

## Case History

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A 71-year-old man with a past medical history of coronary artery disease presented to his primary care doctor with a 3 day history of fevers, diaphoresis and full body myalgias. He denied any chest pain, shortness of breath, or cough at that time. He had a chest x-ray taken and was given levofloxacin due to concern for pneumonia. That evening, he developed new ulcers on his buccal mucosa and posterior pharynx, which caused odynophagia. The next morning he noticed a new painless, non-pruritic rash on both of his ankles. The following day he returned to his primary care doctor who prescribed acyclovir, nystatin, and viscous lidocaine for the ulcers and stopped his levofloxacin. That evening he presented to an outside hospital for fever to 104°F. He was transferred to VCUHS for management of suspected Stevens-Johnson syndrome.

Upon further review of systems, he denied headaches, neck stiffness, abdominal pain, nausea, vomiting, or diarrhea. He denied ever having fevers to this degree or oral ulcers before this episode. He had not traveled recently and had no sick contacts. He did admit to living on a farm and frequently removing ticks from his dog. He did not recall being bitten or removing any ticks from his body in the preceding weeks.

### Past Medical History:

- ❖ Coronary artery disease, s/p 1 stent to LAD and 2 to RCA in 2005
- ❖ Hypertension
- ❖ Hyperlipidemia
- ❖ Gastroesophageal reflux disease

### Medications:

- ❖ Aspirin 81 mg daily
- ❖ Clopidogrel 75 mg daily
- ❖ Atorvastatin 10 mg daily
- ❖ Esomeprazole 40 mg daily
- ❖ Lisinopril 10 mg daily
- ❖ Acyclovir 200 mg daily
- ❖ Allergic to Penicillin (hives) and Erythromycin (nausea)
- ❖ No known reaction to IV dye or shellfish

### Family History:

- ❖ Significant for coronary artery disease and hypertension
- ❖ No similar episodes of fever or ulcers in any family members

### Social History:

- ❖ He was born in the United States and is of Scandinavian descent.
- ❖ Retired electrical technician. Lives with girlfriend on a farm outside of Fredricksburg, Virginia

- ❖ Tobacco: none for 30 years, previously smoked 1 pack per day for 25 years
- ❖ Denied any alcohol or drug intake

## Physical Exam

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- General: Pleasant elderly white man in no distress. Weight 99 kg.  
Vital signs: Temperature 101.7°F, heart rate 112/minute, respiratory rate 24/minute, blood pressure 135/71 mmHg in right arm, 153/80 mm Hg in left arm, pulse oximetry 95% on 2L oxygen via nasal cannula.
- HEENT: Conjunctiva without injection, exudates, or pallor. No scleral icterus. Pupils equal, round, and reactive to light bilaterally. Multiple oral ulcers on posterior pharyngeal palate with white base and surrounding erythema. Crusted, cracked lower lip with dried blood and mild denuding.
- Neck: Supple without lymphadenopathy, thyromegaly, or JVD.  
Heart: Regular, tachycardic, rate low 100s. S1 constant intensity, S2 physiologically split. PMI non-displaced. No murmurs, rubs, or gallops. No carotid or femoral bruits. 2+ femoral, dorsalis pedis, and posterior tibial pulses.
- Chest: Normal respiratory effort, no accessory muscle use. Few crackles in the bases bilaterally.
- Abdomen: Normal bowel sounds, non-distended, non-tender, no hepatosplenomegaly.
- Genitourinary: Erythematous scrotum without loss of epidermis  
Extremities: No cyanosis, clubbing, or edema.  
Dermatologic: Petechial and erythematous macular rash with areas of palpable purpura on ankles and dorsum of both feet. No involvement of palms, soles, trunk, back, or face.
- Neurologic: Alert and oriented to person, place, and time. Cranial nerves intact. 5/5 motor strength in all extremities. 2+ biceps and patellar DTRs.

