



URETHRAL STRICTURE DISEASE

What is urethral stricture?

The urethra is a tube that carries urine from the bladder so it can be expelled from the body.

Usually the urethra is wide enough for urine to flow freely through it. When the urethra narrows, it can restrict urinary flow. This is known as a urethral stricture.

Urethral stricture is a medical condition that mainly affects men.

What are the causes of urethral stricture?

Urethral stricture involves constriction of the urethra. This is usually due to tissue inflammation or the presence of scar tissue. Scar tissue can be a result of many factors.

A straddle injury is a common type of trauma that can lead to urethral stricture. Examples of straddle injuries include falling on a bicycle bar or getting hit in the area close to the scrotum.

Other possible causes of urethral stricture include:

- pelvic fractures
- catheter insertion
- radiation
- surgery performed on the prostate/ through the urinary tube
- repetitive urinary tract infections
- sexually transmitted infections (STIs) gonorrhea or chlamydia

What are the risk factors for urethral stricture?

Some men have an elevated risk of developing urethral stricture, especially those who have:

- had one or more STIs
- had a recent catheter (a small, flexible tube inserted into the body to drain urine from the bladder) placement
- had urethritis (swelling and irritation in the urethra), possibly due to infection and enlarged prostate

What are the symptoms of urethral stricture?

Urethral stricture can cause numerous symptoms, ranging from mild to severe. Some of the signs of a urethral stricture include:

- Weak urine flow or reduction in the volume of urine
- Thin stream of urine
- Sudden frequent urges to urinate,
- Feeling of incomplete bladder emptying after urination,



Frequent starting and stopping urinary stream
Pain or burning during urination
Inability to control urination (incontinence)
Pain in the pelvic or lower abdominal area
Urethral discharge
Penile swelling and pain
Presence of blood in the semen or urine darkening of the urine
Inability to urinate (this is very serious and requires immediate medical attention)

How is urethral stricture diagnosed?

1.Reviewing your symptoms and medical history

You can self-report the symptoms mentioned above. Your doctor may also ask about past illnesses and medical procedures to determine whether one or more risk factors are present.

2.Performing a physical examination

A simple physical examination of the penis area can help the doctor identify the presence of a urinary stricture. For instance, the doctor will be able to readily observe redness (or urethral discharge) and find out if one or more areas are hard or swollen.

3.Conducting tests

To make a definite diagnosis of a urethral stricture, the doctor may also decide to perform one or more of the following tests:

1.measuring the rate of flow during urination (**UROFLOWMETRY**)

2.analyzing the physical and chemical properties of urine to determine if bacteria (or blood) are present(Urine Routine & Microscopy)

3. Retrograde Urethrography (**RGU**) and Micturation Cystourethrography (**MCU**) - these are dye studies using the help of an x-ray to demonstrate the location, length and calibre of stricture.

4. Cystoscopy: inserting a small tube with a camera into the body to view the inside of the bladder and urethra (the most direct way to check for stricture) measuring the size of the urethral opening

What are the treatment methods for urethral stricture?

Treatment depends on the severity of the condition.

Nonsurgical

The primary mode of treatment is to make the urethra wider using a medical instrument called a dilator. This is an outpatient procedure, meaning you won't have to spend the night at the hospital. A doctor will begin by passing a small wire through the urethra and into the bladder to begin to dilate it. Over time, larger dilators will gradually increase the width of the



urethra.

Surgery

Surgery is another option.

Endoscopic surgery- Cystoscopy + **VIU** (visual internal urethrotomy) is a minimally invasive procedure which cuts open the narrowing in the urinary tube using a sharp knife.

Open surgery- An open **urethroplasty** is an option for longer, more severe strictures. This procedure involves removing affected tissue and reconstructing the urethra. Results vary based on stricture size.

Urine flow diversion

In severe cases, a complete urinary diversion procedure may be necessary. This surgery permanently reroutes the flow of urine to an opening in the abdomen. It will require monthly followup and catheter change.

How can I prevent recurrence of urethral stricture?

Stricture is a disease which is known to recur.

It is important to followup regularly.

Methods employed to prevent recurrence include

1. Self calibration (patient himself passes a catheter to check patency of the lumen of the urinary tube)
2. Regular Urethral dilation (stretching the urinary tube serially to increase the lumen)
3. Regular uroflowmetry examination to look for decrease in flow.

What is the long-term outlook?

Many people have a good outcome after treatment for a urethral stricture. You may need future treatments as well if the stricture is the result of scar tissue.