

The Children's Hospital

Posterior urethral valves

Information for parents and carers



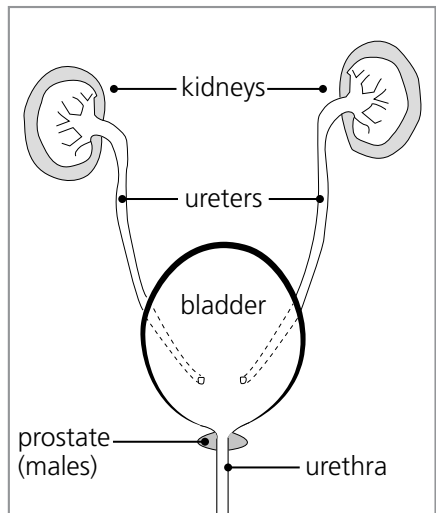
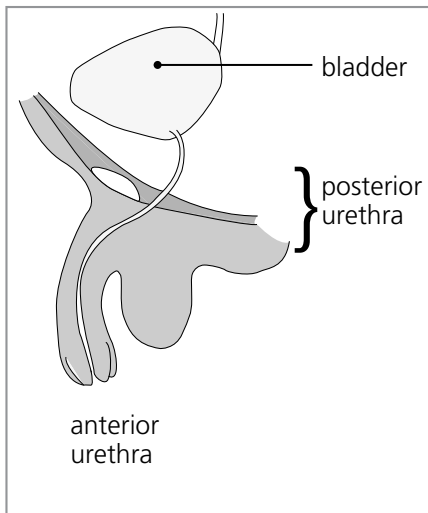
What are posterior urethral valves (PUV)?

Posterior urethral valves (PUV) is a problem that occurs in some baby boys from birth. It affects the urethra (the tube which carries urine from the bladder to the outside).

The urethra is made up of two main parts; the part which runs through the penis (anterior urethra) and the part which is close to the bladder (posterior urethra).

PUV occurs when there is a blockage in the posterior urethra, near the bladder. This makes it difficult for your baby to pass urine (have a wee). As the bladder is unable to empty, pressure will build up as it continues to fill with urine. This can also extend up to the ureters (tubes connecting the kidney to the bladder) and to the kidneys, causing them to swell.

PUV affects 1 in 8000 new born baby boys. It is thought to happen in the early stage of pregnancy when the organs of the baby are developing. It is not thought to be inherited or caused by anything which you may have done during your pregnancy.



How can we diagnose PUV?

PUV can often be picked up on antenatal scans when a baby boy is found to have an enlarged bladder, kidneys or ureters.

It can also be diagnosed when a baby is born, as they won't be able to pass urine easily, if at all.

However, in less severe cases, it might not be until your child is older when symptoms develop such as:

- difficulty in passing urine
- a weak stream of urine
- an enlarged bladder which can be felt as a hard lump in their abdomen (tummy area)
- urinary tract infections (UTIs)
- increased frequency of passing urine
- dribbling urine after weeing and day-time wetting in toilet-trained children.

An important part of the diagnosis of PUV is to use scans and X-rays.

- **Ultrasound scan:** Antenatal and postnatal ultrasound (during and after your pregnancy) is very useful for looking at your son's kidneys and bladder and detecting any obvious swelling or abnormalities.
- **Micturating cystourethrogram (MCUG):** This test involves inserting a urinary catheter (very fine tube) into your son's bladder and injecting contrast (dye) through it. This helps to show up the urethra and any blockages within it. It is also the best way to check whether your child has urinary reflux (a flow back of urine from the bladder into the ureters and kidneys).

- **Cystoscopy:** This involves inserting a small tube attached to a tiny camera into your son's bladder through their urethra. It allows us to be able to see the inside of the urethra and the bladder. It also gives us the best view of the PUV.
- **Blood tests:** Kidney function can be checked using simple blood tests to see how well your son's kidneys are working.

How is PUV treated?

Most cases of PUV are treated with surgery. This involves using a cystoscope (small tube with a camera attached to it) being placed into the urethra in the penis. The blockage can be seen through the camera and then removed.

