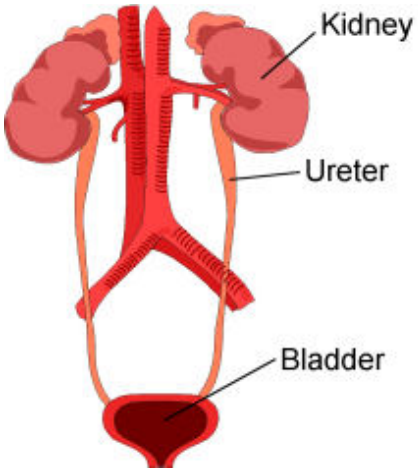
Vesico Ureteral Reflux (VUR)

VUR stands for vesicoureteral reflux. This means that urine from the bladder goes back into the ureters. Ureters are the tubes that connect the kidneys to the bladder. In severe cases the urine that is in the bladder goes back into the kidneys. The bladder is the sac-like structure which holds urine in between the times you go to the bathroom.



CAUSES

VUR usually occurs as the result of:

- A defect in the opening of the ureter in the bladder from birth (Primary VUR).
- Blockage preventing the urine from getting out of the bladder (Secondary VUR).

Mild cases of VUR disappear and get better without treatment on their own. Until VUR disappears, it is better to check urine for infection and treat the infection. The combination of VUR and urinary tract infection (UTI) is damaging to the kidneys.

SYMPTOMS

Mild cases of VUR go away within first 5-years after birth. No damage to kidneys occur in these cases. More severe cases of VUR can lead to:

- Repeated urinary tract infections
- Damage to the kidneys.
- High blood pressure.
- Kidney failure.
- Problems during pregnancy in females.

DIAGNOSIS

VUR is diagnosed by a special X-ray. These special X-rays are called:

- Micturating (MCU).
- Voiding cystourethrogram (VCUG).

An ultrasound (USG) may be helpful in detecting potential kidney damage. In unborn babies a USG may show problems with the urinary system including enlargement of the:

- Kidney.
- Pelvis.
- Ureters.

If this is found, the child may require further evaluation as to the cause of the enlargement.

VUR is most often present as a birth defect. A urinary infection is usually what brings VUR to a caregiver's attention. VUR is suspected in cases with recurrent urinary tract infection. It can be inherited. It should be looked for in brothers and sisters.

No major problems are expected as an adult if:

- VUR is diagnosed before urinary tract infection occurs.
- Recurrent UTI (urinary tract infection) is prevented by medications.
- VUR is surgically corrected.

TREATMENT

VUR can be treated by medicine which kill germs (*antibiotics*) to control and prevent urinary infections. If

VUR persists in spite of taking antibiotics for a long time, either the drug is not appropriate and needs to be changed or surgery is required. Surgery repairs the defect by creating a new opening for the ureter/s that will stop the backward flow of urine. Surgery for VUR is indicated if:

- Long-term antibiotic therapy fails to control UTI.
- VUR is severe.
- Child does not take medicines.

HOME CARE INSTRUCTIONS

- **Yearly follow ups** with weight, height, blood pressure, urine examination, and kidney (*renal*) function tests **are needed**, even up to 20-25 years of age, and **even if your child has no problems. This is extremely important even if there are no problems.** Kidney problems can be happening silently. Good follow up will help prevent the necessity of a future transplant or other problems.
- Diet may be continued as usual.

SEEK IMMEDIATE MEDICAL ATTENTION IF:

- Your child runs a temperature greater than 102° F (38.9° C) or as their caregiver suggests.
- Your child has frequent urination, back pain, feeling sick to their stomach (*nausea*), or vomiting.

The outcome will be good if early diagnosis, appropriate drug therapy, and timely surgery are performed when needed. **This is absolutely necessary to accomplish a desirable outcome.**

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