

## Health PEI Recommendations for the Management of Gram Positive Cocci in Clusters Bacteremia

Culture Results	Management Recommendations		Comments
	Medications	Investigations	
<p>Gram stain results: Gram positive Cocci in Clusters</p> <p>Typically: <i>Staphylococcus aureus</i></p> <p>Other potential pathogens: Coagulase negative <i>Staphylococcus</i></p> <p>If pathogen has been identified as <i>Staphylococcus aureus</i>: see below.</p>	<p>Use double therapy initially &amp; reassess when susceptibility results available</p> <p style="text-align: center;"><b><u>DOUBLE THERAPY</u></b></p> <p>1. Cloxacillin 2 g IV q4h</p> <p style="text-align: center;"><b>OR</b></p> <p>2. Cefazolin 2 g IV q8h (RD) (If non-severe PCN allergy)</p> <p style="text-align: center;"><b>OR</b></p> <p>3. Meropenem (RD) 1-2 g IV q8h (If severe PCN allergy where patient has severe sepsis or greater*)</p> <p style="text-align: center;"><b>OR</b></p> <p>4. Piperacillin/Tazobactam (RD) 4.5 g IV q6h (If treating another serious infection)</p> <p style="text-align: center;"><b><u>PLUS:</u></b></p> <p>1. Vancomycin 25 mg/kg (max 3 g) IV load, then Vancomycin (RD) 15 mg/kg (max 3 g/dose) IV q12h**</p> <p style="text-align: center;"><b>OR</b></p> <p>2. Daptomycin (RD) 8 – 10 mg/kg (max 1250 mg) IV q24h (If true allergy to Vancomycin and non-respiratory infection)</p> <p>*If severe PCN allergy &amp; patient does not have severe sepsis or greater: consider vancomycin monotherapy (dosing as above)</p> <p>**For patients under age 50, morbidly obese and / or intravenous drug use: consider q8h dosing of Vancomycin IV if normal renal function.</p>	<p><b>Culture Results:</b> If only one draw/culture positive (especially if only in one out of two bottles), the positive result may be due to skin contamination. If the patient has not already started on effective therapy consider repeating cultures before antibiotic initiation.</p> <p><b><u>Bacteremia vs. line infection:</u></b> If not already done, patients with central IV lines should have aerobic and anaerobic blood cultures performed from the central device (Line or Port) as well as aerobic and anaerobic peripheral blood cultures. Note: re: multi-lumen central device: an aerobic bottle is required for EACH lumen, however no anaerobic bottles are required.</p> <p><b>Rationale:</b> To determine, based on a lab calculation, if the patient has a true bacteremia versus only a line infection, and if a true bacteremia, if the central line or port is the most likely source/cause. For patients with more than one lumen anaerobic blood cultures are unlikely to be additive and can lead to excessive blood collection.</p> <p><b><u>Cardiac Imaging:</u></b> For patients with prosthetic heart valves and/or pacemaker wires request a TTE even if the organism is later found out to be coagulase negative <i>Staphylococcus</i>. See next page for <i>S. aureus</i> and MRSA.</p> <p><b><u>Source Control:</u></b> See next page</p>	<p><b>Antibiotics:</b> Do not rely on the following antibiotics to treat a bacteremia, even in the setting of clinical improvement (unless guided by Infectious Diseases):</p> <ol style="list-style-type: none"> <li><b>Levofloxacin and Moxifloxacin</b> only have 80% routine susceptibility to <i>Staph aureus</i> and less to coagulase negative <i>Staphylococcus</i>. These agents are not considered effective therapy for bacteremia due to increased chance of developing resistance (even in patients improving on this regimen).</li> <li><b>Clindamycin</b> is bacteriostatic and levels in the blood are not sufficiently high enough to control a bacteremia.</li> <li><b>Sulfamethoxazole/Trimethoprim</b> (Septra/Bactrim) is bacteriostatic</li> <li><b>Doxycycline</b> is bacteriostatic</li> </ol>

RD = dose adjustment required in renal impairment

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<p><i>Staphylococcus aureus</i> (<b>Not</b> MRSA)</p>	<p>1. Cloxacillin 2 g IV q4h OR 2. Cefazolin 2 g IV q8h (RD) (If non-severe PCN allergy) Note: Cloxacillin preferred</p> <p>3. For severe PCN allergy: obtain Infectious Diseases opinion</p> <p><u>Duration of therapy:</u> Minimum of 2 weeks IV from official Day 1 of therapy. <u>Note:</u> Official Day 1 of therapy is the day the first negative blood cultures were drawn, unless there is another source control issue (see Comments).</p>	<ul style="list-style-type: none"> <li>• Consider early Infectious Diseases opinion</li> <li>• Request a TTE initially and will frequently require a TEE especially if prosthetic valve, pacemaker wire, or blood cultures fail to clear after 4 days of effective therapy.</li> <li>• Repeat blood cultures after 48 hours of effective therapy and every 48 hours until clearance. <b>Note:</b> persistent bacteremia from blood cultures obtained 4 days after initiation of antibiotics suggests inadequate source control or warrants reassessment of current antibiotic therapy. Consider Infectious Diseases consultation (on or off Island).</li> <li>• If prosthetic heart valve and any bacteremia: consider early Infectious Diseases formal consultation (e.g role of additional antibiotics including rifampin and low dose gentamicin).</li> </ul>	<p><b>Source control</b> involves consideration of the following:</p> <ol style="list-style-type: none"> <li>1) Removal of any plastic such as Foley Catheters, Central/PICC lines etc.</li> <li>2) Endocarditis: new/ decompensating HF, prolonged PR interval, rheumatoid factor, increasing cardiac markers.</li> <li>3) MSK: rule out infected prosthetic joints/septic arthritis including the sternoclavicular and sacroiliac joints, abscesses (see below) Bone: spine (discitis)</li> <li>4) Abscesses: psoas, epidural, pleural, subhepatic, suprahepatic, prostate, cardiac etc.</li> </ol>
<p>MRSA</p>	<p>1. Vancomycin 25 mg/kg (max 3 g) IV load, then Vancomycin (RD) 15 mg/kg (max 3 g/dose) IV q12h OR 2. Daptomycin (RD) 10 mg/kg (max 1500 mg) IV q24h (If true allergy to Vancomycin and non-respiratory infection)</p>	<ul style="list-style-type: none"> <li>• As above</li> <li>• Consider Infectious Diseases formal consultation. <b>Rationale:</b> patient specific characteristics (e.g. minimum inhibitor concentration to vancomycin may warrant the use of alternatives such as linezolid or daptomycin); infection control intervention such as reducing bioburden of the patient may be recommended.</li> </ul>	<ul style="list-style-type: none"> <li>• As above</li> </ul>

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## References:

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