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# MEDICAL FACULTY ASSOCIATES

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THE GEORGE WASHINGTON UNIVERSITY

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## **LAPAROSCOPIC PYELOPLASTY**

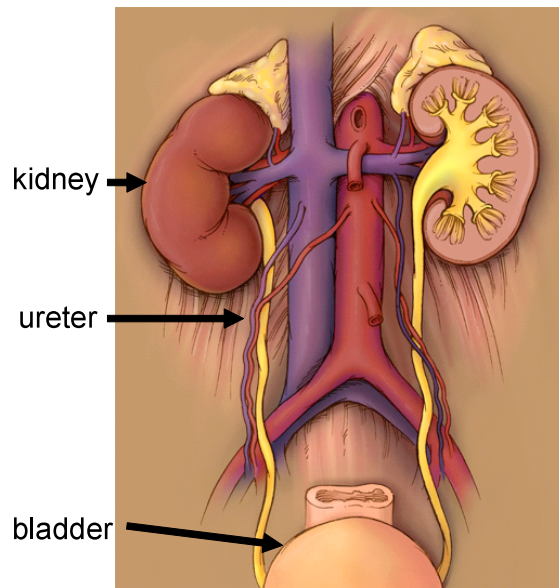
Urology Clinic  
GW Medical Faculty Associates  
The George Washington University  
2150 Pennsylvania Avenue, NW  
Washington, DC 20037

### **PURPOSE**

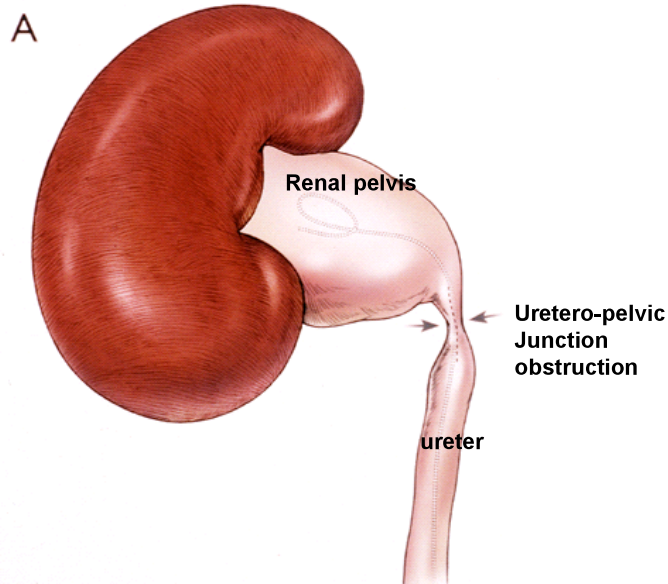
Laparoscopic Pyeloplasty is a minimally invasive technique to treat a blockage of urine flow from the kidney to the bladder due to an ureteropelvic junction obstruction (UPJ).

### **GENERAL INFORMATION**

Pyeloplasty is a surgical procedure to correct a problem with blockage or narrowing of the ureter where it leaves the kidney. This abnormality is called an ureteropelvic junction (UPJ) obstruction (see attached diagram) which could potentially cause pain, stones, infection, high blood pressure and deterioration of kidney function. Pyeloplasty has the highest success rates when compared to other available options. Traditionally the surgery was performed through a large incision in the flank. The laparoscopic approach was developed as a less invasive alternative with a quicker recovery and a more favorable cosmetic result when compared to the traditional open surgical approach.



**Anatomy of the Urinary Tract**



## **WHAT TO EXPECT PRIOR TO THE SURGERY**

**Step 1:** As soon as your surgery is scheduled, call the PAT (PRE-ADMISSION TESTING) Unit to speak with a triage nurse at (202) 715-4557 to assess your pre-anesthesia needs and to provide pre-operative instructions. This unit's hours of operation are 8:00 a.m. – 4:30 p.m. Monday – Friday.

**Step 2:** PRE-REGISTER with the Admissions Office. This can be done by telephone. Call (202) 715-4907. You will be asked to provide your name, address, insurance, and

next of kin information. Registration is necessary regardless if you are admitted to the hospital.

