Visiting the ER for your urological problems: When to go and what to expect

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Let's look at why you would go to the emergency room (ER) for a urological problem.

Each section is divided by:

- The problem;
- The symptoms (what you'll feel, see and what the doctor can see);
- The tests you may have in the ER; and
- The treatment.

Finding the cause of your emergency is the first step to finding solution just for you.

Kidney

I. Kidney stones

The problem: Stones that block the drainage tube from the kidney down to the bladder (or obstructing ureteral calculi) are the most common cause of severe back and side pain (or flank colic) seen in the ER. Renal colic is the name for the pain caused by passing a kidney stone. The kidneys play an important role in eliminating waste products from the body. These are usually dissolved in the urine. About one in 10 Canadians will develop a kidney stone sometime during their life. More men than women get kidney stones; children rarely get them.

Symptoms: Pain from a kidney stone is felt on the side where the kidney stone is located. Its exact location either in the kidney or in the ureter may change as the stone moves down the ureter toward the bladder (Figure 1). Renal colic will often start in the flank (between the ribs and hip) or lower back, but it can also be felt in the lower abdomen, groin, genitals or inner thigh. You may feel mild to severe cramping or stabbing pain which may lead you to the hospital.

The pain may increase and decrease in severity, coming and going with episodes of pain lasting 20 to 60 minutes. You may try to ease the pain by moving around and trying to find a comfortable position, but this rarely works. Nausea, vomiting and/or a frequent urge to urinate, which may be painful, often occur. You may also experience blood in the urine (hematuria) when you have kidney stones.



Figure I. A look at the ureters and where a kidney stone may lodge itself.

Tests: Your doctor may suspect renal colic because of the pain you describe and by simple blood and urine tests, and by imaging tests to get a detailed picture of your kidney, ureter and bladder (simple X-ray called a kidney/ureter/bladder [KUB] or computed tomography [CT] scan) to determine the size and location of the kidney stone. A stone-protocol CT scan, which uses less radiation than a normal CT scan, is common, although an ultrasound may also be used. Another rare test is the dye test (intravenous pyelogram [IVP]), which is another type of X-ray that takes pictures of the urinary tract after a dye is inserted. Many kidney stones are seen on a KUB X-ray – this is a useful test that allows your doctor to follow the progress of the stone through the ureter.

Treatment: The severity of your pain due to the kidney stone will often bring you to the ER. Once the doctor confirms the diagnosis, your pain can be controlled with oral painkillers (like acetaminophen with codeine) or intravenous medications, such as morphine. Anti-inflammatory medications (like indomethacin or diclofenac) in tablet or suppository form (in the rectum) may also be useful. Many kidney stones are small enough to pass out of your body on their own with the urine in a few days.

You can also wait for the stone to pass (also called expectant therapy). If you are taking this route, you will need pain relief, an antispasmodic agent and/or anti-inflammatory drugs, adequate hydration and antibiotics (if there are signs of a urinary infection). Drink plenty of water (2 to 3 litres per day); this will make you go to the bathroom and may help pass the stone. Your doctor may recommend a daily oral medication called an alpha-blocker (e.g., tamsolusin or Flomax) to relax your ureter muscles to make the stone passage easier.



Figure 2. A ureteric stent.

Depending on how sick you are and the size, number and location of the stones, your doctor may place a nephrostomy tube (external drainage tube into the kidney through the skin of the back) or an internal ureteral stent (internal drainage tube called a double J stent), with stone disintegration and/or removal of the stone, at the same time or later.

If your pain becomes hard to manage, if the stone becomes lodged and fails to pass, or if you have fever (greater than 38.5°C) or have the chills (which is a sign of infection), the situation becomes more urgent. In this case, your stone itself may not be dealt with because you are getting sicker. The doctor may place a ureteric stent or nephrostomy tube to relieve your pain, decompress the urinary system and allow the kidney to drain urine.

The ureteric stent (Figure 2) may cause blood in the urine, bladder discomfort (spasm), increased frequency and urgency of urination or flank (kidney) pain with urination or a full bladder due to back pressure. These symptoms can increase with activity, but resolve shortly after the stent is removed.

