CONCEALED DIAGNOSIS:  
A CASE OF BARTONELLA ENDOCARDITIS

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INTRODUCTION

• Rare disease and a very difficult diagnosis
• Risk factors: homelessness, alcoholism, infestation with body lice, contact with cats and previous valvular disease
• Subacute illness with nonspecific findings
  Mimics many other diseases
• Delay in diagnosis and proper treatment leads to complications
  Valve destruction
  Heart failure
PATIENT PRESENTATION

- 47 yo M presented to the ER w/ a two year hx of symptoms:
  - Chest pain
  - Palpitations
  - 60lbs weight loss
  - Dysphagia
  - Diarrhea
  - Night sweats
- No EtOH, tobacco or intravenous drug use
- Lived in Florida working as fishmonger
- Had a negative workup for hyperthyroidism with his PCP
PHYSICAL EXAMINATION

- BP 134/94 HR 104 RR 16 O2Sat 98% in room air
- Cachectic with poor dentition
- Jugular venous distention and a soft diastolic murmur heard best at the left sternal border
- No crackles
- Abdomen soft and nontender; splenomegaly was present
- No peripheral edema, all pulses palpable
LABORATORY AND OTHER STUDIES

- Anemia (Hb 7.8 g/dL) w/ no hemolysis and normal WBC
- CRP of 39.6 mg/L
- Total protein 9.0mg/dl and Albumin 2.9mg/dl
- Three sets of blood cultures were negative for >5 days
- EKG normal
- Chest X-ray mild cardiomegaly
- Transthoracic echocardiogram:
  - No vegetations
  - Mildly dilated left ventricle
  - Aortic insufficiency on bicuspid aortic valve
Patient wanted to be discharged home
DDx: Amyloidosis, Multiple Myeloma, Sarcoidosis
One month later returned with persistent chills and weight loss
PCR for Bartonella, Coxiella burnetti and Tropheryma whipplei
Transesophageal echocardiogram showed multiple lesions in the aortic valve and severe aortic insufficiency
Empirical Rx w/ Gentamycin, Unasyn and a fluoroquinolone
+ serum Bartonella PCR: Gentamycin IV was given for two weeks and oral doxycycline for one year
Aortic valve replacement soon after
TRANSESOPHAGEAL ECHOCARDIOGRAM

Figure 1. Aortic valve markedly thickened and with multiple vegetations (arrows). The image in the right also shows the patient bicuspid aortic valve.

Figure 2. Aortic valve severely damaged by vegetations showing severe regurgitation in echocardiogram with doppler.
DISCUSSION

• **Culture-negative endocarditis (CNE):**
  Three independent blood samples
  Negative cultures
  Five days of incubation and subculturing

• **7% or more of blood cultures remain negative**
  Previous administration of antimicrobial agents
  Inadequate microbiological techniques
  Infection with highly fastidious bacteria or nonbacterial pathogens (eg, fungi)
DISCUSSION

• Common pathogens: *Streptococcus* spp.*, Coxiella burnetii, Bartonella spp., Brucella spp., Fungi
  Others: *Tropheryma whippelii; Mycobacteria* spp.,; *Legionella* spp.
• What about the HACEK group?
• Initial workup: Blood cultures x3 and echocardiogram
• Detailed history, repeated echocardiogram and serology/polymerase chain reaction (blood samples or removed valves) based on presentation, epidemiology and clinical findings
• DDx includes Nonbacterial Thrombotic Endocarditis
Fig 3. Petechiae (nonblanching, pinpoint reddish brown macules)

Fig 4. Splinter hemorrhages, linear reddish-brown lesions, are seen in the nail bed

Fig 5. Janeway lesion (arrow) occurred on the palm

Fig 6. Osler nodes are tender papulopustules located on the pulp of the finger

Fig 7. Oval shaped, Roth spots, white centered hemorrhages present on the retina of a patient
DISCUSSION

• Identification of the organism guides the antibiotic therapy
• Empirical treatment (American Heart Association):
  HACEK: Ceftriaxone + Ciprofloxacin
  CNE (subacute): Vancomycin + Ampicillin-sulbactam
• Bartonella endocarditis: Gentamycin for 2wks + Doxycycline for 6wks or more
REFERENCES


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Metrowest Medical Center residents and staff
QUESTIONS?
THANK YOU!