

Pericardial Effusion and Connective Tissue Disease

Spondnick, David. "Pericardial Diseases." *Braunwald: Heart Disease: A Textbook of Cardiovascular Medicine, 6th ed*, 2001: 1869-61.
Soler-Soler et al. "Diagnosis and treatment of pericardial effusion." *UpToDate*, v.11.1.

Key Points:

- **Pericardial disease occurs commonly in connective tissue disease, but is not always clinically significant**
- **Pericardial effusions related to RA and SLE can be managed usually with anti-inflammatory agents**
- **Constrictive pericardial disease and tamponade are rarer complications and require intervention**

1. Differential diagnosis for pericardial effusion

- Infection: viral, bacterial, TB, mycoplasma, fungal, rickettsial, parasitic, endocarditis-related
- Malignancy: metastatic (lung, breast, Hodgkin's, leukemia, melanoma) or primary
- Radiation
- Metabolic / endocrine: uremia, hypothyroidism
- Trauma: blunt, penetrating, iatrogenic, dissection
- Post myocardial infarction (early or Dressler's)
- Autoimmune / rheumatic
- Drug related: drug-induced lupus, other
- Idiopathic

2. Pericardial disease in connective tissue disease:

- Mechanism: vasculitis via immune complex deposition / inflammatory cell infiltration or hypersensitivity (drug-induced)
- Fluid: may resemble synovial analysis or include serologic markers
- Predominance in males with connective tissue disease
- In literature: tamponade mostly in case reports / series, lack of studies re: management

3. Rheumatoid arthritis

- Most commonly associated with pericardial disease among CTD
- Middle-aged white men
- 1/2 at autopsy with adhesions, 1/2 on echo with effusion
- Clinically significant effusions -> poorer prognosis
- Manifestations:
 - Asymptomatic rub
 - Adhesive pericarditis with constriction
 - Chronic effusion -> predisposing to superinfection
- Fluid: serous / serosanguinous, low glucose (<45mg/dl), >15,000 WBC, protein >5g/dl, with immune complexes on staining
- Management: ASA, NSAIDs, corticosteroids; surgical for constrictive

4. Systemic Lupus Erythematosus

- Pericarditis in majority of patients with lupus
- Parallels disease course
- Manifestations
 - Large effusion
 - Rarely tamponade or constriction (more often in males)
- Fluid: serous, serosanguinous, or hemorrhagic
- Steroids, NSAIDs; surgical for constrictive or tamponade

5. Other connective tissue diseases: acute rheumatic fever, scleroderma, Sjogren's, polymyositis/dermatomyositis, mixed connective tissue disease, seronegative spondyloarthropathies, systemic vasculitides, hypersensitivity vasculitides, Behcet, Wegener's, sarcoid, serum sickness