Histoplasma Infection of Aortofemoral Bypass Graft

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Abstract: *Histoplasma* infection of vascular grafts is extremely rare. To our knowledge, there are only 4 cases reported with *Histoplasma capsulatum* infection of the aortic graft. All had previous disseminated histoplasmosis and atherosclerotic peripheral vascular disease. They were treated surgically with explantation of the infected graft and reimplantation of new graft in extra-anatomic uninfected site. The authors present a new case of *H capsulatum* infection of aortofemoral bypass graft, but unlike the other cases, this case was managed without surgical intervention.

Key Indexing Terms: *Histoplasma*; Aortofemoral bypass graft; Vascular graft infection. **[Am J Med Sci 2014;347(5):421–424.]**

Vascular graft infections by fungal organisms are rare, and to our knowledge, only 4 case reports of *Histoplasma* infections appear in literature to date. We report a new case of aortofemoral bypass prosthetic graft infection caused by *Histoplasma capsulatum*.

CASE PRESENTATION

A 68-year-old white man with medical history of coronary artery disease status post bare metal stent placement in right coronary artery in January 2011, peripheral artery disease status post aortafemoral bypass surgery in 2000, hypertension, and hyperlipidemia presented to our facility with retrosternal chest pain relieved by sublingual nitroglycerin. Additionally, he reported an unintentional weight loss of 40 pounds in the last 6 months, night sweats, dry cough, and generalized fatigue. He was born and raised in Missouri and moved to Oklahoma at the age of 16 years. He used to do construction work and farming. He smoked 1 pack per day for 48 years and drank alcohol occasionally.

On presentation, his vital signs were unremarkable and he was afebrile. Physical examination demonstrated splenomegaly and pulsatile mass over right femoral region. No abdominal or femoral bruit was appreciated. Based on history and risk factors, he was evaluated for an acute coronary syndrome; however, this was ruled out by electrocardiogram and cardiac enzymes. Additionally, a myocardial perfusion scan demonstrated no evidence of any ischemia and a left ventricular ejection fraction of 70%. Chest radiograph was unrevealing (Figure 1). Laboratory studies revealed a white blood cell count of 1,500 cells per cubic millimeter (reference range, 4,000–11,000/mm^3), hemoglobin of 11.7 g/dL (reference range, 12–16 g/dL), and platelet counts of 119,000/mm^3 (reference range, 140,000–440,000/mm^3). Electrolytes and creatinine were within normal limits. Erythrocyte sedimentation rate was 37 mm/hr (reference range, 12–19 mm/hr). Peripheral blood smear revealed decreased numbers of platelets and rare small platelet clump, normocytic normochromic appearance of the red blood cells, and diminished number of both neutrophils and lymphocytes. No immature white cells were noted. Bone marrow biopsy showed hypocellular marrow and few granulomas. Staining for acid-fast bacteria and fungi was negative. Positron emission tomography or computed tomography (CT) scan was essentially negative except for splenomegaly and mild diffuse splenic uptake. Additional tests that were unrevealing included antinuclear antibody, VDRL, hepatitis profile, HIV panel, fungal serology, and urine and serum *Histoplasma*

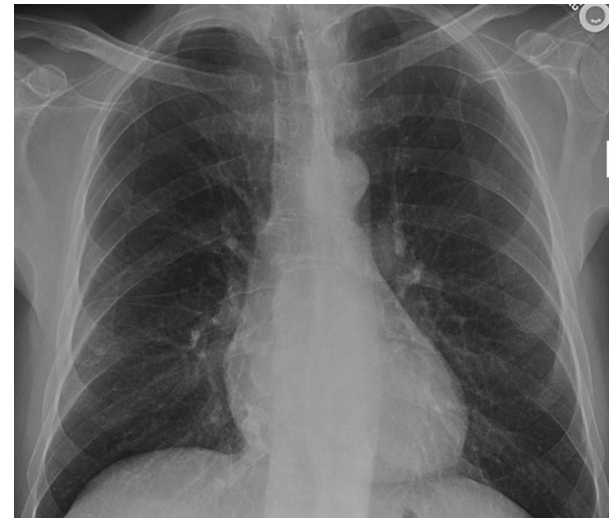

FIGURE 1. Chest x-ray.

