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Laparoscopic Ventral Hernia Repair

Approximately 90,000 ventral hernia repairs are performed each year in the United States. Many are performed by the conventional “open” method. Some are performed laparoscopically. If your surgeon has recommended a laparoscopic repair, this brochure can help you understand what a hernia is and more about the treatment.

Laparoscopic hernia repair is a technique to fix tears or openings in the abdominal wall using small incisions, laparoscopes (small telescopes inserted into the abdomen) and a patch (screen or mesh) to reinforce the abdominal wall. It may offer a quicker return to work and normal activities with decreased pain for some patients.

WHAT IS A VENTRAL HERNIA?

- When a ventral hernia occurs, it usually arises in the abdominal wall where a previous surgical incision was made. In this area the abdominal muscles have weakened; this results in a bulge or a tear. In the same way that an inner tube pushes through a damaged tire, the inner lining of the abdomen pushes through the weakened area of the abdominal wall to form a balloon-like sac. This can allow a loop of intestines or other abdominal contents to push into the sac. If the abdominal contents get stuck within the sac, they can become trapped or “incarcerated.” This could lead to potentially serious problems that might require emergency surgery.
- Other sites that ventral hernias can develop are the belly button (umbilicus) or any other area of the abdominal wall.
- A hernia does not get better over time, nor will it go away by itself.

HOW DO I KNOW IF I HAVE A HERNIA?

- A hernia is usually recognized as a bulge under your skin. Occasionally, it causes no discomfort at all, but you may feel pain when you lift heavy objects, cough, strain during urination or bowel movements or with prolonged standing or sitting.
- The discomfort may be sharp or a dull ache that gets worse towards the end of the day. Any continuous or severe discomfort, redness, nausea or vomiting associated with the bulge are signs that the hernia may be entrapped or strangulated. These symptoms are cause for concern and immediate contact of your physician or surgeon is recommended.

WHAT CAUSES A VENTRAL HERNIA?

- An incision in your abdominal wall will always be an area of potential weakness. Hernias can develop at these sites due to heavy straining, aging, injury or following an infection at that site following surgery. They can occur immediately following surgery or may not become apparent for years later following the procedure.
- Anyone can get a hernia at any age. They are more common as we get older. Certain activities may increase the likelihood of a hernia including persistent coughing, difficulty with bowel movements or urination, or frequent need for straining.

WHAT ARE THE ADVANTAGES OF THE LAPAROSCOPIC REPAIR?

Results may vary depending on the type of procedure and each patient's overall condition. Common advantages may include:

- Less post-operative pain
- Shortened hospital stay
- Faster return to regular diet
- Quicker return to normal activity

ARE YOU A CANDIDATE FOR THE LAPAROSCOPIC REPAIR?

Only after a thorough examination can your surgeon determine whether a laparoscopic ventral hernia repair is right for you. The procedure may not be best for some patients who have had extensive previous abdominal surgery, hernias found in unusual or difficult to approach locations, or underlying medical conditions. Be sure to consult your physician about your specific case.

WHAT PREPARATIONS ARE REQUIRED?

- Most hernia operations are performed on an outpatient basis, and therefore the you will probably go home on the same or following day that the operation is performed.
- Preoperative preparation includes blood work, medical evaluation, chest x-ray and an EKG depending on your age and medical condition.
- After your surgeon reviews with you the potential risks and benefits of the operation, you will need to provide written consent for surgery.
- It is recommended that you shower the night before or morning of the operation.

- Your surgeon may request that you completely empty your colon and cleanse your intestines before surgery. Usually, you must drink a special cleansing solution. You may be requested to drink clear liquids, only, for one or several days prior to the operation.
- After midnight the night before the operation, you should not eat or drink anything except medications that your surgeon has told you are permissible to take with a sip of water the morning of surgery.
- Drugs such as aspirin, blood thinners, anti-inflammatory medications (arthritis medications) and Vitamin E will need to be stopped temporarily for several days to a week prior to surgery.
- Diet medication or St. John's Wort should not be used for the two weeks prior to surgery.
- Quit smoking and arrange for any help you may need at home.

HOW IS THE PROCEDURE PERFORMED?

There are few options available for a patient with a ventral hernia.

- The use of an abdominal wall binder is occasionally prescribed but often ineffective.
- Ventral hernias do not go away on their own and may enlarge with time.
- Surgery is the preferred treatment and is done in one of two ways.

