

Dysuria

Definition / Supporting Information

Dysuria is discomfort (particularly pain or burning) when passing urine. This may be described by children who can verbalise their symptoms or may be noted by parents who see pre-verbal children in pain when they presume them to be weeing in their nappy.

Keywords / also known as: painful urination, urination difficulties, urinary tract infection (UTI)

Essential History

Ask about:

- Duration of dysuria
- Frequency / Urgency (if toilet trained)
- Wetting when previously dry / enuresis [[NICE quality standard QS70](#)]
- Offensive urine
- Constipation
- History / family history of urinary tract infection (UTI) / renal disease (including renal stones)
- Antenatal renal tract anomalies
 - Investigations undertaken (antenatal and postnatal)
- Vaginal discharge
- History of insertion of foreign body
- Inflamed genitalia
- History of eczema
- Toileting history
 - Toilet training milestones and toileting habits
- Local trauma
- Use of irritants
 - Bubble bath
 - Detergents
 - Perfumed soaps

'Red Flag' Symptoms and Signs

Ask about:

- Haematuria

- Fever
 - Consider pyelonephritis
- Loin / abdominal pain
 - Consider pyelonephritis
- Vomiting
 - Consider pyelonephritis
- Incontinence (see Enuresis)
- Gritty urine
 - Consider renal stones
- Sexual activity
 - Consider sexual abuse (see Child maltreatment: when to suspect maltreatment in under 18s [[NICE clinical guideline CG89](#)])
- Conjunctivitis / oral lesions / joint pains

Look for:

- Enlarged kidneys or distended bladder
- Labial adhesions
- Genital vesicles / ulcerations
- Signs of perineal trauma / physical injury
 - Consider sexual abuse (see Child maltreatment: when to suspect maltreatment in under 18s [[NICE clinical guideline CG89, section 1.1.21](#)])
- Balanitis / phimosis
- Signs of thrush
- Rash / conjunctivitis
- Midline defects in the lower back
- Abnormal lower limb reflexes

Differential Diagnosis

- UTI (see Child maltreatment: when to suspect maltreatment in under 18s [Urinary Tract Infection in under 16s: diagnosis and management](#) [[NICE clinical guideline CG54](#)])
- Urethritis due to:
 - Infection
 - Trauma
 - Allergy
 - Foreign body
- Irritants and trauma due to:
 - Bubble baths
 - Detergents
 - Perfumed soaps

- Sexual activity or abuse, including Female genital mutilation (FGM) (see Child maltreatment: when to suspect maltreatment in under 18s [[NICE clinical guideline CG89](#)])
- Masturbation
- Vulvovaginitis due to:
 - Poor hygiene
 - Allergy
 - Infection (eg, group A *Streptococcus*, *Shigella*, *Candida albicans*)
 - Chronic constipation
- Urethral prolapse (girls)
- Overactive bladder / dysfunctional voiding
 - Occasionally, neuropathic disorders such as spina bifida, transverse myelitis, or spinal cord trauma
 - Non-neuropathic disorders
- Pelvic inflammatory disease (in sexually active adolescent girls)
- Balanitis / balanoposthitis
- Threadworms
 - Anal pruritus is the symptom, but young children may incorrectly describe this as dysuria.
- Labial adhesions in prepubertal girls
- Lichen sclerosus in prepubertal girls
- Urethral strictures due to:
 - Urethral instrumentation
 - Trauma
 - Inflammation (may be congenital)
- Meatal stenosis (circumcised boys)
- Renal stones
- Systemic causes
 - Stevens–Johnson syndrome
 - Behçet’s syndrome
 - Reiter’s syndrome
 - Varicella

Investigations

To be undertaken by non-specialist practitioners (eg, GP Team) or specialist practitioners (eg, Emergency Department / General Paediatric Team(s)):

- Urine dipstick / culture and microscopy for suspected UTI (see Child maltreatment: when to suspect maltreatment in under 18s Urinary Tract Infection un under 16s: diagnosis and management [[NICE clinical guideline CG54](#)])

- External vaginal swab if thrush or bacterial vaginosis is suspected (see Vaginal Discharge)
- Urethral smear and urine dipstick / culture and microscopy if urethritis is suspected
 - eg, self-taken introital swabs (nucleic acid amplification (NAAT) testing for chlamydia and gonorrhoea (or charcoal medium for gonorrhoea))
- For imaging following UTI see Urinary tract infection in under 16s: diagnosis and management [[NICE clinical guideline CG54, section 1.3](#)]

Treatment Approach

To be undertaken by non-specialist practitioners (eg, GP Team) or specialist practitioners (eg, Emergency Department / General Paediatric Team(s)):

UTI

- For cystitis, in children over 3 months of age, treat with oral antibiotics (eg, trimethoprim, nitrofurantoin) for 3 days
- For acute pyelonephritis, treat with oral antibiotics for 7–10 days
 - Use of an oral antibiotic with low resistance patterns is recommended (eg, a cephalosporin or co-amoxiclav)
- See Urinary tract infection in under 16s: diagnosis and management [[NICE clinical guideline CG54, section 1.2](#)]

Non-specific vaginitis (see also Vaginal Discharge)

- Usually responds to thorough perineal hygiene
- Advise patients to:
 - Avoid nylon tights and tight pants
 - Avoid sitting for long periods in nylon bathing suits
 - Wipe only from front to back
 - Avoid bubble baths
 - Use only simple barrier cream, if required
- For persistent cases of non-specific vaginitis, treat in standard childhood doses for 10–14 days with one of the following antibiotics
 - Amoxicillin / co-amoxiclav
 - Cephalosporin
 - Clindamycin
 - Alternatively, a 1–2 month daily low-dose antibiotic may be helpful.