**Step 3:** Schedule an appointment with your primary care / internist for pre-operative evaluation. Information and test results from your evaluation should be faxed to the **PAT Unit** at **(202) 715-4507 or 715-4525**.

### **IMPORTANT REMINDERS**

- Clear liquids only for 24 hours prior to surgery and do not eat or drink after midnight the night before your surgery.
- **You must bring your films with you (IVP, CT or MRI) the day of surgery if you have not left them with your doctor.**

Do not hesitate to ask your physician's office to clarify any concerns you may have.

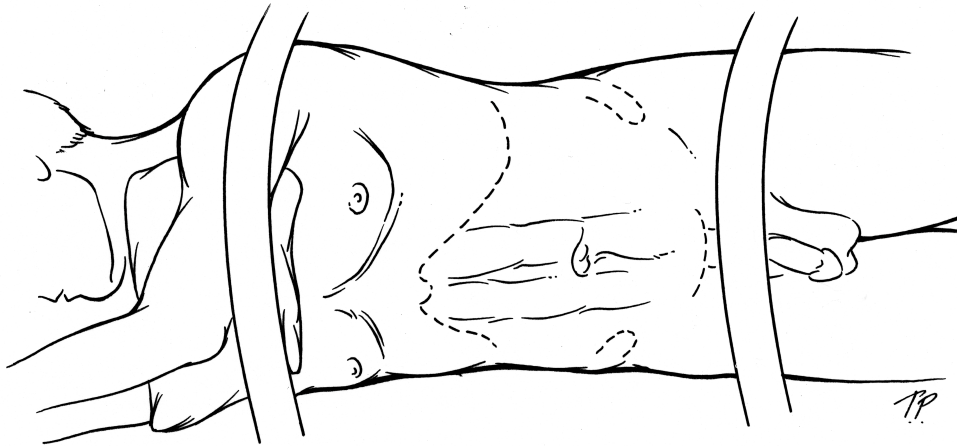
### **PREPARING FOR SURGERY**

- **Make sure you that either your doctor has your films or that you bring them with you to surgery. These are an integral part of the procedure for your doctor in identifying the correct surgical site.**
- Drink clear fluids for a 24-hour period prior to the date of your surgery (please see attachment 1, Clear Liquid Diet). Nothing by mouth after midnight the night prior to surgery.
- Aspirin, Motrin, Ibuprofen, Advil, Alka Seltzer, Vitamin E, Ticlid, Coumadin, Lovenox, Celebrex, Voltaren, Vioxx, Plavix and some other arthritis medications can cause bleeding and should be avoided 1 week prior to the date of surgery (Please contact your surgeon's office if you are unsure about which medications to stop prior to surgery. Do not stop any medication without contacting the prescribing doctor to get their approval).

### **THE OPERATION**

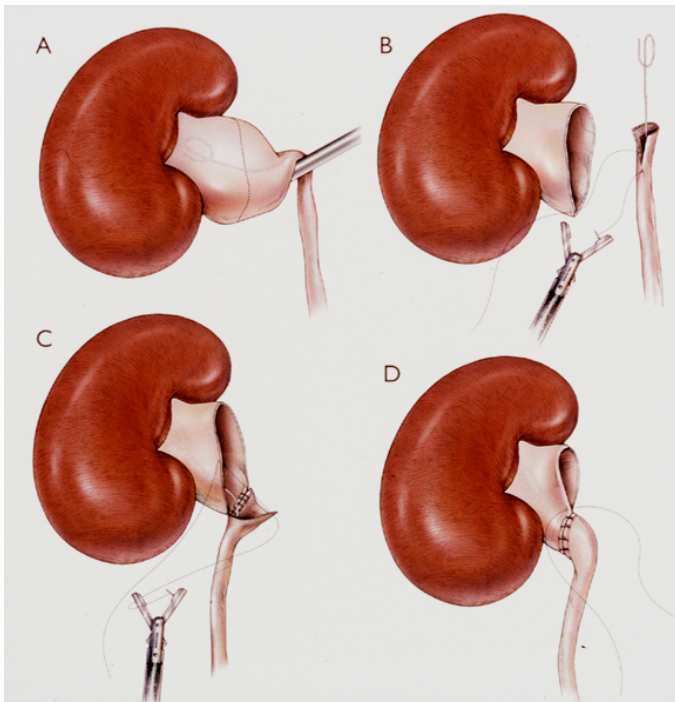
Right after being under anesthesia, the surgeon will pass a scope into the bladder and perform an x ray to confirm the site of the obstruction and place an internal ureteral stent. A ureteral stent is a hollow tube that goes from the kidney to the bladder and helps with urine drainage during the healing process. It is temporary and removed in the doctor's office 4-6 weeks following surgery. The stent is not visible from outside the body.

