Pericardial Effusion and Connective Tissue Disease

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 / sersanguinous, 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