



Posterior Urethral Valves

What are posterior urethral valves?

Posterior urethral valves (or PUV) is a condition found only in boys. It affects the urethra (the tube which runs from the bladder to the outside). In boys with PUV, the urethra is blocked near the bladder making it hard for your son to pee. As the bladder pushes hard to get the pee out, pressure builds in the bladder which may result in pee being pushed back from the bladder into the ureters and kidneys. This causes the kidneys and bladder to swell and may lead to kidney damage.

What are the symptoms of PUV?

There are different symptoms that go along with PUV, but they don't always affect every child the same way. How bad the symptoms are depends on how bad the blockage is. . Some symptoms include:

- an enlarged bladder, so that it can be felt through the belly as a lump or seen on ultrasound during pregnancy
- urinary tract infections (UTIs)
- trouble peeing
- a weak stream of pee
- having to pee a lot
- bedwetting after being toilet trained
- poor weight gain

But, these symptoms can be like those of other conditions, so you should always check with your doctor.

How is it diagnosed?

PUV can be diagnosed by a routine ultrasound scan during pregnancy if the baby's bladder, ureters, or kidneys are swollen. It can also be diagnosed in a newborn baby if the bladder is swollen and pee dribbles all the time. If the blockage was not severe before or just after birth, the condition can stay undetected until the child has symptoms stated above.

The severity of the blockage affects how the condition is diagnosed. Each case will be different, but the following tests are usually needed:

- **Ultrasound** (of your son's belly) - this is very like the ultrasound scan that most women have during pregnancy. It takes a picture of the organs inside your son's body and shows how well they are working.

- **Voiding cystourethrogram (VCUG)** - this test shows pee passing from the bladder to the urethra and then to the outside. It will also show if the pee is flowing backwards towards the ureters and kidneys (this is known as reflux).
- **Cystoscopy** - this procedure is done under anesthesia and uses a small tube with a camera at the end to check the inside of the bladder.
- **Blood tests** - these will show how well your child's kidneys are working and check that there is enough fluid inside the body.

Other tests and scans may be needed to check that other parts of the urinary system are working properly. These can include kidney and bladder function tests.

What causes PUV?

We don't know what causes it. It seems to happen early in pregnancy when the organs, muscle, and other tissues start to form. It is not due to anything the mother did or did not do during pregnancy. PUV happens in one in every 8000 births and affects only boys.

How can PUV be treated?

There are several choices for treatment, depending on how badly the symptoms are affecting your child:

- The first course of action usually deals with the symptoms and includes putting a catheter (thin, plastic tube) into the bladder to drain away the pee. Any UTIs and fluid imbalance will also be treated with antibiotics.
- Another course of action is to try to remove the parts of the valve which are causing the backflow of pee into the kidneys. This is usually done using a cystoscope (a tube with a light on the end) rather than an operation.

What happens before the operation?

You'll get information about how to prepare your child for the operation by phone before to the surgery date. Your child should not have anything to eat or drink (put in specific number of hours). It is important to follow these instructions - if not your child's operation may need to be delayed or even cancelled.

Are there any risks?

The doctors will explain about the surgery in more detail, talk about any worries you may have and ask your permission for the operation by signing a consent form. If your child has any medical problems, particularly allergies and constipation, please tell the doctors about these. Please also bring in any medicines your child is currently taking.

All surgery carries a small risk of bleeding during or after the operation. There are always risks when your child has surgery under anesthesia. After anesthesia some children may feel sick and throw up. They may have a headache, sore throat or feel dizzy. These side effects usually don't last long and aren't severe.

What happens after the operation?

Your child will be brought back to the hospital floor to recover. Your child will be in the hospital for a couple of days. The surgeon will decide how long the stay will be depending on how bad the blockage was. He will be able to eat and drink soon after the operation.

Your child may have a tube (catheter) coming out of the bladder to drain away pee. This is usually taken out two days after the operation and then you will be able to go home.

Your son will need follow up appointments on a long term basis to make sure that no lasting damage has been done to the urinary system.

When you get home:

- Your child should drink lots of liquids.
- Your child's surgeon will want to see you about three months after the operation to check on your child's progress.

When to call the doctor:

- Your child is in a lot of pain and pain relief does not seem to help.
- Your child has a lot of blood in his or her pee.
- Your child is not passing any pee or poop.
- Your child has a fever over 101

During office hours, Monday through Friday 7 am to 5:30 pm 720-777-2705.

After hours, call the urology resident through the hospital operator at 720-777-1234.