The Heart of The Matter

William Z. Bligh-Glover M.D.
Lorain County Coroner’s Pathologist
Lorain County
Lorain County

- **Geography**
  - Just West of Cleveland
  - On the Lake

- **Population**
  - Rust belt inner city poverty
  - Farming community

- **Industry**
  - Heavy manufacturing (gone)
    - Amship, Ford, Chrysler, Republic Steel
  - Farming
  - Education
Outside The Office
Case Report

- Mr. G.A.
  - 32 year old African-American Man
  - No known medical history
  - No recent complaints
  - No social history of concern

- Found dead in bed by spouse.
Significant External Findings

- Not Much
  - Scar on temple
  - Bloodshot eyes
Significant External Findings

- Not Much
- Scar on temple
Significant Internal Findings

- **Heart**
  - 350 gm
  - LV 1.6 cm, RV 0.4 cm
  - Coronaries N.P.D.

- **Weird left ventricle**
  - White colour
  - Firm consistency
  - Looked like 7 day infarct, but was firm like scar tissue.
Gross Differential Diagnosis

- Tumor
- Scar
Microscopic Findings

- Normal (?) myocardium
  - Recognizable myocardium
- Hyper cellular area
  - Benign spindle cells
  - Plasma cells
  - Non-caseating granulomata
Histologic Findings in Giant-Cell Myocarditis

Giant Cell Myocarditis

- Giant cell myocarditis is a rare but devastating disease
  - Young otherwise healthy individuals.
  - Associations:
    - Thymoma
    - Inflammatory bowel disease
    - Other autoimmune disorders
- Outcome:
  - Death or heart transplantation is approximately 70% at 1 year.
  - Immunosuppression can lengthen time to transplantation
  - 25% of transplanted patients get it in their transplants
T-Cell Process

- T-lymphocytes (related cytokines)
  - Lewis rat model
  - Human studies suggest that giant cell myocarditis is mediated by T lymphocytes
  - May respond to treatment aimed at attenuating T cell function

- Immunosuppression:
  - Cyclosporine in combination with steroid, azathioprine, or muromonab-CD3 have prolonged transplant-free survival
    - (12.6 months vs. 3.0 months for no immunosuppression).
  - Post-transplantation survival is approximately 71% at 5 years
    - 25% rate of giant cell infiltration in the donor heart
Sarcoid?

- **No signs or symptoms reported**
  - Dyspnea
  - Cough
  - Erythema nodosum
  - Constitutional sx
    - Weight loss, fatigue, night sweats, fever (IL-1, IL-6, TNF-α)

- **Autopsy findings**
  - Nothing in lungs
  - No lymphadenopathy
  - Nothing in spleen
Thymoma?

- Didn’t see the thymus
Bowel?

- Grossly normal