FORT WORTH SURGICAL CONSULTANTS

Groin Hernia

Robotic Assisted Laparoscopic Inguinal Hernia Repair

Patient Postoperative Instructions and Information

Inguinal Hernia:

A hernia is an abnormal opening through a barrier between two spaces through which the contents of one space can protrude into the other. An inguinal hernia is an opening in the abdominal wall in the groin. Contents that are normally inside the abdomen, such as abdominal fat and intestines, can bulge through this opening into the fat beneath the skin of the abdominal wall in the groin. This bulge can cause pain, especially with activity that increases pressure inside the abdomen, such as coughing, lifting heaving objects, bending over, etc. The bulge is often more noticeable as the day progresses and a person has been standing and active, both of which tend to increase abdominal pressure and push the abdominal contents through the opening. Some people notice that they can push the bulge back inside and that it may go away when sleeping at night. Hernias never go away and never get smaller. They do tend to grow larger over time.

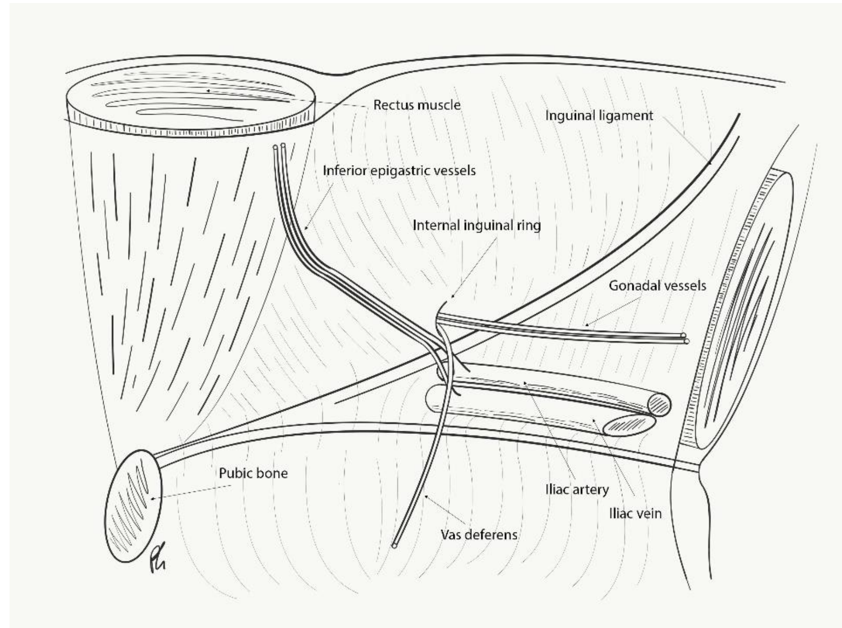

Figure 1, Inguinal anatomy with possible hernia sites, as seen from inside the abdomen

Though they can cause pain, most of the time hernias are not dangerous. Rarely, however, hernias can become incarcerated, meaning the abdominal contents can be trapped outside the abdominal wall by the tightness of the opening. If bowel is trapped, it can become obstructed, not allowing stool and intestinal fluid to progress toward the rectum. This can lead to abdominal distension as stool backs up, nausea and vomiting, and cessation of bowel function (unable to pass bowel movements or gas). The bowel can also become strangulated so that it does not receive adequate blood flow. Both conditions, obstruction and strangulation, are life-threatening and require immediate surgical repair. Thankfully these complications are rare.

The decision to repair a hernia will always be individualized between you and your surgeon. In general, repair is recommended when hernias are symptomatic (causing pain, certainly with any history of incarceration or obstruction) and when they are growing larger in size. There are also times where hernias that are not causing symptoms should be repaired. Again, this is an important part of the discussion with your surgeon. There are multiple ways to repair inguinal hernias and this discussion will also be important with your surgeon. This document describes the robotic assisted laparoscopic inguinal hernia repair.