There are many ways to treat a stone causing renal colic. Treatment depends on your general health, as well as the type, size and location of the stone. Ultrasound shock waves can break a stone into smaller, more easily passed pieces. A stone trapped in the ureter can often be removed with the help of a small fiberoptic telescope passed through the urethra (urinary channel) without any incisions. More difficult stones may require surgery that includes a introducing a nephroscope (kidney telescope) through a small puncture through the skin over the kidney or a small incision. This is rare.

2. Kidney trauma

The problem: Although the kidneys are well-protected from injury because their location, damage can happen from blunt trauma (especially with children) or penetration injuries (like stab or gunshot). Almost 90% of kidney injuries result from blunt trauma. This is our focus.

What you'll feel and what the doctor may find: Blunt trauma happens because of a direct blow to the flank (back) or abdomen. In children, minimal obvious trauma (like snowboarding injury, hit by a softball, fall from play structure) can cause a kidney injury. In adults, a car accident is a common cause. Blood in the urine after a blunt injury requires a visit to the ER. Flank pain and bruising are signs of a kidney injury.

Tests: If there is blood in the urine, a significant drop in blood pressure, or if the doctor suspects injury, you will have a CT scan to get a picture of the kidney, a check for urinary leaks if there is a tear in the kidney or ureter or if there is bleeding from the kidney.

Treatment: Rarely is urgent surgery needed for blunt trauma. Your blood pressure will be monitored and you will be given pain medication and fluids. Your urine output will also be checked (which should become clear once bleeding from the kidney stops). Bed rest or limited movement is often recommended for the first few days after blunt injury. For penetrating trauma, surgery is almost always necessary.

Bladder

I.Acute urinary retention

The problem: The function of the bladder is to store urine until we are ready to urinate (emptying or voiding). When we suddenly cannot urinate or have difficulty doing so we have to visit the ER. The term for this is acute urinary retention (AUR). Your urine passage may be blocked due to:

- An enlarged prostate (in men as they get older, also called benign prostatic hyperplasia, BPH);
- A urinary tract infection;
- Medications (side effect of narcotics, over-the-counter cold preparations or sympathomimetic ephedrine derivatives, like Pseudafed, anticholinergics);
- Decreased mobility after surgery or constipation;
- A stricture in the urinary passage (scar tissue or narrowing);
- Neurological conditions (such as multiple sclerosis, herniated discs or Parkinson's disease);
- Diabetes; or
- Cancer (prostate or bladder).

What you'll feel and what the doctor may find: You will feel pain when you cannot empty your bladder, or even when a small amount of urine is emptied at a time.

Tests:

- An exam of your abdomen or a digital rectal examination (DRE) may reveal an enlarged bladder, full of urine.
- Many times your doctor will check your nervous system (also called a neurologic checkup) to rule out nerve injury as the cause.
- Your doctor will also take some blood and urine to test for infection.
- An ultrasound or bladder scan will give your doctor an estimate of the amount of urine in your bladder.

Treatment:

- The most common way to treat AUR is by placing a catheter (e.g., a Foley cathether) into the bladder. A catheter is a hollow tube, and is moved along the urinary channel (for men via the opening at the tip of the penis and for women the urethral opening located in the vulvar area).
- A lubrication jelly, often containing some anesthetic to decrease the discomfort of passing the catheter, is placed into the urinary passage; this is done via a blunt-tip applicator, not a needle.
- For men with an enlarged prostate, a special catheter with a tip like a hockey stick may be used to help get by the blockage caused by the prostate (Coude catheter).

Once the bladder is emptied, you should experience immediate relief of the pain. You will be monitored in the ER for a few hours (to check the amount of urine, to check kidney function with a blood test and to make sure you are getting enough fluids).

After your discharge from the hospital, you would make an appointment with a urologist for a followup. If a catheter cannot be placed due to blockage, a cystoscopy (using a fibre optic telescope) can be performed, allowing for a catheter to be placed with the help of a guidewire (no incisions needed), or a catheter can be placed through the skin of the low abdomen directly into the bladder (with a small incision or puncture through the skin).

To treat AUR once and for all, you may need long-term medications (like alpha blockers and other agents which shrink the prostate) or you may have to go through surgery to remove the obstructive prostate tissue located in the urinary channel.

