University Hospitals of Derby and Burton
NHS Foundation Trust

Urology Surgery - Antibiotic Prophylaxis

Reference no.: CG-ANTI/2018/047

- Check previous culture results first. In patients where organisms resistant to the recommended prophylaxis have previously been isolated, please contact the microbiologist for advice on prophylaxis.
- Elective procedures should be deferred in the presence of symptoms consistent with an active infection until an antimicrobial course is complete and associated symptoms have improved.
- Antimicrobial prophylaxis should be stopped after wound closure and case completion, even in the presence of a drain. If there is a suspected infection, a treatment course should be given.
- Prophylactic doses should be given within the 60 minutes prior to incision.
- All antibiotic doses are for adults of average size with normal hepatic and renal function.
- IV Doses of gentamicin ≤ 160mg can be given as a bolus over 3-5 minutes. Doses larger than this should ideally be given as a 30 minute infusion.
- Antifungal prophylaxis may be indicated in certain situations. See the information on page 3.

MHRA drug safety update for fluoroquinolones (January 2024):

- This guideline includes fluoroquinolone usage.
- The Medicines and Healthcare products Regulatory Agency (MHRA) - with input from the Commission on Human Medicines (CHM) - have reviewed and published drug safety updates regarding systemic fluoroquinolones.
- Ciprofloxacin is hyperlinked to the British National Formulary.
- For NHS medicines and MHRA information for healthcare professionals on ciprofloxacin, click here and here, respectively.
- For MHRA printable information for patients on fluoroquinolones, click here.

In patients who have previously been positive for MRSA (from any site) and who are undergoing a percutaneous procedure, ADD a stat dose of teicoplanin 400mg IV to the prophylactic regime.		
Procedure	**Standard prophylaxis**	**Notes**
Cystoscopy (rigid or flexible)	Not routinely recommended if urine is sterile	Consider IV Gentamicin 2-3 mg/kg (usual max 240mg) or Ciprofloxacin (500mg PO STAT) for those with several potential adverse factors (e.g., advanced age, immunocompromised state, anatomical abnormalities). Treat patients with UTI prior to procedure using antimicrobial agent active against pathogen isolated
Urodynamic studies	Not routinely recommended	
TURP, TURBT, urethrotomy, urethral dilatation	Gentamicin 2 - 3 mg/kg IV/IM STAT (Usual max 240mg)	For TURP, if "high risk" e.g. indwelling urinary catheter, add Teicoplanin 400mg IV stat For TURBT, only give prophylaxis to patients at high risk of post-procedural sepsis/large tumors Treat patients with UTI prior to

		procedure using antimicrobial active against pathogen isolated
Ureteroscopy (rigid or flexible - including diagnostic and operative)	Gentamicin 2 - 3mg/kg IV/IM STAT (Usual max 240mg)	
PCNL (percutaneous nephrolithotomy)	Gentamicin 2 - 3mg/kg IV/IM STAT (Usual max 240mg)	Prophylaxis recommended for patients with stone > 20 mm or with pelvicalyceal dilatation
ESWL (extracorporeal shockwave lithotripsy)	Not routinely recommended	If high risk patient of infection (e.g., single kidney, immunocompromised) IV Gentamicin 2-3 mg/kg single dose

In patients who have previously been positive for MRSA (from any site) and who are undergoing a percutaneous procedure, ADD a stat dose of teicoplanin 400mg IV to the prophylactic regime.		
Procedure	**Standard prophylaxis**	**Notes**
Transrectal prostate biopsy	**1st choice:** Ciprofloxacin 500 mg PO BD for 3 days, with the first dose given two hours prior to the procedure OR Gentamicin 2 - 3 mg/kg IV/IM STAT (Usual max 240mg)	Rectal biopsy not *usually* done at RDH
Transperineal prostate biopsy	Low risk - Not routinely recommended High risk - Gentamicin 80mg IM STAT	High risk = those with catheter, high BMI, immunocompromised, transplant, diabetes, previous ITU admission/sepsis
Nephroureterectomy, Pyeloplasty (laparoscopic or open)	Cefuroxime 1.5G IV STAT	If severe penicillin allergy Gentamicin 2 - 3mg/kg IV/IM stat (Usual max 240mg)
Nephrectomy	Not routinely recommended	
Radical prostatectomy (robotic or open)	Cefuroxime 1.5G IV STAT	If severe penicillin allergy Gentamicin 2 - 3mg/kg IV/IM STAT (Usual max 240mg)
Radical cystectomy	Cefuroxime 1.5G IV STAT	If severe penicillin allergy Gentamicin 2 - 3 mg/kg IV/IM STAT (Usual max 240mg)
Ureteric stent change	Gentamicin 2 - 3mg/kg IV/IM STAT (Usual max 240mg)	
Nephrostomy insertion or change	Preferred choice: Gentamicin 2 - 3mg/kg IV/IM STAT (Usual max 240mg) **OR** Ciprofloxacin 500mg PO STAT	

Circumcision, Hydrocele repair, Excision of epididymal cyst, Vasectomy	Not routinely recommended	
Orchidectomy with testicular implant	Cefuroxime 1.5G IV STAT	If severe penicillin allergy Gentamicin 2 - 3mg/kg IV/IM STAT (Usual max 240mg) **PLUS** Teicoplanin 400mg IV STAT

Antifungal prophylaxis for urological procedures with asymptomatic persistent candiduria. Persistent candiduria defined as culture of Candida species ≥ 10^5 cfu/ml from ≥ 2 urines in ≤ 3 months.	
Procedure	**Anti-fungal prophylaxis**
Catheter insertion or removal **Nephrostomy or stent placement or exchange**	No prophylaxis unless neutropenic or other severe immunosuppression – see below.
Resective, enucleative, or ablative outlet procedures **TURBT** **Ureteroscopy** **PCNL** **All endoscopic procedures** **Procedures in which high pressure irrigants are used (and in those cases where surgical entry into the urinary tract is planned)**	Candida albicans - Fluconazole 400mg PO STAT 60 - 90 minutes prior to the procedure Candida species other than albicans discuss with a consultant microbiologist
All procedures in patients with persistent candiduria and neutropenia or other severe immunosuppression	These patients may already be on anti-fungal prophylaxis. If not, then: Candida albicans - Fluconazole 400mg PO STAT 60 - 90 minutes prior to the procedure Candida species other than albicans - discuss with a consultant microbiologist A longer course may be indicated in neutropenic patients with a fungal ball or obstruction of the urinary tract - discuss with a consultant microbiologist

Document Control (Version 5)

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Consultation With:	Consultant Microbiologists Antimicrobial/Surgical Pharmacists Consultant Urologists Interventional Radiology
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Changes made since previous version	Inclusion of Transperineal prostate biopsy prophylaxis Aligning practice for transrectal prostate biopsy prophylaxis Addition of MHRA warning for quinolone use Addition of prophylaxis options for nephrostomy insertion Addition of optional Teicoplanin for streptococcal cover for "high risk" patients undergoing a TURP
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