Surgery details and expectations:

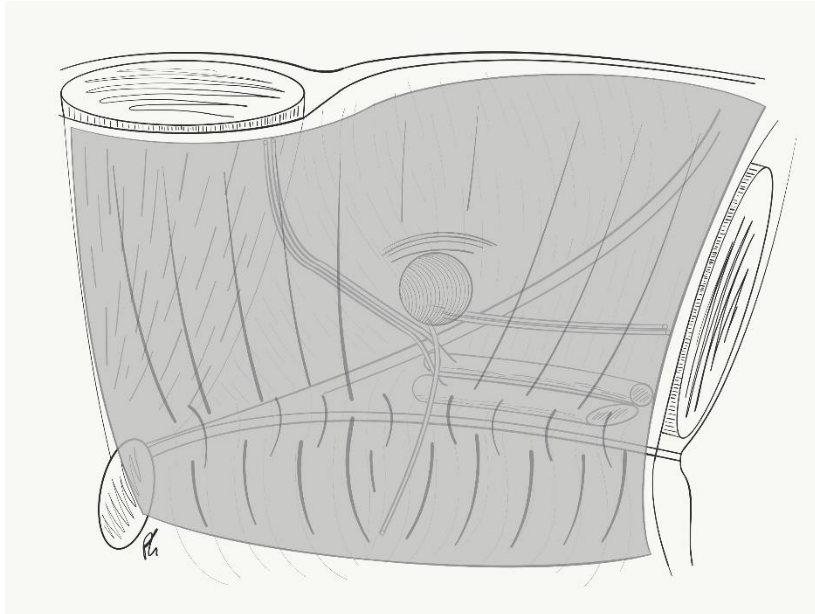

Figure 3, beginning of operation with peritoneum intact and hernia defect visualized

Figure 2, peritoneum being pulled down and hernia sac pulled out

Like most surgeries, you will need to take nothing by mouth after midnight the night before surgery. You will be completely asleep for this procedure and there will be a breathing tube placed in your airway to help you breathe.

The basic concept of this operation is to return all abdominal contents back to their normal location in the abdomen and to patch the hernia opening closed. The robotic assisted laparoscopic approach completes these objectives from inside the abdomen, working on the internal surface of the abdominal wall in your groin. Laparoscopic surgery is performed through small incisions, using small instruments through these incisions and a telescope to see what is being done. The abdomen is inflated with carbon dioxide to allow visualization. Though most of the gas is evacuated at the end of the operation, there will always be small pockets that remain. Carbon dioxide is used (instead of normal air) because it is rapidly absorbed by the body and ultimately exhaled out, thus more quickly eliminating the remaining gas that can cause irritation after surgery. The da Vinci robot is a tool that is utilized to provide better dexterity and visualization during the operation. It is fully controlled by your surgeon through the entire duration of the operation. It allows the use of laparoscopic instruments that are much more like the surgeon's hands as opposed to typical laparoscopic instruments, allowing more complex and precise operative movements. Furthermore, it utilizes 3-D technology that gives the surgeon a true three-dimensional view during the operation that is not possible with standard laparoscopy.