Penis

I. Priapism

The problem: Priapism is as an erection lasting more than 4 hours that is not caused by sexual desire. It is a urological emergency; if untreated it can lead to:

- A lack of blood flow in the penis (or irreversible penile ischemia);
- Death of the tissue on the penis (or necrosis); or
- Scarring of tissue that expands and fills with blood during an erection (erectile dysfunction that may not respond to pills or injections).

Priapism is serious; you must go to the ER immediately. Any delays is seeing a doctor about this can lead to serious complications. At this time, there are no pills to treat priapism.

There are 2 types of priapism:

- 1. Ischemic priapism occurs when there is a lack of blood flow to the penis.
- 2. High flow priapism is a result of an injury or trauma and is not an urologic emergency.

Ischemic priapism happens in men of any age, including newborns. It peaks between the ages of 5 and 10, and 20 and 50 years.

Causes include:

- Sickle cell disease
- Self-injection of erectile dysfunction medication, trazadone and other psychotropic and recreational drugs (including alcohol and cocaine)
- Certain cancers

In half of all cases, there is no cause to the priapism. Sickle cell disease and leukemia are the most common causes of priapism in children.

Myth watch: It is extremely rare to get priapism by taking Viagra, Levitra, Cialis or Staxyn, unless you already have the other causes listed above.

Symptoms: Ischemic priapism is the most common type.

- Priapism is usually painful and does not stop after an orgasm.
- Pain may be delayed until 6 to 8 hours have elapsed.

If untreated, the result is increased lack of blood flow to the penis and lack of oxygen (or acidosis), with pain and inflammation, with subsequent death of the penis tissue, fibrosis (internal scarring) and erectile dysfunction.

Tests: There may be different causes of your priapism. Your doctor will perform the following to determine the exact cause of your priapism:

- Your doctor will take a complete history and physical exam at first. Your doctor will pay special attention to any medication you may be taking or any recreational drug use, as well as any sickle cell anemia.
- Your penis will be hard and painful; the head of your penis will be soft (soft glans) in cases of ischemic priapism.
- A blood test will show your complete blood count, electrolytes and indicate any sickle cell anemia.
- Your doctor will exam your urine (through a urinalysis) and may examine your urine for illicit drugs (or a urine toxicology test).
- You may get a needle into the side of your penis to get a blood sample to determine oxygen levels and confirm ischemic priapism.

• Alternatively, a colour duplex Doppler ultrasound may be used. This uses sound waves to assess the level of your blood flow. Unfortunately, many centres do not have this type of ultrasound.

Treatment: Treatment will tackle the main cause of your priapism (if the cause is found). Mainly, the doctor is focussed on relieving your pain, reversing the erection and preventing damage to the penis (which could lead to permanent erectile dysfunction – something can can happen months after your diagnosis).

- Before you agree to any treatment, you need to understand that about 50% of men have some form of erectile dysfunction after treatment (regardless of the type of treatment you choose). If your erection has lasted for more than one day, this chance goes up to 90%.
- Conservative treatment rarely works and is not recommended (there is no proof that pills, ice packs, exercise or cold showers work).
- Other treatments include:
 - needle aspiration of the corpora (suction removal of fluids);
 - injection of vasoconstrictive agents (to narrow your blood vessels so that more blood can flow in your penis); or
 - surgery.

How treatment works:

- A local anesthetic, also called a penile nerve block, is injected at the base of the penis (where it attaches to the body) before starting the priapism treatment.
- The first treatment your doctor will try is to inject medicine directly into your penis; this may irrigate and remove old hypoxic blood (or blood with no oxygen). The needle is usually placed into the side of the penis. The medicine most often used in Canada is called phenylephrine this acts like a "decongestant" for your penis and allows more blood to flow through it.
 - The medicine is injected, then there is a wait of 3-5 minutes, the blood from the shaft of the penis is removed; this pattern is repeated every 3-5 minutes until the erection is gone.
 - Your blood pressure will be checked this procedure.
 - Common side effects are pain in your penis, headache, increased blood pressure, bradycardia (slowing of the heart rate), palpitations and sweating.
- If you have sickle cell disease, the main focus will be on:
 - Relieving your pain (with an analgesia)
 - Increasing the oxygen in your penis (also called oxygenation)
 - Tranfusing your blood (or exchange transfusion)
 - Increasing your fluid intake (or hydration)

- Also, during each priapism episode, you will be given therapy on top of the other medicine to treat your other disorders that may have caused your priapism.
- If these treatments fail, you may need surgery.

