

Urinary Obstruction in Dogs

SCROTAL Urethrostomy

Associated Terms:

Urethral Calculi, Urethral Stones, Cystotomy, Scrotal Urethrostomy

Your pet has had a urethrostomy performed to create a new, permanent opening in the urethra & remove abnormal tissues or stones. This procedure creates an opening in the urethra above & usually larger than the normal opening; the remaining length of “unused” urethra may or may not have been removed. The urethra heals very rapidly, but can also heal with excessive scarring & tissue formation (called granulation tissue). It is important to prevent your pet from traumatizing (i.e. excessive licking/chewing) the new urethral opening during the healing phase to reduce the chance of these complications. After urethral surgery, the inflammation created by the incisions & manipulation will make your pet feel like he/she has to urinate frequently; this will subside over the next week or so. Once the new opening has matured, in ~4-6 weeks, complication are rare.

OVERVIEW

The urethra is the tube that carries urine from the bladder out of the body. In the male dog, it passes along the back side of the dog & between the rear legs. Within the penis, the urethra lies within a trough of bone, the os penis & becomes narrower. Calculi (stones) that develop within the urinary tract will often become stuck within the urethra behind this bone, blocking the urethra. The urethra can also be blocked if the bone is fractured or if the dog develops a tumor of the penis. Scar tissue can also cause partial blockage.

SIGNS/SYMPTOMS

Clinical signs depend on the severity of the blockage.

Dogs that have a partial obstruction may:

- urinate small amounts frequently
- take a long time urinating
- strain to urinate
- have blood in the urine
- urinate in drips instead of a strong stream
- urinate in inappropriate places (on the carpet or on their bedding)

If the urethra is completely blocked, your dog will strain without producing any urine.

He/she will be in pain & be lethargic, lose their appetite & possibly start vomiting. An overly large urinary bladder will be easily felt in the back half of the belly. (Caution: it may be painful when touched). The urinary bladder may rupture & spill urine into the dog's abdomen with complete obstruction. Dogs with total urethral obstruction will die within days if the obstruction is NOT relieved. Your pet should be seen by a veterinarian immediately if he/she is unable to urinate.

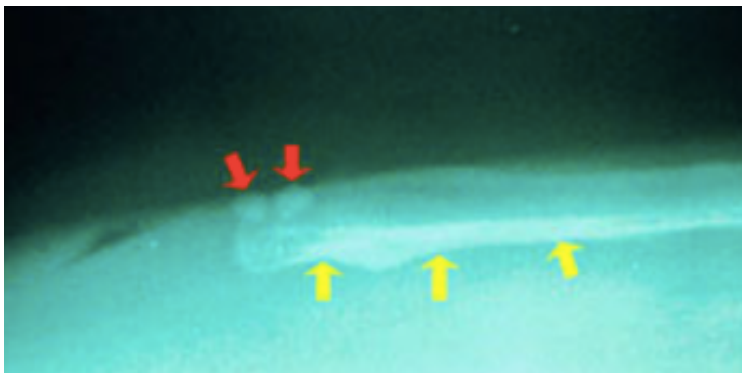
Urinary tract calculi are the most common cause of urethral obstruction in dogs, anything that causes stone formation will increase the risk of urethral blockage. For example, Yorkshire Terriers & Schnauzers with liver shunts ([portosystemic shunts](#)) & Dalmatian dogs are prone to forming urate calculi. Kidney, bladder & prostate infections can increase the risk of struvite calculi formation.

DIAGNOSTICS

Diagnosis of obstruction is usually based on an inability to advance a urethral catheter into the bladder. Your primary care veterinarian may feel the catheter pass over the calculi in dogs that are partially obstructed. X-rays of the dog may show small stones within the bladder &/or urethra. Your veterinarian can inject contrast material into a urethral catheter during x-rays to see if there is any narrowing of the urethra.



Abdominal radiographs revealed uroliths in the bladder & the urethra.



Abdominal radiographs revealed 2 uroliths stuck behind the os penis within the urethra.

Ultrasound evaluation may be recommended to assess the bladder for tumors, blood clots, stones that do NOT show up on X-ray, as well as to evaluate the other parts of the urinary tract (kidneys & ureters) & prostate gland in male dogs. Blood work is evaluated to determine the severity of the dog's illness.

Kidney function may be temporarily damaged in dogs with urinary tract blockage.

Potassium, which is normally removed from the body through the urine, can also be very high & can cause heart problems, so an electrocardiogram (ECG) is often performed. The urine will be checked for crystals, which may help to determine the type of stone present & for evidence of infection & may be submitted for culture.

