

Explanation for Endocarditis with Confusion and Hand Pain

Teaching Points:

Infective endocarditis (IE) is an infection of the heart valves that can present insidiously. Risk factors include prosthetic heart valves, intracardiac devices, unrepaired cyanotic congenital heart disease, or prior history of IE. Fever is present in 80% of cases. Physical exam may reveal a new cardiac murmur or an old murmur that is worse. Immunologically mediated exam findings include Osler's nodes (figure 1) and Roth spots while vascular phenomena include Janeway lesions and subconjunctival hemorrhages (figure 2). Transthoracic echo (TTE) is typically performed first in an attempt to identify vegetations and complications such as abscess or fistula formation and cardiogenic shock or pulmonary edema. TEE is performed in the setting of high clinical suspicion with inconclusive TTE findings. In addition to infectious and mechanical cardiac complications, IE may cause embolization to the nervous system, lungs, spleen, kidney, or extremities. Treatment with antibiotics is initiated after obtaining blood cultures, and the regimen and length of treatment are dependent on culture and sensitivity data and the type of valve. In 80% of cases, staphylococci and streptococci are the causative organisms. Surgery may be indicated in cases of infectious complications, heart failure, or embolic phenomena.

Our patient had multiple manifestations of IE—a new murmur, microscopic hematuria, Osler's nodes, and subconjunctival hemorrhages. She was treated with IV ceftriaxone for 6 weeks. Surgery was considered given the possibility of cardiac abscess but deferred given the patient's age and comorbidities. Her hand pain improved with antibiotics, and TTE after 1 month of IV antibiotics demonstrated only thickening of the prosthetic MV and AV leaflets but no vegetations.

References:

Hoen, B and Duval, X. "Infective Endocarditis." *The New England Journal of Medicine*, 368: 1425-33. April 11, 2013.