Surgery: What to expect?

- The goal of surgery is prevent ischemia (lack of blood flow) and fibrosis (scarring) of the penis.
- After surgery, it is likely that you will experience partial or complete erectile dysfunction.
- Surgery for priapism involves creating a new path for the blood to drain from the penis (also called a fistula or shunt).
- Right after surgery, your penis may look partially to fully erect again because of swelling and increased blood flow (also called post-ischemic hyperemia). An ultrasound of your penis and a blood sample from your penis will ensure that fresh blood is flowing.

A note about high-flow priapism:

- If your erection is a little or not at all painful, your priapism happens because there is too much blood flowing in your penis. This causes your penis to get hard.
- Your erection may also be caused by an injury to perineum (the area between your anus and scrotum) or direct blow to your penis. In these cases, your priapism is rarely painful.
- Sometimes, the only symptom you have is a little hardness in your penis.
- Most of the time, men likely see a doctor much later for this.
- To confirm the diagnosis, colour Doppler ultrasound will show a high blood flow in your penis.

Treatment includes:

- Watchful waiting: which means your doctor will closely monitor you;
- Hormone therapy;
- Embolization: a way to plug the artery to reduce blood flow; or
- Open surgical ligation: a way to tie off the artery that is causing the massive blood flow.

High-flow priapism can be safely followed conservatively (meaning with watchful waiting) for months with the hope that the artery will close on its own.

2. Penile fracture

The problem: A penile fracture happens when your penis is injured during sex. The injury causes a hole (or fracture) in the wall of your erection (also called erection chamber) (Figure 3).

- The hole usually happens when your partner is on top; something goes wrong and you hear a "pop" sound, you feel a lot of pain and you have some bruising (or combination of all of these).
- This can also happen when you penetrate your partner from behind and you miss; this causes your penis to bend.
- Masturbation rarely causes a penile fracture.

Symptoms:

- Pain
- Swelling
- Bruising



Figure 3. A fractured penis; notice the black/blue bruising and the swelling.

• If your penis is an eggplant-colour or if there is blood your urine after the injury, you should go to the ER.

Tests: Your doctor will suspect a penile fracture when there is blood at the tip of your penis or blood in your urine (these also hint at a possible injury to your urethra as well).

- An ultrasound will pinpoint the site of the injury and will determine the type of surgery, if available.
- If there is even a suspicion of a fracture, your doctor will operate and repair the damage immediately.
- If the doctor suspects an injury to your urethra or if you cannot urinate, you will be given a retrograde urethrogram to check out any damaage (a catheter is placed in the tip of the penis and dye is injected into the urethra; your penis is then X-rayed to look for any leaks or tears). If there is a tear or leak, it will be repaired.

Treatment: Surgery is most successful when it is done soon after the injury.

- Your penile fracture may lead to erectile dysfunction or a deformed penis.
- The doctor may close the "fracture" or "burst" areas with a cut along the foreskin (also called a circumcision incision) to find the damaged areas; in some cases, you may have a straight-line cut at the bottom of your penis.

3. Circumcision complications (in children)

The problem: In newborns, circumcision is performed under local anesthesia and without stitches. Serious complications are rare, but local infection and bleeding may require a trip to the ER.

Symptoms: Bleeding is usually venous oozing, and may respond to local pressure. Swelling, drainage of pus, fever, or difficulty urinating may occur.

Tests: The doctor will review the baby's birth history and exam the baby. Blood and urine samples may be taken if the doctor suspects an infection.

Treatment:

- Pressure on the area.
- If the doctor suspects the bleeding is abnormal (beyond the average bleeding with a circumcision), then the baby will get a blood test and may be given vitamin K.
- If the baby's urinary tract is blocked from the healing or if there is scarring, the doctor may have to unblock the urinary opening (this is a small procedure).
- Infection, although rare, may lead to a blood infection and fever (also called neonatal sepsis); in this
 - In general, babies under a month old who have fever will be admitted to the hospital for a short course of intravenous (IV) antibiotics until blood cultures are negative.
- Older babies (who are otherwise well and feeding) may receive antibiotics if the doctor does not suspect a blood infection.

