

Three types of treatment for VUR

How does it work

- Antibiotics:** Antibiotics taken every day help to prevent UTI until VUR goes away by itself. This could take years, get more information from your doctor
- Endoscopic injection:** A gel is injected where the ureter joins the bladder so that urine cannot flow back up to the kidneys.
- Surgery:** The connection between the bladder and ureter is repaired surgically.

What does it involve

- Antibiotics:** Medicine must be taken every day often for several years
- Endoscopic injection:** Out patient procedure children normally go home the same day
- Surgery:** Open surgery - children normally have to stay in hospital for a couple of days

Will my child be cured

- Antibiotics:** No, your child will need regular follow-up until VUR goes away by itself
- Endoscopic injection:** About 70% of children are cured or improved such that they don't need any more treatment
- Surgery:** About 95% children are cured permanently



Dr. Ravish I.R.

MS, MCh. (Urology)
Fellowship in Paediatric Urology (KLEU)
Fellowship in Paediatric Urology (Minnesota, USA)
Consultant Urologist, Laparoscopic,
Endoscopic & Paediatric Urologist
email: irravish@yahoo.com

Dr. Ravish I. R. - He did his MBBS & MS (General Surgery) at JSS Medical College Mysore and MCh (Urology) from JNM Medical College Belgaum in the year 2007, followed by Fellowship in Paediatric Urology from KLES, Belgaum and later did his Fellow in Paediatric Urology from University of Minnesota (USA) in the year 2008. He presently has formed a formidable team to deliver the best in Paediatric Urology. He is the Sr. Urologist at Vikram Hospital, Bengaluru which consists a team of Urologist & Nephrologist.

Special Interest in:

- Paediatric Urology
- Laser Urology
- Laparoscopy



VUR

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34, 31st 'A' Cross, Jayanagar 7th Block, Bengaluru - 560 011.
Ph: 080-2665 0004 / 82776 74213
Email: irravish@yahoo.com

What is vesico ureteral reflux?

Vesico ureteral reflux is the abnormal back flow of urine from the bladder into the ureter and upto the kidney. It is the most common problem found in children with urinary tract infections. Reflux is dangerous because it allows bacteria that might be in the bladder to reach the kidney. This can cause a kidney infection (pyelonephritis) which potentially can lead to kidney scarring and/or damage. About 1% of children in the world have VUR.

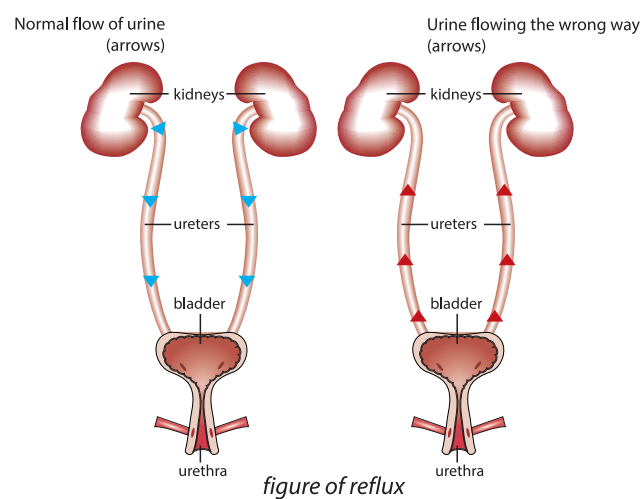
Why does reflux occur?

Normally ureter enters the bladder (the bladder is made out of muscle) in such a way that urine is allowed to enter the bladder but not allowed to back up to the kidney. Reflux occurs when the ureter enter the bladder abnormally. As a result, the muscle backing of the bladder doesn't completely cover the ureter and urine is appropriately is allowed back towards the kidney.

Reflux can occur due to non-anatomical reasons like dysfunctional voiding, neurogenic bladder or other secondary causes.

Is VUR serious?

Using x-rays of the urinary system, your healthcare provider can tell you how serious your child's VUR with a grading scale. this scale ranges from grade I (mild) to grade V (severe). Most of the time, milder grades of VUR will resolve on their own. However the more severe the VUR, the less likely it will go away on its own.

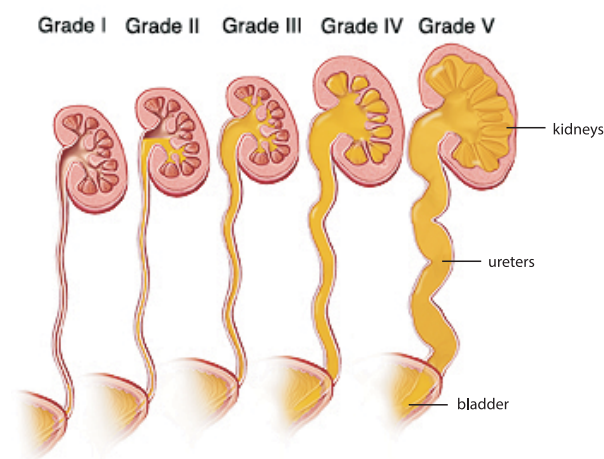


there can be serious consequence of VUR. Kidney infections can occur when infected urine flows back into the kidneys. These infections can lead to scarring and damage to the kidney's. This damage can cause poor kidney function & high blood pressure later in life.

Damage and/or scarring that may have resulted from a previous urinary tract infection

How is reflux diagnosed?

VUR is diagnosed using an x-ray of the bladder. this x-ray is called voiding cystourethrogram (VCUG). In the VCUG test, a thin, soft tube (catheter) is placed in the bladder through the urethra. Dye is then placed into the bladder through the tube. X-ray pictures are taken to see if the dye flows back into the ureter's. The severity of VUR is determined by the amount of urine flowing back through the ureters.



What, if any, other test should be done?

- ◆ Ultrasound of the urinary tract - it is usually done prior to VCUG.
- ◆ Renal scan - this test is done if the above tests are abnormal or if repeated febrile infections have occurred. It is used to better demonstrate the actual function and/or drainage of the kidneys. A renal scan can also show if there is kidney.

Nuclear cystogram

This test is very similar to VCUG, however, it has less radiation and is very sensitive for reflux. This test is recommended for subsequent follow-up in the medical management of reflux, after the diagnosis is made by the VCUG. The nuclear cystogram is also used as a screening test for siblings of kids who have reflux.

Is VUR inherited?

VUR runs in families. As many as 1/3 of siblings will have VUR. If a parent has VUR, about half of his or her children will also have it. The risk of kidney damage is greatest during the first 6 years of life. The goal is to find VUR early and prevent infection that could result in kidney damage.

How do i know if my child has an infection signs of urinary tract infection?

- ◆ Foul smelling or cloudy urine
- ◆ Fever
- ◆ Stomach ache
- ◆ Back ache
- ◆ Side pain
- ◆ Burning or pain when urinating
- ◆ Frequent & urent urination
- ◆ Headache
- ◆ Vomitting

How is reflux treated?

There are 3 types of management plans. These are based upon the degree of reflux, the age of the child at time of diagnosis, the ** and severity of urinary tract infections, and the amount of damage to the kidneys seen on x-ray studies.