After the stent placement, 3 to 4 small incisions (5-10 mm) are placed into the abdomen. A telescope connected to a camera and several working instruments are passed through these "keyholes". This allows the surgeon to have an enlarged view of inside the body on a video monitor to guide him through the procedure.



The blockage site is identified and repaired using several sutures that dissolve with time. Typically, the length of the operation is 3-4 hours and the patient is sent to the recovery room with a foley catheter (draining the bladder), an internal ureteral stent (which you do not see) and a drain which comes out the flank to allow any urine that leaks from the repair to escape the body.

Below is a diagram of the most commonly used type of repair called a dismembered pyeloplasty.



## POTENTIAL RISKS AND COMPLICATIONS

The safety and efficacy of the procedure has been well established for selected patients. As with any surgical procedure, there are risks and potential complications. The safety and complication rates are similar when compared to the open surgery. Potential risks include:

- **Bleeding:** Blood loss during this procedure is rare. If you are interested in autologous blood transfusion (donating your own blood) you must make your surgeon aware. If you wish to make an autologous blood donation, you must first call the GW Hospital Transfusion Services Department at **(202) 715-4398**. They will assist you in choosing a blood collection facility convenient to you. Please allow at least 1-2 weeks for the collections, processing and delivery of the donated blood to GW Hospital.
- **Infection:** All patients are treated with intravenous antibiotics, prior to starting surgery to decrease the chance of infection from occurring after surgery. If you develop any signs or symptoms of infection after the surgery {fever ( $>100.5^{\circ}$  F) drainage from incision, urinary frequency/discomfort, pain or anything that you may be concerned about please contact us immediately}.
- **Tissue / Organ Injury:** Although uncommon, possible injury to surrounding tissue and organs including bowel, lung, vascular structures, spleen, liver, pancreas and gallbladder could require further surgery. Loss of kidney function is rare, but is a potential risk. Scar tissue may also form in the kidney requiring further surgery.

Injury could occur to nerves or muscles related to positioning. Hernia at incision site is a possibility.

- **Conversion to Open Surgery:** The surgical procedure rarely may require conversion to the standard open operation if difficulty is encountered during the laparoscopic procedure. This could result in a larger than standard open incision and possibly a longer recuperation period.
- **Urine Leak:** The urinary drainage system is cut across in order to perform the repair and is sutured closed. A drain is left to allow any urine leakage to drain out of the body. Most patients are able to leave the hospital without an external drain. However, if urine continues to drain, you may need to be discharged with the drain.
- **Hernia:** As with any surgical procedure, a hernia may form at the surgical site and may require future procedures.
- **Treatment failure:** Pyeloplasty has a very high success rates however, there is 5-10% failure rate that may require further treatment.

## WHAT TO EXPECT AFTER THE SURGERY

Immediately after the surgery you will be taken to the recovery room and transferred to your hospital room once you are fully awake and your vital signs are stable.