4. Foreskin problems

The problems:

A. One problem is when the foreskin tightens over the penis (Figure 4), which makes it hard to pull the foreskin back – this is also called phimosis (Figure 5).

• The condition slowly gets worse in middle-aged to older men. Men will come to the ER because they cannot go to the bathroom; their foreskin completely covers the penis.

Causes:

- Local trauma
- Infection (higher in men with poorly controlled diabetes)
- Poor hygiene
- Chemical irritation

In children, phimosis happens because of circumcision (due to insufficient tissue removal).



Figure 5. Phimosis: non-retractile foreskin.



Figure 4. An illustrated look at the penis, including the foreskin.

Special note: Infants normally have phimosis; by 3 years old, children usually are fine. Most (90%) of the phimosis is easily retracted; by adolescence most phimosis is gone.

Symptoms:

- Inability to urinate;
- Red and swollen foreskin with little to no visible opening; or
- In children, there may be blood in their urine or they may have a hard time urinating.

Tests:

- It may be hard to pull back the tender foreskin. The doctor may have to gently pull it back to examine you.
- Forced retraction may cause future adhesions and narrowing of the passages in the penis (or strictures).
- There are no diagnostic tests.

Treatment:

- When you cannot go to the bathroom, you must go to the ER and see a urologist.
- If your urine is not drained, the doctor may have to cut along the top of your foreskin.
- You will be followed up by a urologist; in some cases, you may need a circumcision.

B. Paraphimosis is the opposite of phimosis; this happens when the foreskin cannot be pulled over the head of the penis (Figure 6). If the retraction stays for a long time, you may not be able to drain your penis and it will swell.

Causes:

- Infection;
- Trauma;
- Masturbation; or
- Not returning the foreskin to its normal position during an medical exam.

Symptoms:

- Painful swollen and trapped foreskin.
- Symptoms can develop within hours.



Figure 6. Paraphimosis: nonreducible (return to normal position) foreskin.

Tests:

- History;
- · Physical exam; or
- X-rays may be needed if the doctor suspects there is a trapped foreign object.

Treatment:

- To successfully reduce the swelling in the foreskin, the doctor may apply pressure around the foreskin or may puncture it with a 21-gauge needle many times to drain the trapped fluid.
- This procedure is an urgent one.
- If the swelling is not reduced, your veins may be dangerously squeezed, the tissues in your penis may die (necrosis or gangrene).
- If these efforts do not reduce the swelling, you may need surgery (dorsal slit procedure or urgent circumcision).

5. Penile trauma (including animal bites)

Accidental injury to the penis usually happens because of an animal attack. The doctor will:

- Clean the wound;
- Irrigate and close the tear; or
- Consider medication to protect against rabies.

You may have to see a urologic plastic surgeon to care for the penile skin that is partially or completely detached.

Watch out for toddlers:

- Toddlers are also prone to injury to their penis or scrotum from a falling toilet seat while potty training and or by a zipper.
- Parents should not attempt to pull on the zipper because tissue may be torn even more.
- In the ER, the zipper is released by cutting the median bar of the zipper mechanism.

Amputation:

- If your penis is amputated, place the cut off part into a clean (preferably sterile) bag placed on ice for transport.
- The doctor can reattach the penis up to 18 to 24 hours after injury.
- Few places have the technical capability to perform a reimplantation of urethra, blood vessels, erection chambers, nerves and skin; it is likely that you will need to be taken to a specialized hospital.

Scrotum

- Pain in your scrotum can happen when you have an inguinal hernia when soft tissue (usually your intestine) bulges through your lower abdominal wall.
- This is a emergency that may also present as an acute scrotum, especially if this happens in the first year of life.
- Significant overlap exists in the clinical signs and symptoms for scrotal pain. You may need an imaging test to identify the problem.

Finding the cause of severe scrotal pain with a physical exam is hard to do; you are in a lot of pain and the exam itself causes you more pain.

- If your scrotum is painful and swollen, you should go to the ER.
- This type of pain is common in men of any age, although it occurs most frequently in young adults and middle-aged men.
- In general, scrotal pain that begins suddenly and severely is testicular torsion (until proven otherwise). If you have scrotal pain, you will also likely experience urinary symptoms (like frequent urination, painful urination).

