

Laparoscopic pyeloplasty

Laparoscopic pyeloplasty is a safe and effective operation to repair an inherited blockage of the kidney called a ureteropelvic junction obstruction. The blockage is often caused by scar tissue or an abnormal blood vessel and can result in pain, kidney stones, recurrent urinary tract infections, blood in the urine, high blood pressure or damage to the function of the kidney. Laparoscopic pyeloplasty is a minimally-invasive procedure, or “keyhole surgery”, where the kidney can be repaired without the larger incision required for traditional open surgery while providing equivalent success rates. Compared to open surgery, laparoscopic pyeloplasty results in less pain, less blood loss, a shorter hospital stay, a faster return to work and normal activities and better cosmesis.

Preparation for surgery

Medications to avoid prior to surgery

Any medications that affect bleeding should be stopped prior to surgery. The following medications should be stopped 7 days prior to surgery: ASA (Aspirin/Entrophen), warfarin (Coumadin), clopidogrel (Plavix), dipyridamole (Aggrenox), ticagrelor (Brilinta), ibuprofen (Advil/Motrin) and other non-steroidal anti-inflammatories (NSAIDs). The following medications should be stopped 72 hours prior to surgery: dabigatran (Pradaxa), rivaroxaban (Xarelto) and apixaban (Eliquis). If you have any questions about your medications prior to surgery, please contact your surgeon.

Diet prior to surgery

You may eat your normal diet up until midnight the night before your surgery. Do not eat any solid food, milk or cream after midnight the night before your surgery. You may drink up to 400 mL (1.5 cups) of water up to 3 hours before surgery. You may not drink any other fluids. You may have sips of water with your morning medications.

You may also be asked to perform a bowel preparation the day before your surgery, which may include a laxative (Citro-Mag) and an enema (Fleet).

The surgery

In the operating room

Laparoscopic pyeloplasty is performed under a general anesthetic, meaning you will be asleep for the operation. The operation is performed through 3-4 small (1 cm) incisions in the abdomen. A ureteral stent (a plastic tube that helps drain urine from the kidney to the bladder) is placed at the end of the procedure. The operation typically takes 2-4 hours.

Potential risks and complications

Although the operation is very safe, a number of potential risks exist. These include the following:

- Bleeding
- Infection
- Injury to other organs including bowel, major blood vessels, liver, spleen, pancreas, gallbladder, and lung
- Injury to the kidney or ureter (the tube that drains urine from the kidney to the bladder)
- Loss of the entire kidney
- Return of the blockage
- Leakage of urine inside your body, that may require additional procedures
- Conversion to open surgery
- Hernia
- General risks associated with all types of surgery including heart attack, stroke and blood clots in the legs or lungs

What to expect after surgery

During your stay in hospital

- **Length of hospitalization:** The hospital stay for most patients is 2 nights.
- **Pain:** You may experience some mild discomfort after surgery around your incisions. You may also experience some discomfort in your shoulder, which is normal after laparoscopic surgery. This can be treated with intravenous medications and medications by mouth.
- **Urinary catheter:** A catheter (a tube to drain the bladder) will be in place when you awake from your surgery. It will be removed the day after your surgery.
- **Drain:** You will have a small drain placed through the abdomen around the site of your surgery. In most patients, it is removed shortly before leaving hospital.
- **Diet:** You will be able to drink fluids beginning in the evening after your surgery. You will be able to resume solid food 1-2 days after your surgery.
- **Ambulation:** You will be encouraged to walk around beginning in the evening after your surgery.

After leaving the hospital

- **Pain:** You may experience some mild discomfort after your discharge around your incisions. This can usually be controlled with acetaminophen (Tylenol). You will be given a prescription for a stronger pain medication in case it is needed.

- **Showering:** You may shower once you have returned home from hospital. Do not soak your incisions. Carefully dry your incisions following a shower. You may not take a bath for 2 weeks after your surgery.
- **Activity:** Walking is strongly encouraged after your surgery. Prolonged lying in bed should be avoided to prevent the development of blood clots in your legs. Heavy lifting (more than 10-20 pounds), running, and vigorous exercise must be avoided for 6 weeks after your surgery.
- **Incisions:** Your incisions will have been closed with staples or stitches. If you have staples, these must be removed 7-14 days after your surgery by either your family doctor or your surgeon. If you have stitches, these will dissolve on their own and do not need to be removed.
- **Stent symptoms:** Some patients do not feel the stent when it is inside their body though most are aware of some changes. Some patients experience bladder discomfort, pain with urination, increased frequency and urgency of urination, a small amount of blood in the urine and discomfort in the kidney. You may be prescribed a medication to help manage these symptoms called tamsulosin (Flomax), silodosin (Rapaflo), oxybutynin (Ditropan), tolterodine (Detrol) or solifenacin (Vesicare).
- **Diet:** You may resume your normal diet once you have returned home from hospital. Limiting your salt intake and eating a healthy diet will help preserve the function of your kidneys.
- **Work:** Most people can return to work 2-4 weeks after surgery if they perform desk work or jobs with minimal physical activity. If your work requires heavy lifting or strenuous activity, you cannot return for 4-6 weeks.
- **Follow-up appointment:** You will need an appointment to visit your surgeon 2-4 weeks after your surgery to see how you are healing and to arrange removal of your ureteral stent. Please call your surgeon to schedule this appointment if it has not been done for you before your discharge from hospital.

When to seek medical care

Contact your surgeon if you experience any of the following after surgery:

- Increased bleeding from your incisions
- Your pain gets significantly worse
- Increasing redness or swelling around your incisions
- Unexplained fever over 38.5 degrees Celsius/101 degrees Fahrenheit
- Very bad smell coming from your incisions
- Continuous leakage of urine (urinary incontinence)

Proceed immediately to the emergency room if you experience any of the following after surgery:

- Difficulty breathing or shortness of breath
- Severe lightheadedness or feeling faint
- You have a serious concern and are unable to contact your surgeon