Pericarditis Empiric Therapy

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Data de publicació: 12-11-2022

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Updated: Dec 05, 2019

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Feedback

Empiric Therapy Regimens

Empiric therapeutic regimens for infectious pericarditis are outlined below, including those for bacterial infections, viral infections, fungal infections, and mycobacterial infections. [1, 2, 3, 4, 5, 6, 7, 8]

Bacterial Pericarditis
Once bacterial pericarditis is suspected, empiric parenteral antibacterial therapy should be started immediately. [9]

In immunocompetent patients, the antibiotic regimen is vancomycin 15 mg/kg IV q12h plus ceftriaxone 1-2 g IV q12h.

In immunocompromised patients, [10] patients with nosocomial infections, and critically ill patients (including those with septic, purulent pericarditis [11]), antibiotic regimens include vancomycin (15-20 mg/kg/dose every 8-12 hours, not to exceed 2 g per dose) PLUS any of the following:

Ceftriaxone (2 g IV once daily), cefotaxime (2 g every 8 hours), or gentamicin (3 mg/kg/day divided equally in 2 or 3 doses) OR

? Cefepime (2 g IV q12h) OR

Beta-lactam plus beta-lactamase inhibitor, such as ticarcillin-clavulanate (3.1 g IV q4h), piperacillin tazobactam (4.5 g q6h), or ampicillin-sulbactam (3 g IV q6h) OR

Carbapenem, such as imipenem (500 mg IV q6h) or meropenem (1 g IV q8h)

Duration of therapy

Optimal treatment duration is not well studied and varies per patient; look for symptomatic and electrocardiographic/echocardiographic improvement.

Antibiotic therapy for bacterial pericarditis is prolonged, usually 4 weeks. The empiric antibacterial regimen should be tailored to the causative bacterial pathogen. [9]

Viral Pericarditis
First-line treatment consists of ibuprofen 300-800 mg PO q8h plus colchicine 0.6 mg PO BID

Duration of therapy: Optimal treatment duration is not well studied and varies per patient; NSAIDs are generally used for 1-2 weeks, with colchicine continued for up to 3 months to reduce the risk of recurrence. [12]

Viral pericarditis is often self-limiting, with most patients recovering without complications.

Treatment includes a short course of NSAID therapy, with colchicine as adjunct, especially to prevent recurrences.

Table 1. Dosing of Most Commonly Prescribed Anti-inflammatory Agents for Acute Pericarditis (Open Table in a new window)

Drug

Usual Dose (Duration)

Tapering

Aspirin

750-1,000 mg q8h (1-2 weeks)

Decrease dose by 250-500 mg every 1-2 weeks

Ibuprofen

600 mg q8h (1-2 weeks)

Decrease dose by 200-400 mg every 1-2 weeks

Colchicine

Patients < 70 kg: 0.5 mg once daily (3 months)

Patients >70 kg: 0.5 mg twice daily (3 months)

Not mandatory; alternatively, 0.5 mg every other day (< 70 kg) or 0.5 mg once (>70 kg) in the final weeks of therapy

Second-line treatment (refractory cases or NSAID intolerance) consists of prednisone 0.25-1 mg/kg PO daily plus colchicine 0.6 mg PO BID.

Duration of therapy

Optimal treatment duration is not well studied and varies per patient; prednisone may be tapered after 2-4 weeks if patients are asymptomatic, with colchicine continued for up to 3 months to reduce risk of recurrence.

Fungal Pericarditis
First-line treatment is as follows:

Micafungin 100 mg IV q24h or

Anidulafungin 200 mg loading dose, then 100 mg IV q24h or

Caspofungin 70 mg loading dose, then 50 mg IV q24h or

Fluconazole 400 mg IV q24h (may be considered while culture results are pending) [11]

Duration of therapy: Optimal treatment duration is not well studied and varies per patient; look for symptomatic and electrocardiographic/echocardiographic improvement; surgical or percutaneous drainage typically required

Second-line treatment (or if patient is critically ill) is as follows:

Liposomal amphotericin B IV 3-5 mg/kg daily

Duration of therapy: Optimal treatment duration is not well studied and varies per patient; surgical or percutaneous drainage typically required

Surgical decompression may be needed in addition to specific antifungal therapy once culture results are available. [13]

Corticosteroid therapy may be considered since its anti-inflammatory effects have been beneficial in other types of pericarditis. [14]

Mycobacterial Pericarditis
The four-drug regimen for mycobacterial pericarditis is as follows: [11]

Isoniazid 300 mg PO q24h plus

Rifampin 600 mg PO q24h or 10 mg/kg/day plus

Pyrazinamide 15-30 mg/kg PO daily (up to 2 g/day) given as a single dose plus

Ethambutol 15-25 mg/kg PO q24h

Duration of therapy: 4-drug regimen for 8 weeks, then daily isoniazid and rifampin only for 4 months

Adjunctive corticosteroid therapy, although controversial, can be beneficial. Prednisone (or prednisolone) is suggested at 1 mg/kg/day for 4 weeks, then 0.5 mg/kg/day for 4 weeks, then 0.25 mg/kg/day for 2 weeks, then 0.125 mg/kg/day for 2 weeks.

The latest American Thoracic Society (ATS)/Centers for Disease Control and Prevention (CDC)/Infectious Diseases Society of America (IDSA) guidelines for the prevention and treatment of opportunistic infections in adults and adolescents with HIV infection do not recommend corticosteroids in the treatment of tuberculous pericarditis, since randomized trial data did not demonstrate a significant reduction in the composite endpoint of mortality, cardiac tamponade, or constrictive pericarditis. In addition, corticosteroid use was associated with higher incidence of some cancers. A Cochrane review did not show any mortality benefit from adjunctive corticosteroids and demonstrated only a nonsignificant decrease in constrictive pericarditis. However, less than 20% of the patients with HIV infection included in the analysis were receiving antiretroviral therapy. [15]

In contrast, the official ATS/CDC/IDSA clinical practice guidelines on the treatment of drug-susceptible tuberculosis recommend against the routine use of adjunctive corticosteroids in the treatment of pericardial tuberculosis. The guidelines note that corticosteroids should be considered in selected patients who have the highest risk for inflammatory complications, such as those with large pericardial effusions, high levels of inflammatory cells or markers in pericardial fluid, or early signs of constriction. [16]

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Multisystem Inflammatory Syndrome in Adults

TOOLS

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