1. The traditional approach is done through an incision in the abdominal wall. It may go through part or all of a previous incision, skin, an underlying fatty layer and into the abdomen. The surgeon may choose to sew your natural tissue back together, but frequently, it requires the placement of mesh (screen) in or on the abdominal wall for a sound closure. This technique is most often performed under a general anesthetic but in certain situations may be done under local anesthesia with sedation or spinal anesthesia. Your surgeon will help you select the anesthesia that is best for you.

2. The second approach is a laparoscopic ventral hernia repair. In this approach, a laparoscope (a tiny telescope with a television camera attached) is inserted through a cannula (a small hollow tube).

The laparoscope and TV camera allow the surgeon to view the hernia from the inside. Other small incisions will be required for other small cannulas for placement of other instruments to remove any scar tissue and to insert a surgical mesh into the abdomen. This mesh, or screen, is fixed under the hernia defect to the strong tissues of the abdominal wall. It is held in place with special surgical tacks and in many instances, sutures. Usually, three or four 1/4 inch to 1/2 inch incisions are necessary. The sutures, which go through the entire thickness of the abdominal wall, are placed through smaller incisions around the circumference of the mesh. This operation is usually performed under general anesthesia.

WHAT SHOULD I EXPECT THE DAY OF SURGERY?

- You usually arrive at the hospital the morning of the operation.
- A qualified medical staff member will typically place a small needle or catheter into your vein to dispense medication during the surgery. Often pre-operative medications, such as antibiotics, may be given.
- Your anesthesia will last during and up to several hours following surgery.
- Following the operation, you will be taken to the recovery room and remain there until you are fully awake.
- Few patients may go home the same day of surgery, while others may need admission for a day or more post-operatively. The need to stay in the hospital will be determined according to the extent of the operative procedure and your general health.

WHAT HAPPENS IF THE OPERATION CANNOT BE PERFORMED OR COMPLETED BY THE LAPAROSCOPIC METHOD?

In a small number of patients the laparoscopic method cannot be performed. Factors that may increase the possibility of choosing or converting to the "open" procedure may include obesity, a history of prior abdominal surgery causing dense scar tissue, inability to visualize organs or bleeding problems during the operation.

The decision to perform the open procedure is a judgment decision made by your surgeon either before or during the actual operation. When the surgeon feels that it is safest to convert the laparoscopic procedure to an open one, this is not a complication, but rather sound surgical judgment. The decision to convert to an open procedure is strictly based on patient safety.

WHAT SHOULD I EXPECT AFTER SURGERY?

- Patients are encouraged to engage in light activity while at home after surgery. Your surgeon will determine the extent of activity, including lifting and other forms of physical exertion. Follow your surgeon's advice carefully.
- Post-operative discomfort is usually mild to moderate. Frequently, patients will require pain medication.
- If you begin to have fever, chills, vomiting, are unable to urinate, or experience drainage from your incisions you should call your surgeon immediately.
- If you have prolonged soreness and are getting no relief from your prescribed pain medication, you should notify your surgeon.

- Most patients are able to get back to their normal activities in a short period of time. These activities include showering, driving, walking up stairs, lifting, work and sexual intercourse.
- Occasionally, patients develop a lump or some swelling in the area where their hernia had been. Frequently this is due to fluid collecting within the previous space of the hernia. Most often this will disappear on its own with time. If not, your surgeon may aspirate this with a needle in the office.
- You should ask your physician when and if you need to schedule a follow-up appointment. Typically, patients call to schedule follow-up appointments within 2-3 weeks after their operation.

WHAT COMPLICATIONS CAN OCCUR?

- Although this operation is considered safe, complications may occur as they might occur with any operation, and you should consult your physician about your specific case. Complications during the operation may include adverse reactions to general anesthesia, bleeding, or injury to the intestines or other abdominal organs. If an infection occurs in the mesh, it may need to be removed or replaced. Other possible problems include pneumonia, blood clots or heart problems if someone is prone to them. Also, any time a hernia is repaired it can come back.
- The long-term recurrence rate is not yet known. The early results indicate that it is as good as the standard or traditional approach. Your surgeon will help you decide if the risks of laparoscopic ventral hernia repair are less than the risks of leaving the condition untreated.
- It is important to remember that before undergoing any type of surgery, whether laparoscopic or traditional, you should ask your surgeon about his/her training and experience.

WHEN TO CALL YOUR DOCTOR

Be sure to call your surgeon if you develop any of the following:

- Persistent fever over 101 F (39 C)
- Bleeding
- Increased abdominal swelling or pain
- Pain that is not relieved by your medications
- Persistent nausea or vomiting
- Chills
- Persistent cough or shortness of breath
- Drainage from any incision
- Redness surrounding your incisions