TREATMENT

If the obstruction is caused by urinary tract calculi, your veterinarian will try to flush the stones back into the bladder, where they can either be removed surgically, dissolved with medical management (depending on the type), or broken up with lithotripsy (smashing of stones with ultrasonic waves or lasers). If your dog is very sick, surgery may be delayed & a urinary catheter left in the urinary tract to drain urine from the bladder for a day or two, until medical conditions have improved & your pet is stable for general anesthesia & surgery.

To remove stones from the bladder surgically, a cystotomy procedure is performed.

In this procedure, the dog is under general anesthesia. The bladder is accessed through a small abdominal incision. Then the bladder is opened, stones are removed & the urinary tract is flushed thoroughly to make sure no stones are left behind. If stones in the urethra cannot be flushed into the bladder for removal, a separate incision into the urethra may be necessary. Stones removed at surgery are submitted for chemical analysis & in some cases, for culture as well. Biopsy of any abnormal bladder tissue may be collected as well.



Post-Surgery of a dog with a scrotal urethrostomy.

Dogs which have a urethral obstruction that cannot be unblocked, have a tumor of the penis, or are recurrent stone formers may require surgery to form a new permanent opening to the urethra, called a scrotal urethrostomy. Scrotal urethrostomies may be required because calculi in the urethra may become trapped in scar tissue & therefore cannot be removed. A scrotal urethrostomy allows urine to exit behind the os penis where the urethra is wider. An opening is created that small stones may pass through. Patients with a scrotal urethrostomy may still get urinary obstruction by very large stones in the bladder or upper urethra. For most dogs having a scrotal urethrostomy, the penis is left in place, so your male dog will look the same when he is walking down the street. However, he will urinate from the new opening in the location where his scrotum used to be. Because the surgery site is in the area of the scrotum, **dogs are castrated (aka neutered) during the procedure.**

MONITORING

Please keep your pet in a comfortable, safe, indoor location without free access to stairs for the next 24 hours as he/she recovers from anesthesia & surgery.

Your pet may be groggy for the next few days. He or she may whine or appear more anxious than usual; this may indicate pain/discomfort or side-effects of the medications.

Monitor appetite & attitude. I both do NOT steadily improve over the next 2-3 days, please call your primary care veterinary team or return for progress evaluation & problem-solving.

You can expect your pet to have a bowel movement w/in 5 days. Some animals take longer than others depending on when they last ate prior to surgery & when they started eating after surgery. It may be abnormal in color & consistency for 2-3 days.

Please confirm that your pet has urinated w/in 24 hours of returning home. If he/she does NOT, or you notice any problems related to urination, please contact your veterinary care team.

Closely supervise your pet's movements over the first few days when he/she will be groggy from anesthetics & pain medications. Limit activities to necessary events only (on leash/out to go to the bathroom; access to food/water).

Expect your pet to have urgency to urinate frequently, a tendency to strain to urinate & to have blood-tinged urine for 1-2 weeks. Please allow frequent access their routine "bathroom" location to urinate.

Please look at the incision at least TWICE DAILY. It will look very red & there may be blood clots or crusts on the incision; do NOT clean or disturb the incision. The newly exposed urethra needs time to adjust to being opened & exposed; the redness will subside. The size of the new opening will shrink to 1/3 to 1/2 of its immediate post-surgical size over the next 4-6 weeks.

PROBLEMS to call your VET about:

- gapping of the incision or tissue protruding from incision;
- discharge (other than small amount of crusting);
- bruising & swelling that extends down the back legs & groin;
- inability to pass urine over a 12 hour period.

****Please call & return for a progress exam immediately (or go to an emergency hospital if overnight or weekends) if you notice these problems. They may indicate urine leakage under the incision; the earlier we catch leaking, the easier it is to treat this potentially life-threatening complication.****

If urine is collecting not he skin or fur around the new opening during urination, you may apply a thin film of ointment around the incision to prevent skin irritation from the urine (i.e. Desitin ointment, A&D ointment, Neosporin ointment, vaseline). Do NOT apply to incision. As the incision heals, urination will be better controlled & this will be less of a problem.

MEDICATIONS

It is likely that your have been prescribed one or more medications (given by mouth = PO) for your pet over the first 2 weeks of recovery. During the discharge appointment or shortly thereafter, please make sure you understand the following:

- What each Rx is being used to treat
- What side-effects may develop &
- Weather or not the Rx should be refilled & continued.

