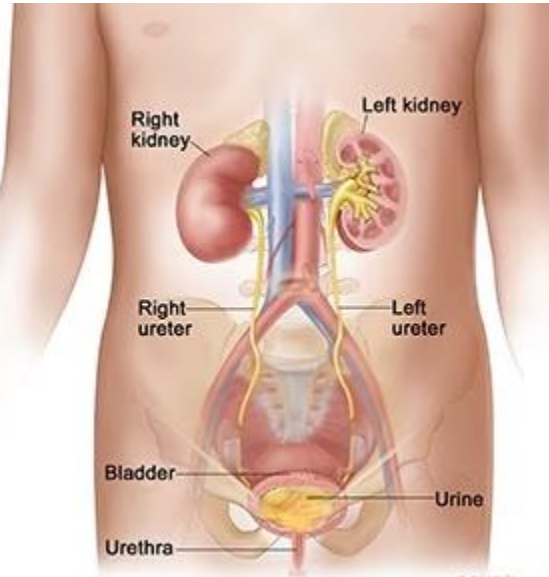
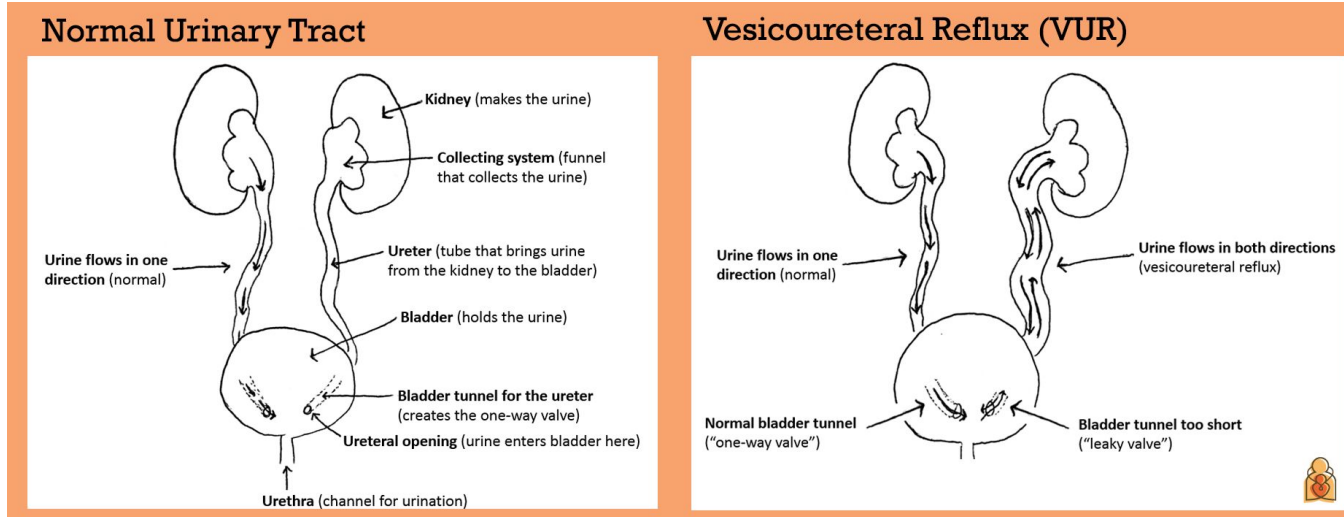


Vesicoureteral Reflux

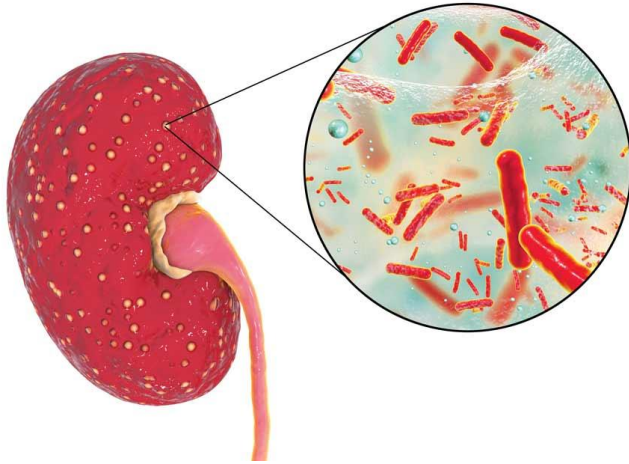


What is Vesicoureteral Reflux?



- Vesicoureteral reflux is a retrograde flow of urine from the bladder into the ureter.
- There are two types of reflux, Type I occurs when there are no abnormalities in the lower urinary tract and Type II when there is an obstruction in the lower urinary tract.
- There are no known cause for Type I, it is proposed that there is a genetic component to Type I Reflux.

Why Should We Care About VUR?



- Urinating is a key mechanism to flush out bacteria from the urinary system.
- If urine is stagnant within the urinary system and bacteria travels back up to the kidney, it may cause an infection that may cause irreparable harm and lead to long term complications.

At risk population for VUR?

- It is also more common in infants and more frequent in female individuals than male.
- Those with congenital bladder outlet obstruction, posterior urethral valves, neurogenic bladder, dysfunctional voiding, and incomplete bladder emptying are more likely to have reflux.

How do VUR patients present?

- Many times patients are asymptomatic.
- Patients who have an active urinary tract infection may often present with vague and nonspecific symptoms.
- Caretakers and provider should be wary when
 - An infant presents with failure to thrive, vomiting, diarrhea, anorexia, and lethargy.
 - An older child presents with voiding problems or vague abdominal pain.
- A textbook physical exam for patients with VUR would reveal fever, flank tenderness, abdominal tenderness, or enlarged kidneys.