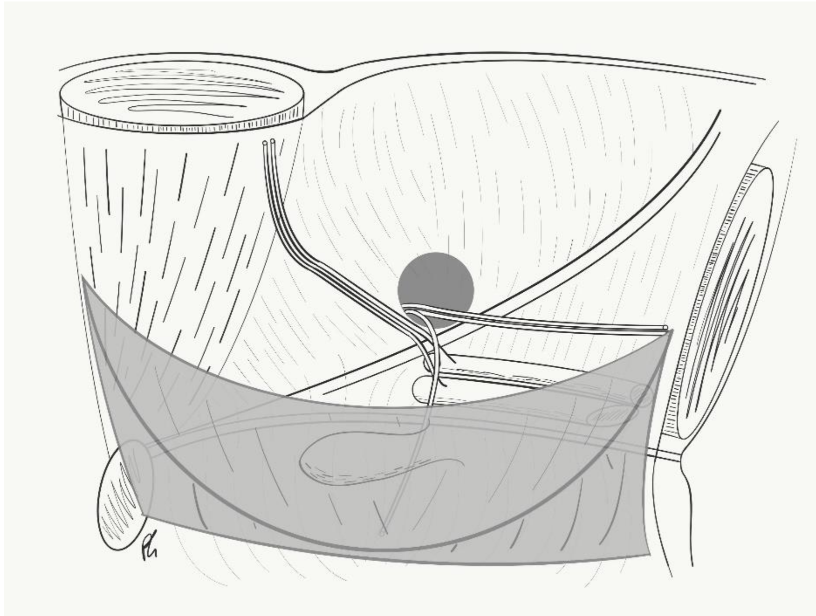

Figure 4, peritoneum fully down and hernia sac removed, hernia defect uncovered

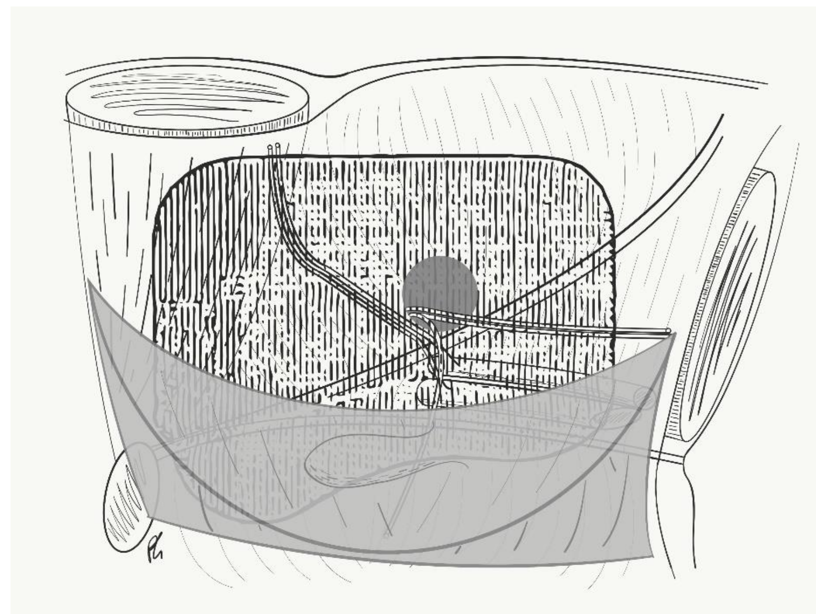

Figure 5, mesh placed to cover hernia defect

Typically, there will be three small incisions: one near the umbilicus and one on either side of umbilicus, each 3-4 inches away and oriented in a transverse direction across the middle of the abdomen. The laparoscopic ports are placed through these incisions. The inner surfaces of both groins are visualized to ensure the presence or absence of a hernia on each side. If any abdominal contents are noted passing through the hernia opening, they are typically returned inside the abdomen at that time. The inner surface of the abdominal wall is lined by a thin membrane called the peritoneum, (figure 2). Where there is a hernia, this membrane is usually pushed out through the opening, like a windsock. Because of scarring, this membranous sac usually remains in place, bulging outside the abdomen. During the operation, the peritoneum membrane is dissected down, away from the abdominal wall and the hernia sac is dissected away with it, (figures 3 and 4). This exposes the hernia defect, the hole in the abdominal wall. This defect is covered with a piece of mesh, much in the way a hole in a tire or clothing is patched, (figure 5). The mesh is then covered up by replacing the peritoneum membrane and suturing it back into place, (figure 6). This hides the mesh from contact with your intestines. The gas is then allowed to escape the abdomen and the ports are removed. The incisions are typically sutured with absorbable suture that is hidden under the skin.