Types of problems:

- Testicular torsion (the most common), or twisting of the testicle that causing the blood flow to stop and the testicle to "die" from lack of circulation (Figure 7);
- Acute severe infections of the testicles or epididymis;
- Trauma causing the testicle to burst or rupture; or
- Fournier's gangrene (a life-threatening infection).

I. Testicular torsion

The problem: Testicular torsion is a true urologic emergency, in which time is of the essence to prevent possible testicular loss.

- If the history and exam suggest testicular torsion, surgical consultation and plans for immediate exploration should be initiated without delay. In 90% of cases, testicles can be saved if surgery is done within 6 hours of the start of your pain.
- Testicular torsion peaks in the pubertal and newborn periods (1 in 4000 men get it in their lifetime).

Symptoms:

- Sudden pain in your testicles;
- Nausea; and
- Vomiting.



Figure 7. Testicular torsion.

Tests:

- If you have had testicular torsion before, you don't need tests to confirm the diagnosis.
- If not, you will likely need a colour flow Doppler ultrasonography. This will see if you have testicular torsion and also find a cause for your scrotal pain.
- To see if there is any blood flow to the your testicle, you may be given a **radionuclide scan**. You either swallow the radionuclide or inject it in your arm. The gamma rays produced by the radionuclide will assess your blood levels.
- If your doctor suspects you have an infection, you may have to give a urine sample.

Myth watch:

• Prehn's sign, or relief of pain with scrotal elevation, was historically taught as a way to differentiate epididymitis (pain relief with scrotal elevation) from testicular torsion. This "test" is totally unreliable and has not been proven.

Appendage torsion:

- If you have appendage torsion (a small piece of tissue on the outside of the testicle), this is not a surgical emergency.
- Appendage torsion mostly occurs in children between eight and 11 years old. It is treated with pain relief medications, possibly nonsteroidal anti-inflammatory agents, and limiting activity.
- It takes about one to two weeks for the pain to subside.

Treatment:

- Surgery to untwist the testicle and to fasten both testicles in place (or pexing) to prevent the twisting from happening again. This surgery is called orchidopexy.
- In the ER, manually untwisting the testicle (or manual destorsion) by the ER doctor may allow your blood to flow again in the testicle (or reperfusion).
 - The blood flow to your testicle can be obstructed with a little twist, so it is important that your doctor explore the outcome surgically before a successful manual detorsion.
 - You may need regular follow-ups to check the testicles after surgery; your primary doctor or urologist may do the follow-up.

2. Acute epididymitis and orchitis

Acute epididymitis is when the epididymis suddenly becomes inflammed. Your epididymis is the coiled tube on the back of your testicle.

Symptoms include:

- Sudden pain in your testicle
- Swelling of the testicle
- Fever
- Abdominal or pelvic pain
- Nausea
- Vomiting

Possible causes:

- Often there is no known cause of the inflammation it is sometimes caused by an infection.
- The infection may be acquired sexually (in sexually active adults) or from a urinary infection (especially in young boys and elderly men).

It's hard to distinguish acute epididymitis from acute orchitis.

Acute orchitis is the swelling of one or both testes. Infection from the bladder, urethra or prostate can lead to the swelling.

Possible causes:

- · Bladder or kidney infections
- Underlying abnormalities of the urinary system in infants and boys
- A sexually transmitted infection in sexually active men
- An enlarged prostate in older men leading to difficulties in emptying their bladder emptying
- Urinary or prostate infection

Acute epididymitis and acute orchitis peak between ages 19 and 35.

Symptoms include:

- Sudden onset severe pain in the scrotum
- Swelling
- Urinary symptoms (painful urination and urgency)
- Fever
- Nausea
- Vomiting

Tests: The diagnosis of acute orchitis or epididymitis can often be made based on:

- Noted symptoms of scrotal pain
- Your physical exam
- Urine tests or urethral swabs
- Ultrasound of the scrotum: to distinguish it from testicular torsion or other possible causes

Treatment:

- If acute orchitis or epididymitis due to bacterial infection is suspected, a course of antibiotics should relieve your symptoms and cure you with a week.
 - Swelling may often take several weeks to resolve.
 - Anti-inflammatory medications, such as ibuprofen (e.g., Advil™) and painkillers, such as acetaminophen (e.g., Tylenol™) may decrease your pain and fever.
- Bed rest and use of a scrotal support may help.
- Most patients are managed out of the hospital.
- Surgery is rarely needed.
- If your infection gets in to your bloodstream, you may need intravenous (IV) antibiotics and you may need to stay at the hospital.
- If your case is severe, you will need IV pain medication and you'll need to be closely monitored.
- If your infection is due to sexual activity, you should tell your partner to get treated as well.