- **Post Operative Pain:** Unfortunately, this is not painless surgery. Pain medication can be controlled and delivered **by the patient** via an intravenous catheter or by injection (pain shot) administered by the nursing staff. You may also experience some minor transient shoulder pain (1-2 days) related to the gas used to inflate your abdomen during the laparoscopic surgery. Most patients see a large improvement in their pain level on the second day after surgery.
- **Drain/Stent:** Expect to have a small drain coming out of an incision in your back over the kidney area. This will drain blood tinged fluid and urine. Most patients are discharged without the drain. However, if persistent drainage occurs, you may have to go home with the drain and have it removed in your doctor's office. This is not a bad sign and usually the drainage will subsequently resolve with time. There is also an internal ureteral stent in place going from the kidney to the bladder to promote drainage from the kidney.
- **Nausea:** You may experience some nausea related to the anesthesia. Medication is available to treat persistent nausea.
- **Urinary Catheter:** You can expect to have a urinary catheter draining your bladder (which is placed in the operating room while the patient is asleep) for approximately two days after the surgery. It is not uncommon to have blood tinged urine for a few days after your surgery.
- **Diet:** You can expect to have an intravenous catheter (IV) in for 1-2 days. (An IV is a small tube placed into your vein so that you can receive necessary fluids and stay well hydrated; in addition it provides a way to receive medication.). Following surgery, the bowels will transiently "go to sleep". Most patients are able to tolerate ice chips and then clear liquids the day after surgery. The diet is then advanced as tolerated by the patient. Once on a regular diet, pain medication will be taken by mouth instead of by IV or shot.

- **Fatigue:** Fatigue is common and afternoon fatigue is common even several weeks beyond surgery. This is part of the body's normal healing process.
- **Incentive Spirometry:** You will be expected to do some very simple breathing exercises to help prevent respiratory infections through using an incentive spirometry device (these exercises will be explained to you during your hospital stay). Coughing and deep breathing is an important part of your recuperation and help prevent pneumonia and other pulmonary complications.
- **Ambulation:** On the day after surgery it is very important to get out of bed and begin walking with the supervision of your nurse or family member to help prevent blood clots from forming in your legs. You can expect to have SCD's (sequential compression devices) along with tight white stockings on your legs to prevent blood clots from forming in your legs.
- **Hospital Stay:** The length of hospital stay for most patients is for approximately 2-3 days.
- **Constipation:** You may experience sluggish bowels for several days or several weeks. This is a combination of the surgery as well as the narcotic pain medicines. Suppositories and stool softeners are usually given to help with this problem. Taking stool softeners and mineral oil daily at home will also help to prevent constipation.

#### **WHAT TO EXPECT AFTER DISCHARGE FROM THE HOSPITAL**

- **Pain Control:** You can expect to have some pain that may require pain medication for 2-7 days after discharge, and then Tylenol should be sufficient to control your pain. Do not restart aspirin or non-steroidal anti inflammatory medicines until you have seen your surgeon and he gives the okay.
- **Showering:** You may shower at home. Your wound sites can get wet, but must be patted dry. Tub baths can soak your incisions and therefore are not recommended in the first 2 weeks after surgery. You may have adhesive strips across your incision. These are not to be removed. They will fall off in approximately 5-7 days. Sutures will dissolve in 4-6 weeks.
- **Activity:** Taking walks is advised. Prolonged sitting or lying in bed should be avoided. Climbing stairs is possible. Driving should be avoided for at least 1-2 weeks after surgery. Absolutely no heavy lifting (greater than 20 pounds) or exercising (jogging, swimming, treadmill, biking) for six weeks or until instructed by your doctor. Most patients return to full activity on an average of 3 weeks after surgery. You can expect to return to work in approximately 4 weeks.
- **Diet:** You should drink plenty of fluids and a regular diet without restrictions following discharge.
- **Follow up Appointment:** You will need to call the GW Medical Faculty Associates Urology Clinic at (202) 741-3106 to schedule a follow up visit for 1- 4 weeks after your surgery date with your surgeon. Your surgeon will tell you the time frame based on your post.-operative needs. During this appointment you will obtain a long term follow up plan from your surgeon. This will probably include being followed for radiological tests and blood testing.

- **Stent or Drain Follow Up:** All patients are discharged with a stent which is removed in the office 4-6 weeks following surgery. Sometimes, patients are discharged with the external drain and/or foley catheter. If these are left the doctor and nursing staff will discuss the management of these as well as when they will be removed following discharge

## **CONTACTS**

GW Medical Faculty Associates Urology Clinic  
Monday – Friday, 8:30 a.m. – 5:00 p.m.  
**(202) 741-3101**

In the event of an emergency and you need to contact someone in the evening hours or on the weekend, please call the GW Hospital at **(202) 715-4141** and ask to speak to the Urology Resident on call.