perplexity

Urine reflux to the epididymis

Symptoms suggesting urine has irritated or refluxed into the epididymis ("chemical epididymitis") include:

- Gradual, usually one-sided pain or aching behind or beside a testicle
- Epididymal tenderness or swelling, often relieved somewhat by elevating the scrotum
- Burning with urination, urinary frequency, or urgency
- Pain with ejaculation
- Lower abdominal, groin, or flank discomfort
- In more significant inflammation: scrotal warmth/redness, fever/chills, enlarged groin lymph nodes, or blood in semen [1] [2] [3]

Reflux is more likely with bladder-outlet obstruction, urethral stricture, very high voiding pressures, or forceful straining. [4] [1]

Pelvic-floor tension and testicular pain

The pelvic-floor muscles, pelvic nerves, and spermatic-cord/inguinal nerves share overlapping nerve pathways. Chronic pelvic-floor overactivity or myofascial trigger points can irritate or refer pain along the **pudendal, genitofemoral, ilioinguinal, or spermatic nerves**, so the brain may perceive it as testicular pain even though the testicle itself is normal. [5] [6] [4]

Typical clues include pain that varies with sitting, stress, bowel movements, sexual activity, or pelvic-muscle squeezing; associated pelvic ache, perineal pressure, painful ejaculation, urinary hesitancy, or a feeling of tightness. A rectal exam and pelvic-floor assessment can identify tight, tender pelvic-floor muscles. [7] [4] [5]

Tests for chronic retention pain

A clinician would usually evaluate:

- **Post-void residual (PVR) ultrasound:** measures urine left after voiding; a key test for retention.
- **Urinalysis and urine culture:** checks for infection, blood, and bacteria.
- **STI testing:** first-void urine NAAT for chlamydia/gonorrhea, and sometimes mycoplasma, when sexually transmitted epididymitis is possible. [8]
- **Scrotal Doppler ultrasound:** assesses epididymal swelling, infection, hydrocele, varicocele, masses, and—critically—testicular blood flow if torsion is possible. [3] [9]

- **Bladder/renal ultrasound:** assesses bladder wall thickening, diverticula, stones, hydronephrosis, and residual urine.
- **Uroflowmetry and urodynamics:** measure flow rate and bladder pressures; useful when obstruction, high-pressure retention, or neurogenic bladder is suspected.
- **Cystoscopy:** considers urethral stricture, prostate enlargement, bladder-neck obstruction, stones, or lesions.
- **Pelvic-floor assessment:** history, external/internal muscle examination, and sometimes surface EMG to evaluate overactivity or poor coordination. [5] [7]

Can chemical epididymitis become infected?

Yes. Chemical epididymitis starts as sterile inflammation from urine irritating the epididymis, but the irritated tissue and any underlying urinary stasis/obstruction can make bacterial infection easier. Infection can then spread from the epididymis to the testicle, causing **epididymo-orchitis**. [10] [1] [3]

Warning signs of bacterial involvement include fever or chills, worsening or spreading pain, marked swelling/redness, purulent penile discharge, vomiting, or systemic illness. Urine culture and STI testing help distinguish sterile irritation from infection. [1] [3] [8]

When scrotal pain after catheterization is urgent

Go to the **emergency department immediately** for:

- **Sudden, severe one-sided testicular pain**, especially if it began abruptly or woke you from sleep
- A **high-riding or horizontally lying testicle**, hard/swollen testicle, or absent cremasteric reflex
- Nausea or vomiting with testicular pain
- Pain not relieved by rest, support, or simple analgesia
- Fever, chills, rapidly worsening swelling/redness, or feeling severely unwell
- Inability to urinate, worsening retention, heavy bleeding, or new severe lower-abdominal pain after catheterization [9] [11] [12]

Testicular torsion is a surgical emergency; testicular salvage is about 90–100% when corrected within 6 hours but falls to about 10% at 12–24 hours. Doppler ultrasound is the usual diagnostic test, but surgery should not be delayed if torsion is strongly suspected. [9]

For **gradual** pain over hours to days with urinary burning, frequency, or epididymal tenderness, epididymitis is more likely—but it still needs prompt same-day medical assessment, urinalysis/culture, STI testing when relevant, and often scrotal ultrasound. [2] [3] [8]

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1. https://reverehealth.com/live-better/what-is-epididymitis/
2. https://accessmedicine.mhmedical.com/content.aspx?bookid=3629&sectionid=305088499

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4. https://bodyharmonypt.com/physical-therapy-for-scrotal-pain/
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