

Waterford: Antimicrobial Guidelines - Antimicrobial Guideline: Sepsis in Pregnancy

Sepsis in Pregnancy
General points See Sepsis and National Clinical Guideline No26 Sepsis management for adults including maternity 2021 See below for antimicrobial recommendations for <ol style="list-style-type: none">1. Sepsis in pregnancy (no identifiable source)2. Severe sepsis (eg. septic shock) in pregnancy. <ul style="list-style-type: none">• NB. Check previous microbiology test results for antimicrobial resistance.• Note Group B Streptococci (GBS) are universally susceptible to penicillins and most cephalosporins including cefuroxime and ceftriaxone. Between 20-30% of GBS isolates both locally and nationally are resistant to clindamycin therefore for empiric use (where susceptibility is unknown) clindamycin cannot be recommended.• These regimes are not suitable for patients with known or suspected MDROs such as ESBL, CPE. Discuss these cases with Clinical Microbiologist.• Take prior antimicrobial use into account when prescribing as recent exposure to a particular agent is a risk factor for resistance to same.• Ensure appropriate microbiological specimens (blood, urine, swabs) sent before starting treatment where possible.• Identify source of sepsis as soon as possible to ensure timely source control.• The empirical antimicrobial regime should be rationalised as soon as microbiology test results available.• Review need for Gentamicin/Amikacin daily.
Sepsis in Pregnancy (no identifiable source) First Line (Empiric Therapy) Co-amoxiclav 1.25g TDS IV + Gentamicin 5mg/kg OD IV (booking weight, max 480mg) (Please see Gentamicin dosing schedule). Note: Early escalation to Piperacillin-tazobactam 4.5g IV QDS + Gentamicin 5mg/kg OD IV (booking weight, max 480mg) may be warranted depending on clinical severity, recent microbiology test results or recent co-amoxiclav use. If history of MRSA colonisation or infection consider adding Vancomycin 15mg/kg IV 12 hourly (booking weight, max 2g/dose), (Please see Vancomycin dosing schedule). Consider 25mg/kg (max 2g) loading dose if severe infection or septic shock. In patients with a booking weight BMI $\geq 30\text{kg/m}^2$ use Obese Dosing Weight/Adjusted Body Weight (Please see formulae for weight calculations) and not Actual Body Weight to calculate gentamicin dose. (Please see Gentamicin dosing schedule).
Penicillin Allergy (Empiric Therapy) NOT IgE-mediated /anaphylaxis/severe penicillin reaction: Cefuroxime 1.5g IV QDS. + Metronidazole 500mg IV TDS. + Gentamicin 5mg/kg OD IV (booking weight, max 480mg). (Please see Gentamicin dosing schedule) If history of MRSA colonisation or infection consider adding Vancomycin 15mg/kg IV 12 hourly (booking weight, max 2g/dose). Consider 25mg/kg (max 2g) loading dose if severe infection or septic shock. (Please see Vancomycin dosing schedule). IgE-mediated /anaphylaxis/severe penicillin reaction: Vancomycin 15mg/kg IV 12 hourly (booking weight, max 2g/dose). Consider 25mg/kg (max 2g) loading dose if severe infection or septic shock (Please see Vancomycin dosing schedule). + Gentamicin 5mg /kg once daily (use booking weight) (Please see Gentamicin dosing schedule) + Metronidazole 500mg IV TDS Add clindamycin if invasive Group A Strep Infection suspected. In patients with a booking weight BMI $\geq 30\text{kg/m}^2$ use Obese Dosing Weight/Adjusted Body Weight (See formulae for weight calculations) and not Actual Body Weight to calculate gentamicin dose. (Please see Gentamicin dosing schedule) Note: Both vancomycin and gentamicin can cause nephrotoxicity as an adverse effect. This risk is increased when both agents are used together and is increased further with the use of concomitant piperacillin-tazobactam and other nephrotoxic medications. Review use of these medications daily, monitor renal function and drug levels.
Sepsis (severe) in Pregnancy e.g. septic shock First Line & Penicillin Allergy (Not IgE-mediated/anaphylaxis or non-severe penicillin allergy) Empiric Therapy Meropenem 1-2g TDS + Clindamycin 1.2g QDS IV + Gentamicin 5mg/kg OD IV (booking weight, max 480mg) (Please see Gentamicin dosing schedule) In patients with a history of Gentamicin resistant Gram negative infections (eg. UTI) use Amikacin 15mg/kg OD IV (booking weight, max 1.5g). (Please see Amikacin dosing schedule) If history of or risk factors for MRSA colonisation or infection add Vancomycin 25mg/kg (max 2g) loading dose then 15mg/kg IV 12 hourly (booking weight, max 2g/dose). (Please see Vancomycin dosing schedule). In patients with a booking weight BMI $\geq 30\text{kg/m}^2$ use Obese Dosing Weight/Adjusted Body Weight and not Actual Body Weight to calculate gentamicin/amikacin dose. (Please see formulae for weight calculation) If there is a strong suspicion clinically that the septic shock may be relating to Group A Streptococcus, then IV immunoglobulin could be considered.
IgE-mediated/anaphylaxis or Severe Penicillin Allergy Empiric Therapy Vancomycin 25mg/kg (max 2g) loading dose then 15mg/kg IV 12 hourly. (Please see Vancomycin dosing schedule). + Clindamycin 1.2g QDS IV + Gentamicin 5mg/kg IV once daily (booking weight, max 480mg) (Please see Gentamicin dosing schedule) In patients with a history of Gentamicin resistant Gram negative infections (eg. UTI) use Amikacin 15mg/kg OD IV (booking weight, max 1.5g). (Please see Amikacin dosing schedule) Ciprofloxacin 400mg BD IV may be added for additional Gram-negative cover. OR Meropenem can be considered for use in select cases (1-2% cross reactivity between penicillin and carbapenem). Discuss with Microbiology/Obstetric teams. + Clindamycin 1.2g QDS IV + Gentamicin 5mg/kg OD IV (booking weight, max 480mg) (Please see Gentamicin dosing schedule) In patients with a history of Gentamicin resistant Gram negative infections (eg. UTI) use Amikacin 15mg/kg OD IV (booking weight, max 1.5g). (Please see Amikacin dosing schedule). If history of or risk factors for MRSA colonisation or infection add Vancomycin 25mg/kg (max 2g) loading dose then 15mg/kg IV 12 hourly (booking weight, max 2g/dose) (Please see Vancomycin dosing schedule). In patients with a booking weight BMI $\geq 30\text{kg/m}^2$ use Obese Dosing Weight/ Adjusted Body Weight and not Actual Body Weight to calculate gentamicin/amikacin dose. (Please see formulae for weight calculation) Review Gentamicin/Amikacin daily with culture results and clinical response. If patient is clinically improving, consider stopping after 48 hours. Note: Both vancomycin and gentamicin/amikacin can cause nephrotoxicity as an adverse effect. This risk is increased when both agents are used together and is increased further with the use of other nephrotoxic medications. Review use of these medications daily, monitor renal function and drug levels. If there is a strong suspicion clinically that the septic shock may be relating to Group A Streptococcus, then IV immunoglobulin could be considered.