MEG Demo (Staff App) - MEG Demo - MEG Staff app: Common Infections

Skin and Soft tissue infections (SSTIs)

Skin and Soft Tissue Infections:

- **Superficial** skin (and soft tissue) infections and chronic varicose ulcers usually do not require antibiotic therapy,
- A disinfectant, such as aqueous chlorhexidine (Unisept®), applied to the lesion is often satisfactory
- Topical antibiotics should not be used; if an antibiotic is required a systemic preparation should be prescribed
- Microbiological swabs can indicate multiple pathogens and may reflect colonisation. Interpret within clinical context and target therapy against likely organisms.

Surgical Site Infection:

- Surgical Site Infections should be classified and documented according to CDC definitions above
- Antimicrobials in conjunction with wound exploration and drainage required for true infection
- If abscess formation is suspected, drainage must be carried out, as antibiotic therapy alone will prolong the course of the infection without eradicating it.

Skin and Soft tissue infections - Table

Clinical Conditions (x)	Likely Organisms	Antimicrobial Dosage	Approx Duration of Therapy	Comments
Empiric therapy Mild (no evidence of systemic sepsis)	Beta-haemolytic strep Group A Staph aureus	Benzylpenicillin 2.4g IV QDS plus Flucloxacillin 1-2g IV QDS	Contact Consultant Microbiologist.	Use clindamycin 450-600mg IV QDS in penicillin allergy. Infection with MRSA should be suspected if: • MRSA Colonised • Recent hospitalisation in last 12 months • Transfer from another hospital or long-term care facility e.g. Nursing Home. If MRSA a potential concern contact Consultant Microbiologist
Empiric therapy Severe		Contact Consultant Microbiologist.		
Surgical Site Infection (SSI)				Contact Russell (stacey).
Necrotising fasciitis	Mixed polymicrobial infection	Piperacillin/tazobactam IV 4.5g QDS + Clindamycin 900mg IV QDS +/- Gentamicin 5mg/kg IV once daily		1. Early wound debridement as emergency procedure is the most appropriate treatment. 2. Contact Consultant Microbiologist. 3. If abdominal wall or groin involvement (likely organisms: anaerobes, gram negative bacilli), add Gentamicin, adjust Gentamicin dosage according to pre-dose levels. 4. In penicillin allergy – Contact Consultant Microbiologist
	Group A Streptococcus	Benzylpenicillin 2.4g IV QDS + Clindamycin 900mg IV QDS		

Antimicrobial Treatment of Respiratory Tract Infections

Clinical Conditions (RTIs)	Likely Organisms	Antimicrobial and Dosage	Approx Duration of Therapy	Comments
Community acquired pneumonia Empiric therapy	Strep pneumoniae Haemophilus Influenzae Atypical organisms	See Community-acquired pneumonia treatment algorithm		
Community acquired pneumonia Specific therapy	Legionella sp.	Mild-Moderate Disease Ciprofloxacin 500mg-750mg PO BD OR Clarithromycin 500mg PO BD +/- Rifampicin 300-600mg PO BD Severe Disease Clarithromycin 500mg IV BD + Ciprofloxacin 400mg IV BD or Ciprofloxacin 500mg-750mg PO BD		• Send sample for Legionella antigen test. • Contact Consultant Microbiologist
Healthcare-Associated Pneumonia (HAP) i.e. • In-patient >48 hours • Recent hospitalisation in last 3 months • Resident in long-term care facility or Nursing home • Dialysis patient Empirical therapy NB Change to appropriate organism-specific therapy if required once culture and sensitivity is obtained	Gram negative aerobes Staph aureus	Piperacillin/tazobactam 4.5g IV TDS		1. Contact Consultant Microbiologist in allcases. 2. In penillin-allergic patients Contact Consultant Microbiologist. 3. Take sputum sample where possible for culture. 4. Take recent isolates from infected sites into account. 5. Note previous antibiotic therapy. 6. Early (<48 hours) post-operative pneumonia can be classified as community-acquired and treated with amoxicillin:clavulanic acid.
Acute tonsillitis Acute otitis media Empirical therapy	Viral Strep pneumoniae Haemophilus Influenzae Morhaxella	Antibiotics not indicated Amoxicillin 500mg PO TDS		In penicillin allergic patients: Clarithromycin 500mg PO BD
Exacerbation of COPD Empirical therapy	Haemophilus influenzae Moraxella catarrhalis Streptococcus pneumoniae	Amoxicillin:Clavulanic acid 500mg:125mg PO TDS		In penicillin allergic patients: Clarithromycin 500mg PO BD
Pneumonia in immunocompromised adult	Pneumocystis jirovecii (carinii)	Sulfamethoxazole:trimethoprim 90-120mg/kg either IV or PO daily in 2 to 4 divided doses	21 days	1. Contact Consultant Microbiologist. 2. Oral prophylactic therapy is necessary once course of treatment is complete.
Cytomegalovirus	Ganciclovir 5mg/kg IV BD		1. Contact Consultant Microbiologist. 2. Oral prophylactic therapy is necessary once course of treatment is complete.	