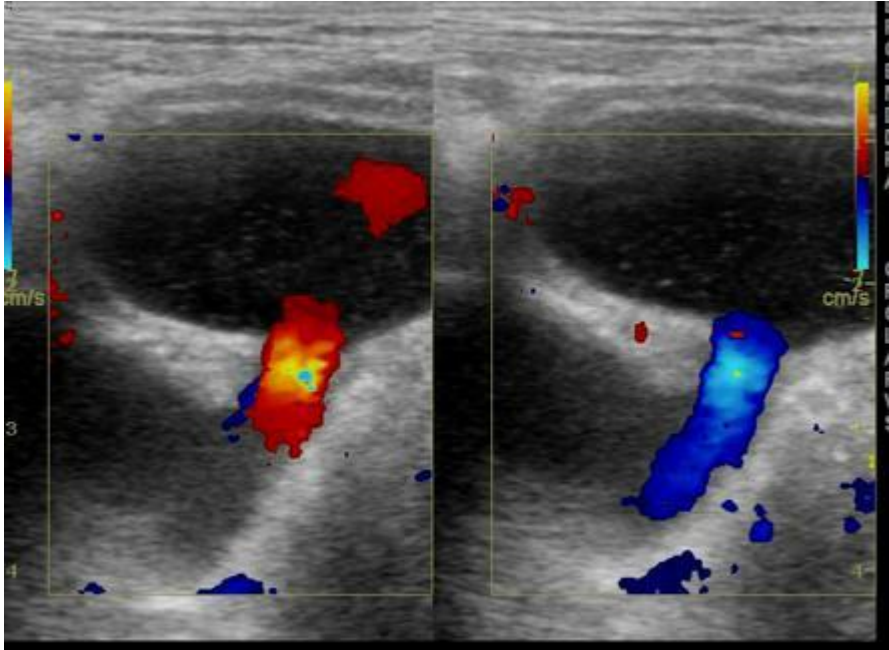
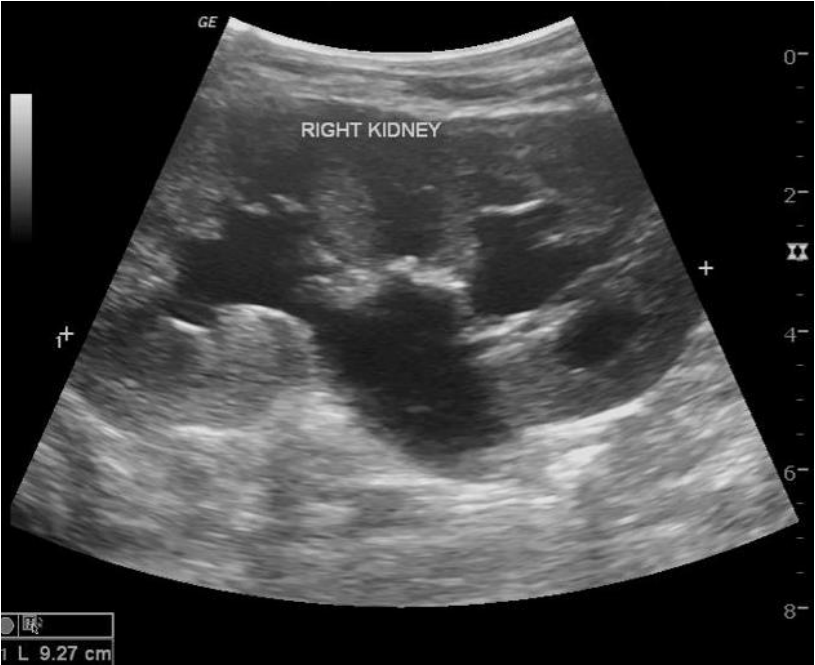
Diagnostic Imaging Gold Standard

Voiding Cystourethrogram



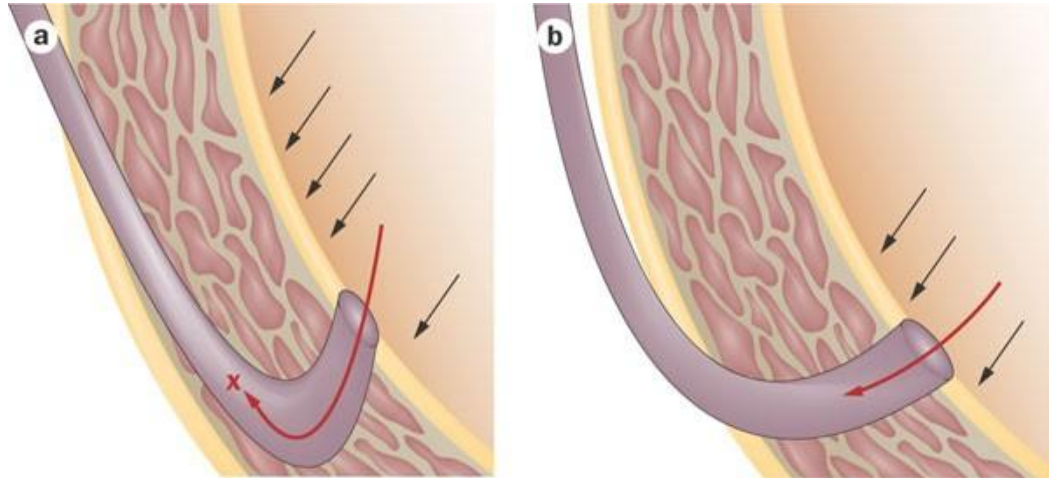
Diagnostic Imaging Alternative

Ultrasound of Kidney and Bladder



Treatment and Management

- Most VUR spontaneously resolve themselves.
- Patients with severe VUR may need long term antibiotic prophylactic therapy until surgical intervention.



References

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