UCSF
PEDIATRIC UROLOGY

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Pyeloplasty

What is pyeloplasty?

Pyeloplasty is the surgical reconstruction of the renal pelvis in order to drain and decompress the kidney. In nearly all cases, the goal of the pyeloplasty surgery will be to relieve a UPJ (uretero-pelvic junction) obstruction.

Why does my child need the pyeloplasty?

A blockage at the connection of the kidney (renal pelvis) with the ureter (tube that carries urine from the kidneys to the bladder) has been detected. This is referred to as a UPJ (uretero-pelvic junction) obstruction. This narrowing causes a ballooning out/dilation of the kidney known as hydronephrosis. Usually this can be verified by an ultrasound and kidney scan.

What causes the UPJ obstruction?

We do not know exactly. There is much research being done to help understand more about what causes UPJ obstruction, but at this time we believe it is caused by an abnormal connection between the kidney and the ureter. This results in a kink and other deformities that make the situation worse.

Are any artificial parts used in the pyeloplasty?

No. The original ureter is surgically approached below the level of the obstruction and the abnormal section is removed. Then the ureter is repositioned and reattached to the healthy renal pelvic tissue above.

Where is the incision?

The surgery can be done from a few different angles. In general, the incision will be on your child's side. Your surgeon will discuss the location of the incision that is the most appropriate for your child. All sutures are dissolvable and do not need to be removed. Occasionally there will be one skin suture removed 10 days or so after the operation if a drain left in place.

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Are any tubes left in place after the surgery?

Different surgeons use different approaches. For example, a "stent" may be left in place to drain the ureter (for about 7 to 10 days) and a nephrostomy tube(kidney catheter) for about 10 to 12 days. A small drain (made of special, soft rubber), called a penrose drain, may be left under the incision. The tube/drains are removed in the office with minimal, brief discomfort. This is usually not painful, but may feel a bit strange. In some cases, no tubes will be left in place. Occasionally, a small amount of reddish-brown drainage may come out of the tubes/drains. It is also to be expected that the skin around the tubes/drains reddens and may have pus-like secretions around it. This is nothing to be alarmed about and is a natural reaction to the drain. Before you take your child home, we will help you feel comfortable assessing the tube and taking care of it at home. If no drain is left in place, then the post-operative visit should be scheduled for two to four weeks after surgery.

While your child is in the hospital, she/he will have a catheter in the bladder to assure that bladder and kidney are not stressed. While the catheter is in the bladder, your child may experience bladder spasms (intermittent cramping). If this occurs, your surgeon will prescribe a medication called Ditropan that will provide relief. The catheter will be removed before your child goes home.

How long will the surgery take?

The surgery takes approximately 2 to 3 hours. If it takes a little bit longer or shorter, do not be alarmed. The operating room nurse, who you will meet on the day of surgery, will give your family periodic updates on the status of the surgery.

Can I stay with my child in the hospital?

Absolutely! We encourage parents to stay with their child in the room. The nurses on the floor will help to make you comfortable. We also encourage siblings to visit during the day as long as they don't have a cold.

What can I expect post-operatively?

While in the hospital, your child will receive medication as needed for pain. Towards the end of the procedure, your child may be given a caudal or epidural nerve block which will help bridge the gap of pain between the time your child is in the operating room and when he/she wakes up. The epidural catheter usually remains in place for about 48 hours. Sometimes with infants, caudal morphine is used and then they are switched to oral pain medication. Younger children will be given pain medication (usually morphine) intravenously before the caudal wears off completely. Some older children are candidates for PCA (Patient Controlled Analgesia) pumps. This involves infusion of the pain medication through the IV to maintain a more consistent blood level of pain medication. Please discuss with the anesthesiologist, whom you will meet the day of surgery, what is the best form of pain control for your child.

A prescription for pain medication that can be taken by mouth (usually Tylenol with Codeine) will be given to you at the time of discharge. You can have the prescription at any pharmacy that is convenient for you.

Will my child have any problems urinating after surgery?

After having had a bladder catheter, it is common to experience urinary frequency and maybe some discomfort for the first few times your child tries to urinate. Sitting the child in a shallow tub of warm water may provide relief. Also placing a damp, warm washcloth on the perineum may make the child more comfortable.

What kind of side effects do the medications have?

Many children often lack interest in food following surgery. However, we ask that you continue to offer your child frequent fluids to maintain an adequate urine output. He/she does not have to take a large amount at one time, even just a few sips every 15 minutes or so is great. Be creative with the way you offer liquids. If your child enjoys popsicles, jello or soup, offer these first for meals. Smoothies (yogurt and fruit) are a terrific source of vitamins and are usually tolerated

well. This may require patience and persistence on your part as you offer fluids (in one form or another) frequently.

Morphine, Droperidol or Demerol are among the medications your child may be given while in the hospital. These medications should help the discomfort, but may make your child drowsy. Although it is rare, it is important for you to know that some children react to pain medication differently. Some children become overexcited, nervous or develop a rash. If this happens, simply let the nurse taking care of your child know and the medication will be changed to amore agreeable one for your child. Before discharge, the medication will be switched to Tylenol with codeine (Tyco). This comes in both tablet and liquid form. The codeine part of this medication can make some children constipated, so it is particularly important to encourage your child to be as active as possible. Provide plenty of liquids, fruits and vegetables when tolerated. Smoothies are a terrific source of vitamins and are usually tolerated well. Gradually, you can start to manage your child's discomfort with plain Tylenol as needed. Within a few days to a week after discharge, you should begin to notice your child feeling more like him or herself again.

What is the follow-up after surgery?

Your child will usually be discharged on the second or third day after surgery. If a drain or catheter is left in place, an office appointment should be made for one week after surgery to remove it. If there is no drain, schedule an appointment for four to six weeks after the surgery. It is important that your child continue the low dose antibiotics until this time if prescribed. One to two months after the surgery, your child will be scheduled for an ultrasound of the kidneys. This test tells us if there is any blockage at the site of the surgery. Some surgeons may recommend repeating a renal scan to tell us about kidney function. Your child should then visit us for a follow-up in 6 to 8 months for another ultrasound and office visit.

Children who have undergone successful pyeloplasty surgery may still get urinary tract infections. If you suspect your child has an infection, you should notify your child's pediatrician or call our office at 415 353 2200.

Please contact our office (415 353 2200) if you are concerned with your child's progress after surgery, or if your child exhibits any of the following:
· Temperature greater than 101° F
· Excessive bleeding
· Extreme irritability/inconsolability
· Difficulty urinating
· Vomiting
· Return of symptoms experienced prior to procedure

See the next page for contact information.

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Appointments & Location

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