Wye Valley NHS Trust

NHS Herefordshire Clinical Commissioning Group

UTI antibiotic guidance has changed

1st line Nitrofurantoin

2nd Line options:

- Trimethoprim - if low risk of resistance
- Ciprofloxacin suspected pyelonephritis
- Co-amoxiclav <75years
- Pivmecillinam >75y

Use UTI dip stick testing only to rule out infection

URINARY TRACT INFECTIONS – refer to PHE UTI guidance for diagnosis information

As *E. coli* bacteraemia in the community is increasing ALWAYS safety net and consider risks for resistance [1C]

UTI in adults (no fever or flank pain) PHE URINE SIGN CKS women, CKS men RCGP UTI clinical module SAPG UTI	**Treat women** with severe/or ≥ 3 symptoms;[1, 2A, 3C] **women** mild/or ≤ 2 symptoms AND Urine NOT cloudy 97% negative predictive value, do not treat unless other risk factors for infection. If cloudy urine use dipstick to guide treatment. Nitrite plus blood or leucocytes has 92% positive predictive value; nitrite, leucocytes, blood all negative 76% NPV.[4A-] Consider a back-up / delayed antibiotic option.[20A] **Men**: Consider prostatitis and send pre-treatment MSU[1,5C] OR if symptoms mild/non-specific, use negative dipstick to exclude UTI.[6C] **Always safety net.** **First line**: nitrofurantoin if GFR over 45ml/min.[24-5] GFR 30-45: only use if resistance & no alternative. ***In treatment failure:*** always perform culture.[1B]	Nitrofurantoin[8B+ 9C 10B+]	100mg m/r BD[11C]	Women all ages 3 days[2,12,13A+] Men 7 days[1,5C]
		Trimethoprim[7B+]	200mg BD	
		Pivmecillinam[13,21,22,29,30A]	200mg TDS[13,29,30A]	
		(400mg if resistance risk)	*400mgTDS[13]*	
		If organism susceptible: amoxicillin[14B+]	500mg TDS	
		Use nitrofurantoin first line as general resistance and community multi-resistant. Extended-spectrum Beta-lactamase *E. coli* are increasing. Trimethoprim (if low risk of resistance) and pivmecillinam are alternative first line agents. **Risk factors for increased resistance include:** care home resident, recurrent UTI, hospitalisation >7d in the last 6 months, unresolving urinary symptoms, recent travel to a country with increased antimicrobial resistance (outside Northern Europe and Australasia) especially health related, previous known UTI resistant to trimethoprim, cephalosporins or quinolones.[19] **If increased resistance risk**, send culture for susceptibility testing & give safety net advice. If GFR<45 ml/min or elderly consider pivmecillinam 400mg TDS[2,13,21,3] or fosfomycin (3g stat in women[15,16B,17A] plus 2nd 3g dose in men 3 days later).[18]		

See http://www.herefordshireccg.nhs.uk/antibiotics-and-prescribing-guidelines

Why pivmecillinam in UTI in >75y?

- Highly concentrated in the urine
- Well tolerated, can be given in impaired renal function
- Works where resistance to other antibiotics due to β-lactamase stability. Local urinary isolates are sensitive to: 97% pivmecillinam, 96% nitrofurantoin, 87% co-amoxiclav, 68% trimethoprim
- Lab will report pivmecillinam patients >75 and if the isolate is resistant to other agents
- Low risk of widespread clinical resistance developing
- Minimal effect on gut and vaginal flora so mainly used in >75y to minimise the risk of C diff
- Wide experience and use in Nordic countries
- Pivmecillinam 200mg TDS, 3 days women (£4.86) & 7 days men (£7.56)
- Available in all community pharmacies and dispensaries and via OOH services

More information http://jac.oxfordjournals.org/content/early/2013/09/24/jac.dkt368.full.pdf+html

Remember UTI dip stick testing is only for ruling out UTI

- A **negative urinalysis** effectively **rules out UTI** (negative predictive value 100%).
- A positive urinalysis is false in up to 50% of cases, i.e. does not reliably confirm the diagnosis