



Robot-Assisted Laparoscopic Pyeloplasty

What is pyeloplasty?

It is an operation to surgically reconstruct a portion of the kidney's urinary drainage system. It is done to relieve obstruction, which typically results in pain and/or diminished function of the affected kidney. A stent is placed in the ureter after the reconstruction, where it will facilitate proper healing. The stent is removed in a brief office procedure, usually four to six weeks following surgery.

Typically, this operation employs a laparoscopic technique, whereby the abdominal cavity is filled with gas, and a camera and surgical instruments are passed through port sites in the abdominal wall.

The Davinci surgical robot is utilized by the surgeon to perform this operation, allowing for more precise movements, and enhanced visualization compared to traditional laparoscopic techniques. In rare circumstances, when it is felt that the operation cannot continue safely or efficiently in a laparoscopic manner, your surgeon may decide to convert to a traditional open technique, with a larger incision. This operation is performed in a hospital under anesthesia, and sometimes includes an overnight stay.

Alternatives to this procedure include surveillance of the kidney, or temporary stenting of the obstruction. Your surgeon has considered all of these techniques with you and feels pyeloplasty is the appropriate treatment given your circumstances.

Anticipated benefits include potential cure of the underlying condition.

What are the risks?

Bleeding. As with any operation there will be some bleeding. Transfusion rates for this operation are typically less than 1%.

Infection. A preventative antibiotic is given prior to the surgery at the hospital, and overall infection rates are usually less than 5%. Most common sites of infection would be the skin where the surgical ports are placed, and are rapidly and effectively treated with antibiotics post-operatively.

Injury to nearby structures. There are numerous structures adjacent to the kidney that have risk of injury during this operation. Such risk is very low, but can include injuries to the spleen, pancreas, adrenal gland, colon, small intestine, or liver.

Urine leak. A drain is positioned next to the reconstructed region post-operatively to pull any excess fluid out of the body following surgery. Sometimes, this fluid will be urine. In this case, the drain may be used for a longer duration.

Recurrence of obstruction. The region of repair may heal with excessive scarring, and result in recurrence of the obstruction. This may happen less than 5% of the time, and often can be treated with an endoscopic approach if necessary.

Anesthetic and other risks. Significant events such as heart attack, stroke, even death may occur as a result of any anesthetic, though such risks are extraordinarily low, especially if properly evaluated by your primary physician before surgery if indicated. Should you develop any pain or swelling of your lower legs and ankles following surgery, notify your doctor's office immediately, as this may indicate a blood clot in your leg (deep vein thrombosis or "DVT"). If a blood clot moves to the lung this could be immediately life-threatening, and usually presents with shortness of breath and/or painful breathing.

What are preparations for surgery?

Please have nothing to eat or drink after midnight prior to your surgery. If you take blood thinners, your surgeon will have discussed stopping this medication prior to your surgery. Sometimes, a bowel preparation is done to help clean out the colon the day before.

What happens after the surgery?

You will stay in the hospital for observation overnight. There will be a drain and bladder catheter in place. These two tubes are often removed the next day. Many patients will go home the day after surgery, but we will make sure that you are able to walk, tolerate a diet, and that your pain is well managed prior to leaving the hospital. In the days following surgery, it is normal to feel some discomfort in the incision sites.

Urinary bother such as frequency, urgency, incontinence, bladder or flank discomfort with urination may persist after surgery while the stent remains in place. Also, it is common to have blood in the urine occur with the stent.

Resuming activities

You can go back to work when you feel able, usually within one to two weeks, but this of course depends on the nature of your work. Typically, we ask that you abstain from any heavy physical activity for four to six weeks.

You may drive when you feel able and are not under the influence of any medications.

Follow-up

Your doctor will arrange a follow-up visit, usually within one to two weeks following surgery, to ensure you are progressing appropriately, and to arrange eventual stent removal in the office.

For any concerns, do not hesitate to call our office for advice or instruction.