3. Blunt scrotal trauma

The problem: A sign of a blunt scrotal trauma is a painful, tender, scrotal mass resulting from the accumulation of blood (or hematocele).

Blunt force injury may cause your testicle to bruise (testicular contusion) or may cause a break in the covering of your testicle (or the tunica albuginea).

Tests:

- Ultrasonography assesses the blood flow and anatomic integrity of your scrotum.
- CT imaging is also often used to uncover other injuries if there is concurrent pelvic trauma.

Causes:

- Athletic injuries
- Straddle injuries
- Falls
- Major trauma

Treatment:

- You will need surgery to repair your scrotum if:
 - The covering of your testicle (tunica albuginea) is broken; or if
 - You have a large accumulation of blood in your scrotum (hematocele).
 - Any delay in the diagnosis and treatment can lead to an increased risk of losing your testicle.
 - All but the most superficial penetrating scrotal injuries will require specialty consultation for possible surgery.

4. Fournier's gangrene

Fournier's gangrene is a type of infection that kills your tissue. It usually affects your perineum (the area between your anus and scrotum).

Fournier's gangrene is a rare but life-threatening infection that is extremely challenging to treat. Despite the fact that antibiotic therapy combined with surgery and intensive care surveillance are standard treatment, death rates are high.

Symptoms:

- Nausea
- Vomiting
- Chills
- Fever
- Confusion
- Scrotal pain

Important considerations:

- Fournier's gangrene should be considered in the elderly, diabetic or otherwise immunecompromised males.
- Early surgical consultation and administration of broad-spectrum antibiotics is indicated in all suspected patients.
- Surgical removal of the gangrenous tissues and intensive care support is the definitive treatment.
- CT scans may help assess the degree of the infection (it may affect your abdominal wall, buttocks, armpits or thighs).
- Any delays in diagnosis and surgery can be life threatening, so imaging should not delay surgical consultation.

Prostate

I. Prostatitis

The problem: Prostatitis is the inflammation and/or infection of the prostate and sometimes the area around it.

- Acute bacterial prostatitis, the least common type, is a severe urinary tract infection associated with fevers and chills. If this is what you have, you have to go to the ER immediately.
- It may affect any age group.
- Although many prostate infections may be nonbacterial, anti-inflammatory agents and selected antibiotics are often prescribed.
- Some experts also subscribe medication (usually alpha-blockers) to get rid of any blockages of your urinary outlet.

The problem:

- Fever
- Chills
- Painful or severe burning during urination
- The inability to empty your bladder
- Pain in your lower back, abdomen or pelvic area

You are at risk if:

- You have had a catheter or other instrument inserted into your urethra;
- You have an abnormality or blockage in your urinary tract; or
- You recently had a bladder infection.

Tests:

- Urine sample
- Bloodwork
- Physical exam (may include a digital rectal examination [DRE] the finger exam of the prostate).
 - The DRE is a simple exam in which your doctor inserts a lubricated, gloved finger into your rectum. The prostate is located just in front of the rectum and below the bladder.
 - The DRE allows the doctor to easily press and feel the prostate. It is extremely
 important to make sure the symptoms are not from other conditions, such as
 bacterial or urethral infections, an enlarged prostate or rarely cancer.

Treatment:

Antibiotics, usually for a minimum of 14 days and may be continued up to four weeks.

If the infection has spread to the blood or if your symptoms are hard to manage at home, you may need to go to the hospital and get intravenous (IV) antibiotics.

- A urinary catheter is sometimes needed if you have a hard time urinating.
- You must take the complete dose of your antibiotics and not stop them as soon as your symptoms end (if you do so, you are at a high risk of getting the infection again).