If unsuccessful, then antibiotic (mupirocin / metronidazole / clindamycin) or oestrogen creams may be used.

Sexually transmitted infections (see also Vaginal Discharge)

- Liaise with Genito-Urinary Medicine (GUM) or sexual health specialists (or Sexual Assault Referral Centre if suspicion of sexual abuse).
- Vulvovaginal candidiasis (*Candida albicans*)
 - Topical therapy with clotrimazole 1% cream for 7–14 days or
 - Oral fluconazole for children under 16 years (post-puberty), 150 mg repeated 72 hours after the first dose
 - If more intensive treatment is warranted
 - Oral fluconazole, 150 mg once weekly for 6 months after initial treatment of one dose every 3 days for three doses
 - A variety of month-long antifungal treatments have been successful
 - Long-term ketoconazole has been used to suppress recurrent infection, but hepatotoxicity is a concern.
 - Male sexual partners should be treated if they have any signs or symptoms of penile candidal involvement.
- *Trichomoniasis vaginalis*
 - Metronidazole 2 g orally in a single dose for children over 10 years,
 - Alternative regimes have been used.
 - The patient should be told to avoid alcohol until 24 hours after completion of therapy.
 - Sexual partners must be treated.

Labial adhesions

- Separation of adhesion and topical oestrogen to prevent readhesion

Lichen sclerosus

- Topical emollient if mild
- Topical steroids twice a day for up to 2 weeks if more severe
- Usually resolves with onset of puberty

Balanitis and balanoposthitis

- Warm soaks
- Oral or local antibiotic therapy
- Topical steroids may alleviate inflammation

Meatal stenosis

- Refer to a paediatric urologist.
 - Surgical meatomy is the recommended treatment.

Urethral prolapse

- Medical treatment
 - Sitz baths

- Antibiotics
- Topical estrogen
- Refer for surgical repair if medical treatment fails.

When to Refer

Refer to specialist practitioners (eg, Emergency Department / General Paediatric / Paediatric Nephrology / Urology Team(s)) if:

- Risk of serious illness / suspected sepsis (see Sepsis: recognition, diagnosis and early management [[NICE Guideline NG51, section 1.1](#)])
- Possible UTI in infant under 3 months of age (see Urinary tract infection in under 16s: diagnosis & management [[NICE clinical guideline CG54, section 1.2](#)])
- Acute pyelonephritis or recurrent UTI (see Urinary tract infection in under 16s: diagnosis & management [[NICE clinical guideline CG54, section 1.2](#)])
- Suspected sexual abuse (see Child maltreatment: when to suspect maltreatment in under 16s [[NICE clinical guideline CG89](#)])
 - Discuss with child protection lead and refer according to local protocols (eg, designated doctor for child protection or Sexual Assault Referral Centre)
- Voiding dysfunction (Paediatric / Paediatric Nephrology / Paediatric Urology Team)
- Nephrolithiasis (Paediatric / Paediatric Nephrology / Paediatric Urology Team)
- Macroscopic Haematuria (Paediatric / Paediatric Nephrology / Paediatric Urology Team)
- Genitourinary tract anomalies (Paediatric Urology Team)
 - Meatal stenosis
- Signs of systemic inflammatory illness (Paediatric Team)

‘Safety Netting’ Advice

- Advise parents to seek medical advice if symptoms do not improve or ‘red flag’ symptoms develop.
- Advise parents whose child has a suspected UTI about the importance of completing any course of treatment and preventing further infections.
- Ensure families are aware of the possibility of a UTI recurring and understand the need for vigilance and to seek prompt treatment from a healthcare professional for any suspected re-infection.

Patient / Carer Information

**Please note: whilst these resources have been developed to a high standard they may not be specific to children.*

- [Urinary tract infection \(UTI\) including kidney infections](#) (Web page), infoKID
- [Urinary tract infections in children](#) (Web page), the NHS website

- [Vulvovaginitis \(PDF Leaflet\)](#), The British Society for Paediatric and Adolescent Gynaecology (BritSPAG)

Resources

National Guidance

[Bedwetting in children and young people](#) (Web page), NICE quality standard QS70, National Institute for Health and Care Excellence

[Child maltreatment: when to suspect maltreatment in under 18s](#) (Web page), NICE clinical guideline CG89, National Institute for Health and Care Excellence

[Sepsis: recognition, diagnosis and early management](#) (Web page) NICE Guidance NG51, National Institute for Health and Care Excellence

[Urinary tract infection in under 16s: diagnosis and management](#) (Web page), NICE clinical guideline CG54, National Institute for Health and Care Excellence

Medical Decision Support

[Child Sexual Abuse](#) (Web page), RCPCH Child Protection Companion

Suggested Resources

**Please note: these resources include links to external websites. These resources may not have national accreditation and therefore PCO UK cannot guarantee the accuracy of the content.*

[Nitrofurantoin for urinary tract infections](#) (Web page), Medicines for Children

[Fever](#) (Web page - requires log-in), Spotting the Sick Child

American Academy of Pediatrics, Subcommittee on Urinary Tract Infection, Steering Committee on Quality Improvement and Management. [Urinary tract infection: clinical practice guideline for the diagnosis and management of the initial UTI in febrile infants and children 2 to 24 months](#). *Pediatrics*. 2011;128(3):595-610 [[PubMed](#)]

Ritchie J, Latthe P *et al*. The Paediatrician and the management of common gynaecological conditions. *Arch Dis Child*. 2018; 103:703-706 [[PubMed](#)]

[Benign Urethral lesions in girls](#) (Web page), Urology Care Foundation

[Benign Urethral lesions in boys](#) (Web page), Urology Care Foundation

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