AFTERCARE & OUTCOME

Dogs will require several weeks of restricted activity after an abdominal procedure. After cystotomy, the dog's bladder will be slightly smaller for a few weeks because of the sutures & he will likely have to urinate more often. They may have a sense of urgency to urinate & accidents may occur.

Blood tinged urine is common.

(Active dripping of frank blood is NOT normal & should prompt you to call your vet).

The e-collar is left on for at least 14 days until the site is healed to prevent licking & chewing.

Your dog will likely come home with oral pain medication. If a bladder infection is present, antibiotics will be prescribed.

Calculi are sent for analysis to determine whether special diets or medications are needed.

The tissue around the urethra has an excellent blood supply & dogs may have bleeding for several days a scrotal urethrostomy. Excitement or trauma to the area from licking can increase the risk of bleeding, so dogs must wear Elizabethan collars & may require sedation for several days to reduce the chance of bleeding.

Complications of urinary obstruction include: tears in the urethra or bladder resulting in urine leakage, bladder dysfunction, incontinence, or scarring in the urethra that can cause recurrence of the obstruction. Postoperative complications after cystotomy include temporary bloody urine, urine leakage at the suture line of the bladder or, hernia formation at the abdominal incision & infection. Complications after scrotal urethrostomy include bleeding (in the first few days after surgery), irritation of the skin from urine, scarring/narrowing of the opening that can cause obstruction, irritation, urine spraying on the legs & infection.

Recurrence of urethral obstruction by calculi is prevented by reducing the factors that cause stone formation. If your dog is a stone former, you will need to follow your veterinarian's diet & medication recommendations closely & have your dog rechecked as needed to make sure crystal formation is being controlled.

Prognosis is excellent for dogs that undergo cystotomy with or without scrotal urethrostomy for urethral blockage, as long as the dog has NOT suffered serious kidney or toxic damage from prolonged obstruction.

TEST PENDING

If there were any stones removed, they will be submitted for stone analysis of their composition. Specific dietary modifications & therapy recommendations will be determined from this result. Your vet will contact with stone analysis result in 2-4 weeks & will make any treatment changes as needed.

If there were any biopsy or urine culture & sensitivity samples taken or submitted & the results should be available in 1-2 weeks.

PROGRESS EXAMS

Please return to your primary vet in 10-14 days for a progress exam. Healing of the new urethral opening will be evaluated, sutures (if present) will be removed & any questions you have or tests needing follow-up will be addressed.

****If you think your pet will NOT allow sutures to be removed from this very sensitive location, please ask your primary vet a week before your progress exam to pick up oral tranquilizer/sedatives to make the visit less stressful for your pet, your vet & yourself.**

DIET

If urinary stones were removed. Until stone analysis results are returned, please follow the general recommendations:

- Encourage water consumption. Provide easy access to fresh water daily. Add water to food daily
- Avoid any dietary supplements (i.e. vitamins or edible treats (biscuits rawhide)).

RESTRICTIONS

Avoid any rigorous activity for a minimal of 2 weeks; no running, jumping, playing or anything that feels like “exercise.” For dogs, short, leashed walks around the yard to urinate/defecate is fine. Walking around one level of the house is fine. Prevent all pets from jumping up & down from furniture, etc. A bad landing or an awkward take-off can result in serious tearing or injury to the surgical site.

For dogs, please use a short (<4-6 feet), hand-held leash when outside to urinate/defecate. Confine your pet to a small area/room/rate when unattended. Please do NOT allow your pet to run, jump or play during this restriction period.

LONG-TERM LIFESTYLE

Pets with a permanent urethrostomy rarely have long term difficult with urination. Sometimes male dogs may soil the inside of their legs when urinating if their stream is directed poorly Pay close attention to the area around the new opening trimmed close to prevent matting & soiling. A small electric trimmer (like those used to trim mustaches & beards) can be helpful; trim every 2-3 months as need to prevent problems.

Excessive scarring or “stricture” may develop many months after surgery & require further evaluation & treatment. If you not smaller than normal pool of urine, a weak urine stream or excessive staring to urinate, please call your primary vet for further evaluation .

Because the new urethrostomy is bypassing normal urethra that usually acts as a barrier to bacteria, pets with permanent urethrostomy are at higher risk for bladder infections. Your primary vet may recommended routine urine testing depending on your pet’s situation. Signs to look for that suggest bladder infection include: increased frequency of urination, an urgency to urinate, staring to urinate (i.e. squatting longer than usual), blood in the urine, excessive licking of the new urethral opening.

If you have any questions, please feel free to ask your primary veterinarian &/or veterinary surgeon.

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