Urinary tract Infections

Urinary Tract Infection

Urinalysis and urine cultures should be interpreted along with clinical signs and symptoms of a UTI

Bacteriuria (>100,000 organisms per ml of a single organism) indicates infection **IF** clinical signs and symptoms of a UTI also present. Lower colony counts may be considered significant in particular situations e.g. patients already receiving antibiotics, catheterised patients etc.

Asymptomatic bacteriuria does not usually require antimicrobial treatment (exceptions include pregnancy, pre-urologic surgery amongst others).

Pyuria (>30 WCC/Microlitre) in the setting of a negative urine culture or in patients with asymptomatic bacteriuria usually requires no treatment

Bacteriuria in the absence of a pyuria is likely a contamination

Catheter-Associated Urinary Tract Infection

The urine of patients with indwelling catheters frequently becomes colonised.

Asymptomatic bacteriuria in catheterised patients **DOES NOT USUALLY** require treatment and catheter should be removed if possible.

Symptomatic patients with a positive urine culture of >1000 organisms per ml should receive antimicrobial treatment for seven days if improving and remove or change catheter.

- Prophylactic antimicrobials should not be administered routinely to patients at the time of catheter placement, replacement, or removal to reduce catheter-associated UTI (IDSA Guidelines 2009)

Antimicrobial Treatment of UTIs

Clinical Conditions	Likely Organisms	Antimicrobial Dosage	Approx Duration of Therapy	Comments
Uncomplicated lower UTI Empirical therapy NB Discontinue empirical therapy and change to appropriate organism-specific therapy once culture and sensitivity is obtained	Escherichia coli Enterococcus sp. Proteus sp. Staphylococcus sp. Klebsiella sp.	Amoxicillin:clavulanic acid 625mg PO TDS or Nitrofurantoin 100mg PO QDS (If GFR >60ml/min)	3 to 5 days 3 to 5 days	1. Send urine sample for culture and sensitivity prior to commencing antibiotics. 2. Intravenous therapy may be required in more severe infection. 3. Adjust therapy based on sensitivities once available. 4. Duration of therapy may be extended if patient has abnormality of the genito-urinary tract.
Acute pyelonephritis Empirical therapy NB Discontinue empirical therapy and change to appropriate organism-specific therapy once culture and sensitivity is obtained	Organism unknown	Amoxicillin:clavulanic acid 1.2g IV TDS + Gentamicin 5mg/kg IV once daily	14 days 5 to 7 days	1. Take blood cultures. 2. Longer treatment may be necessary in complicated pyelonephritis. 3. Adjust Gentamicin dosage according to pre-dose levels.
Sepsis post genito-urinary surgery	Gram negative bacilli	Gentamicin 5mg/kg IV once daily + Amoxicillin 1g IV TDS		Adjust Gentamicin dosage according to pre-dose levels. In Penicillin allergy use Gentamicin OR Ciprofloxacin monotherapy depending on sensitivities
Epididymo-orchitis	British Association for Sexual Health and HIV (BASH) 2010 Guidelines	Most probably due to any sexually-transmitted organism: Ceftriaxone 250mg IM single-dose PLUS Doxycycline 100mg BD PO for 10-14 days If most probably due to Chlamydia or non-gonococcal organisms: Doxycycline 100mg BD PO for 10-14 days Or Ciprofloxacin 500mg BD PO for 10-14 days If most probably due to enteric organisms: Ciprofloxacin 500mg BD PO for 10-14 days		