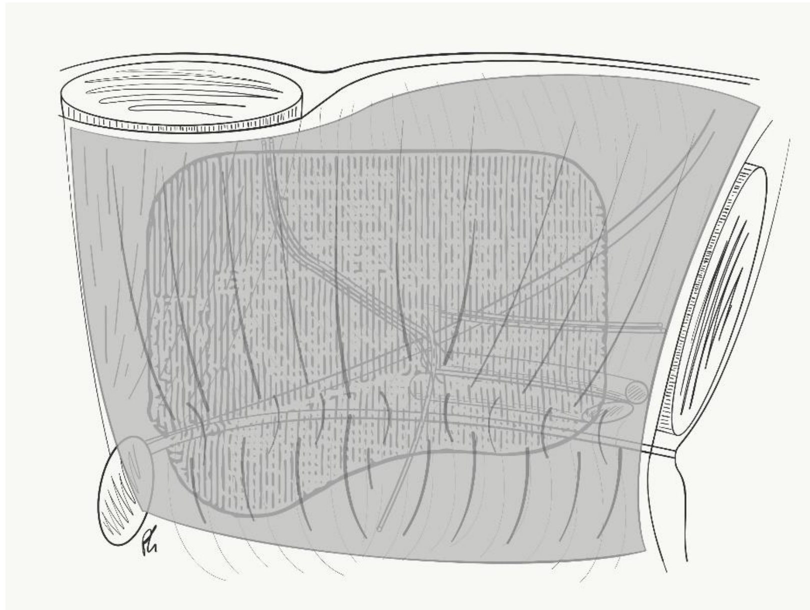

Figure 6, peritoneum closed to cover mesh

Post-Operative Instructions:

Incision:

All of the sutures will be under the skin and will dissolve on their own. A medical glue called Dermabond is typically applied as a dressing. This is waterproof and you may shower on the day after surgery, cleaning the area with soap and water. Carefully blot dry. This glue will flake off on its own as you normally exfoliate.

Activity:

The strength of your hernia repair is primarily dependent on your body scarring the mesh firmly into place. This takes several weeks to become complete. During this time, it is important to not stress the repair to prevent a recurrent hernia. Anything that increases intraabdominal pressure will stress the repair. This includes anything that feels like doing an abdominal crunch or straining to have a bowel movement.

For the first 4-8 weeks after surgery (your surgeon will specify the time appropriate for you), you should not do any strenuous activity that involves straining. This includes lifting heaving objects (greater than 20-30 lbs). It also includes avoiding a chronic cough and constipation.

Diet:

You may eat your regular diet after surgery and full recovery from anesthesia. Anesthesia can leave you with nausea, and you may want to limit yourself to bland foods initially until you feel back to normal.

Pain management:

Your pain can be mild to moderate the first 24 – 48 hours. The pain usually lessens after that.

You may not need strong narcotic pain medication. It is to your advantage to avoid or at least limit narcotic use, as the side effects quickly outweigh the benefits. Narcotics tend to make patients constipated and this can be to a level that causes significant discomfort. In contrast, anti-inflammatory medications such as acetaminophen (Tylenol), ibuprofen (Advil or Motrin), and ketorolac (Toradol) do not cause constipation and, by decreasing inflammation, work to diminish the source of the pain (inflammation) as opposed to merely dulling your sensation of pain. If narcotic medications are prescribed after surgery, it is acceptable and preferable for you to transition to anti-inflammatory medications as soon as you are able. It is helpful to begin trying anti-inflammatory medications and reserve narcotics to be used only if you feel they are needed. If taking narcotics, we advise you to take a stool softener to prevent constipation. Any over-the-counter stool softener or laxative is fine. Examples include MiraLAX (polyethylene glycol) and Dulcolax (docusate sodium).

Do not drive, operate dangerous machinery, or do anything dangerous if you are taking narcotic pain medication (such as oxycodone, hydrocodone, etc.) This medication affects your reflexes and responses, just like alcohol.

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Postoperative appointment:

Please contact the office to make an appoint following your surgery. We will typically see you back in the office about two weeks after surgery.

When to call the office sooner: If you have…

1. Any concerns. We would much rather that you call than worry at home, or get into trouble.
2. Fever over 100.5 degrees F.
3. Foul smelling discharge from any of your incisions.
4. Large amount of bleeding.
5. Increase warmth or redness around the incision.
6. Problems urinating.
7. Pain that continues to increase instead of decrease.