## Laboratory Studies

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- ❖ Sodium 133 mEq/L, potassium 4.2 mEq/L, chloride 101 mEq/L, bicarbonate 21 mEq/L, blood urea nitrogen 21 mg/dL, creatinine 1.2 mg/dL, glucose 133 mg/dL, calcium 8.6 mg/dL, magnesium 2.1 mg/dL
- ❖ Albumin 3.6 g/dL, AST 39 U/L, ALT 20 U/L, total bilirubin 0.4 mg/dL, alkaline phosphatase 55 U/L
- ❖ WBC 8.0 x 10<sup>9</sup>/L, hemoglobin 14.9 g/dL, platelets 161 x 10<sup>9</sup>/L (Differential: 84% Neu, 9% Lymphs, 5% Monos, 2% Eos, 0% Baso)

- ❖ Cardiac enzymes at 0, 3, 6, 9 and 15 hours trended as follows: CK 271→303→389→414→259 U/L, CK-MB 9.5→8.5→6.9→8.4→7.2 ng/mL, troponin I 3.8→3.6→3.7→4.5→4.2 ng/mL
- ❖ Total cholesterol 95 mg/dL, HDL 20 mg/dL, LDL 40 mg/dL, triglycerides 169 mg/dL
- ❖ ECG showed sinus tachycardia with rate of 100/min, left axis deviation, normal intervals, and no significant ST or T wave abnormalities
- ❖ Chest x-ray showed mild cardiomegaly with minimal interstitial edema, and no evidence of airspace disease

## Hospital Course

The patient was admitted to the coronary intensive care unit. He was started on Aspirin, Clopidogrel, Metoprolol and Lisinopril. He was also started on Doxycycline 100 mg po BID for empiric treatment of presumed myocarditis. A cardiac MRI was ordered to confirm this suspicion. Various serologies were sent to evaluate the cause of his illness. After overnight observation and peaking of his cardiac enzymes, he was transferred to the general medicine floor.

On the second day of his hospital stay, he was seen by the dermatology service for biopsy of his skin lesions. His cardiac MRI revealed focal areas of scar in the lateral wall, consistent with a variant form of myocarditis. In addition, a moderate- sized pericardial effusion was noted.

On the third hospital day, he went into an irregular rhythm and ECG showed atrial fibrillation with subtle changes concerning for electrical alternans. A beside echocardiogram was performed showing concentric left ventricular hypertrophy, moderate pericardial effusion with mild hemodynamic compromise, and ejection fraction of 55%.

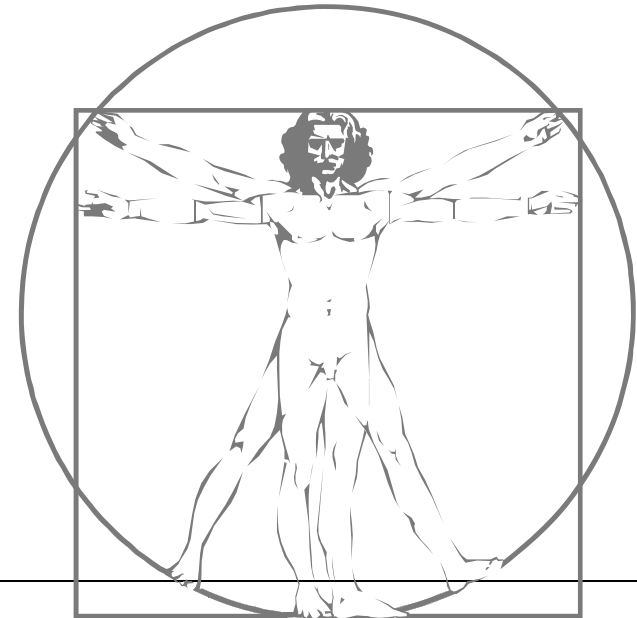
Initially, his rash worsened to form hemorrhagic bullae. At that time, dermatology repeated a skin biopsy. The first skin biopsy was non-diagnostic while the second biopsy was consistent with a small vessel necrotizing vasculitis. Over the next few days, his rash improved and his fever resolved. Repeat echocardiogram showed improvement in the size of his pericardial effusion with no hemodynamic compromise.

A serologic test returned and a diagnosis was made.

## Department of Internal Medicine Clinicopathologic Conference

December 14, 2006

### A 71-year-old Man with Fever and Rash



- Discussant:** Michael Kontos, M.D.  
Assistant Professor, Department of Medicine
- Radiologist:** John D. Grizzard, M.D.  
Assistant Professor, Department of Radiology
- Pathologist:** Patrick McDonough, M.D.  
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