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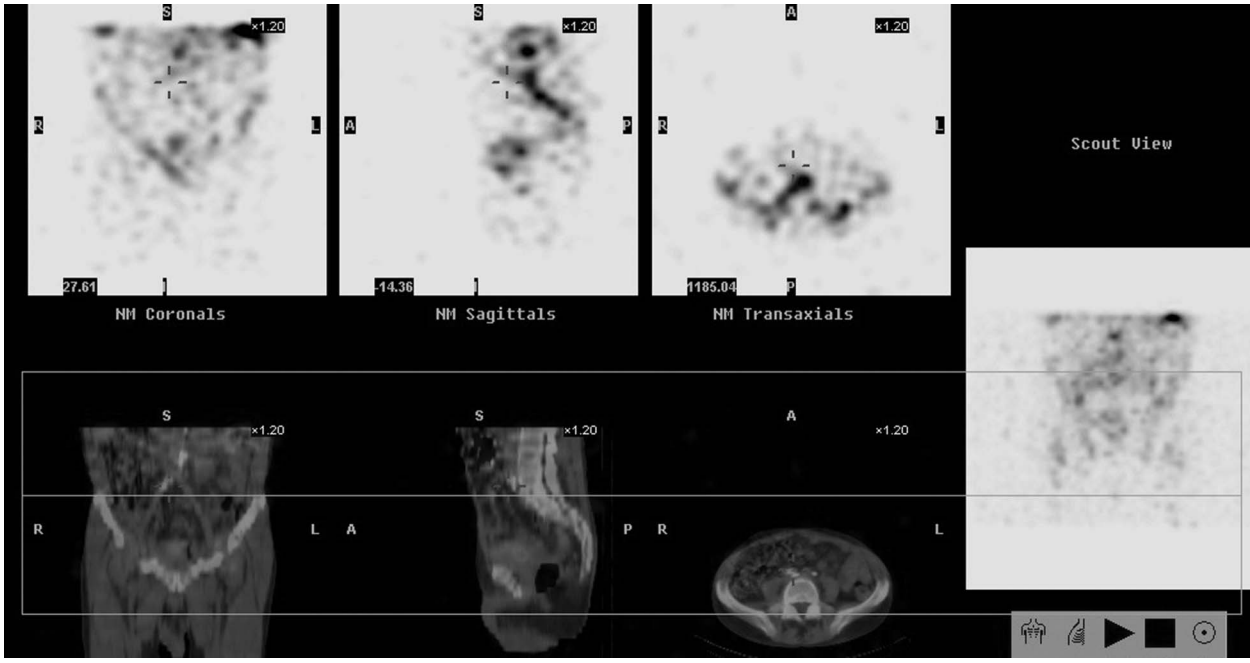

FIGURE 2. First tagged white blood cell scan shows no evidence of infection in right femoral pseudoaneurysm.

antigen. Duplex ultrasonography of the pulsatile right groin mass revealed 2.5 × 4.4 × 6.6-cm hematoma along with a common femoral artery pseudoaneurysm extending into hematoma without any obliteration of flow. Vascular medicine recommended that the pseudoaneurysm should be treated conservatively with sand bag compression and aggressive control of hypertension. He was discharged home with follow-up, with vascular medicine. Twenty-five days after discharge, the laboratory reported that his admission blood culture was growing *H capsulatum*.

With the blood culture findings, his clinical picture suggested subacute, progressive, disseminated histoplasmosis and he was readmitted for initiation of liposomal amphotericin B. However, this therapy had to be discontinued because he had chest pain and hypotension during the 1st infusion. Therefore, itraconazole 200 mg twice daily was initiated. A tagged white blood cell scan was performed to determine whether the pseudoaneurysm was also infected. This scan demonstrated no signs of infection (Figure 2). Finally, he was discharged home on

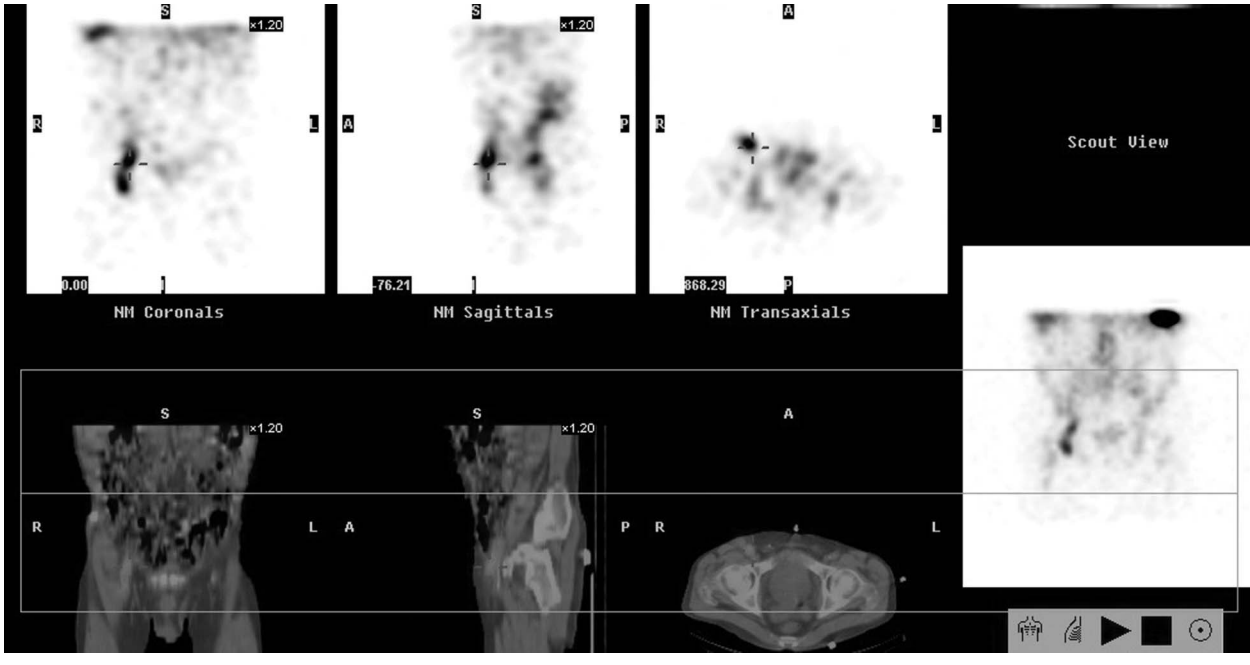

FIGURE 3. Second tagged white blood cell scan shows uptake in right femoral pseudoaneurysm. NM, nuclear medicine.