Non-Purulent Cellulitis

The most common pathogens causing non-purulent cellulitis are beta-hemolytic *Streptococcus* spp. (e.g., Group A/B/C/G *Streptococcus*). However, vancomycin is often started empirically in hospitalized patients with non-purulent cellulitis. Is this always appropriate?

What do guidelines recommend?

Infectious Diseases Society of America guidelines recommend that antibiotics active against streptococci should be used empirically in mild-moderate non-purulent cellulitis. They also note that some experts will prescribe activity against methicillin-susceptible *Staphylococcus aureus* (MSSA), but **NOT** methicillin-resistant *Staphylococcus aureus* (MRSA). Mild infections are typically cellulitis with no systemic signs of infection and moderate infections are cellulitis with systemic signs of infection. Recommended adult antibiotic regimens are listed below. Recommended duration of therapy is typically 5 days assuming adequate clinical response.[1]

Mild Non-Purulent Cellulitis	Moderate Non-Purulent Cellulitis
Penicillin VK 250-500 mg Q6H PO	Penicillin 2-4 million units Q4-6H IV
Cephalexin 500 mg Q6H PO	Nafcillin 1-2 g Q4-6H IV
Dicloxacillin 400 mg Q6H PO	Cefazolin 1 g Q8H IV
Clindamycin 300-450 mg Q6H PO	Clindamycin 600-900 mg Q8H IV

Should empiric cellulitis antibiotics ever include activity against MRSA?

Yes, empiric MRSA activity should be included if there is penetrating trauma, evidence of MRSA infection elsewhere, nasal colonization with MRSA, injection drug use, purulent drainage, or systemic inflammatory response syndrome (SIRS). Additionally, empiric MRSA activity is recommended in severely immunocompromised patients (e.g., malignancy on chemotherapy, neutropenia, cell-mediated immunodeficiency) immersion injuries, animal bites, or those with concern for severe necrotizing infections.[1]

Key Takeaways: Empiric vancomycin is NOT needed for mild-moderate non-purulent cellulitis. Utilize narrow-spectrum antibiotics with activity against streptococci ± MSSA (e.g., cefazolin).

Reference:

1. Stevens DL, Bisno AL, Chambers HF, et al. Practice guidelines for the diagnosis and management of skin and soft tissue infections: 2014 update by the Infectious Diseases Society of America. *Clin Infect Dis*. 2014 Jul 15;59(2):e10-52.

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