, all patients are recommended to walk at least 2 kilometers per day starting the day after the surgery. They are also asked to take analgesics for pain control. They will return a week later to the doctor's office.

Laparoscopic techniques to choose from:

The laparoscopic techniques used are:

Engulfed Inguinal-Femoral Hernia: TAPP repair

Inguinal-Femoral Hernia / Patients with previous lower abdominal major surgery: TEP Repair

Massive Inguinal Hernias with scrotal extensions: TEP repair or Anterior Repair

Bilateral Inguinal Hernias: TAPP or TEP repair

Uni Inguinal Hernias or Bilateral in athletes: TEP or TAPP repair

SEE FREQUENTLY ASKED QUESTIONS