What happens before the operation?

Once your son is diagnosed as having PUV, he will be admitted to hospital. He will have a catheter fitted to help drain off the urine. This is a very thin plastic tube which is inserted through the urethra, past the blockage into the bladder. This should help him to feel more comfortable as it will relieve the pressure which has been building up. It will remain in place until the operation and stay in for about a week afterwards.

The doctor will explain the operation in more detail and talk with you about any concerns you may have.

An anaesthetist will visit you to discuss the anaesthetic your child will have for the operation. They will also talk with you about the pain relief which your child will need after the operation.

We will ask you for your written consent for the operation to go ahead. If there is anything you are unsure about, or if you have any questions, please ask the doctor before signing the consent form.

What does the operation involve?

The operation is carried out under a general anaesthetic. This means your child will be asleep throughout the operation. You can go with your child to the anaesthetic room and stay with them until they are asleep. The nurse will then take you back to the ward. The operation lasts between 30 minutes and an hour. The surgeon uses a cystoscope so they can see the PUV. They will then remove the narrowing.

Your child may also have an extra tube put in their bladder through the lower part of their abdomen (a suprapubic catheter) immediately after the blockage removal. This will help drain their bladder and reduce the pressure on their kidneys.

Are there any risks?

Surgical risks:

Any surgery carries a small risk of infection or bleeding. Excess bleeding during and after the procedure is rare. There is also a small risk of infection and your son will be given antibiotics to help prevent this from happening.

In some cases, it is not possible to successfully remove the blockage. This is a problem which doesn't happen very often but is more likely in very small babies. If this is the case for your baby, the procedure will be repeated when they are a few weeks older. During this time, they will continue to have the urinary catheter in place to help drain their bladder.

Very rarely, the urethra can be injured during the procedure. If this happens, the urinary catheter will remain in place for longer to allow any damage to heal.

Anaesthetic risks:

In modern anaesthesia, serious problems are uncommon. Risk cannot be removed completely, but modern equipment, training and drugs have made general anaesthesia a much safer procedure in recent years.

Most babies and children recover quickly after their operation and anaesthetic. Some babies may suffer side effects like sickness. These usually last only a short time and there are medicines available to treat them if necessary.

The exact likelihood of complications depends on your child's medical condition and on the nature of the surgery and anaesthesia they need. The anaesthetist can talk to you about this in detail prior to the operation.

What happens after the operation?

When your child wakes up and is ready to return to the ward, a nurse will take you to recovery to collect them. They will be able to drink/feed shortly after the operation but may need a 'drip' overnight to ensure they are getting enough fluid. This is a small tube which will be put into a vein. It is attached to a bag of liquid which will slowly 'drip' into their vein.

Your nurse will measure what is coming out of the urinary catheter tube as well as how much fluid your child is taking in, either by drinking or by drip. This is to make sure that there is good balance of urine being produced compared to how much liquid they are being given.

You and your son will be able to go home on the day of the operation. If your child is a young baby or you need more time to learn about how to look after the urinary catheter, your child will stay in hospital overnight and be able to go home the next day.

The hospital experience is strange and unsettling for some children so do not be concerned if your child is more clingy, easily upset or has disturbed sleep. Just be patient and understanding.

What happens next?

Around one week after discharge, your son will be seen in hospital and have his catheter removed. At this appointment your son will also have another X-ray with contrast (MCUG) to check the flow of urine through the urethra.

The doctor will see your child again for a check-up about three months after the operation.

Because PUV will have affected your son from early in your pregnancy with him, it can have a big effect on his kidneys and bladder. This can continue even after successful removal of the blockage. Therefore, the doctors will keep an eye on your son's bladder and kidney function using a series of tests and scans, until he is a teenager.

How to contact us

If you have any questions or concerns about your son when you return home you can telephone:

Tom's ward: 01865 234 109 or 01865 234 110 (24 hours)

If you have a specific requirement, need an interpreter, a document in Easy Read, another language, large print, Braille or audio version, please call **01865 221 473** or email **PALSJR@ouh.nhs.uk**

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