A RARE CASE OF CULTURE NEGATIVE WHIPPLE'S ENDOCARDITIS

ABIGAYLE SULLIVAN DO* EMILY ZAGORSKI SIJAN BASNET AND RONALD HERB

INTRODUCTION: Whipple’s disease is a rare opportunistic infection (1 out of 1,000,000). The classical presentation of Whipple’s disease involves joint arthropathy (migratory oligoarticular or polyarticular) and digestive disorders (diarrhea and weight loss). Cardiovascular disease involvement is noted about one third of the time (pericarditis, congestive heart failure [CHF], or rarely culture-negative endocarditis). This case highlights the importance of a high clinical index of suspicion for Tropheryma whipplei culture-negative endocarditis, in the setting of rheumatologic disease and abrupt worsening of cardiac function, without overt gastrointestinal symptoms.

CASE PRESENTATION: An 84-year-old man with past medical history of prostate cancer, polymyalgia rheumatica (PMR), cryptogenic stroke, and mild mitral valve prolapse of posterior mitral valve leaflet was admitted for severe mitral insufficiency with recent acute CHF symptoms. Documented diagnosis of PMR occurred 18 months prior to acute CHF symptoms, for which the patient was treated with continuous, extensive prednisone taper, starting at 15 mg daily. Clinical presentation of acute CHF and transthoracic echocardiography showing myxomatous degeneration of posterior mitral leaflet, partially flail, with severe mitral regurgitation, prompted evaluation by cardiothoracic surgery. Patient underwent mitral valve repair and pathology was suggestive of nonbacterial thrombotic endocarditis with vegetative studding of mitral valve anterior leaflet. Serum polymerase chain reaction for T. whipplei was negative and the patient was initially treated with intravenous vancomycin and cefepime. Antibiotic regimen transitioned to intravenous ceftriaxone 2gm daily and ampicillin-sulbactam 3 gm every 6 hours for 6 weeks for seronegative endocarditis of unknown etiology. Genome sequencing of valvular tissue detected T. whipplei deoxyribonucleic acid (DNA) with 16s ribosomal ribonucleic acid (rRNA) gene primer set and Periodic acid-Schiff (PAS) staining was positive. This case of Whipple’s endocarditis is currently being treated with trimethoprim-sulfamethoxazole for an anticipated 12 months.

DISCUSSION: This case illustrates the importance of considering T. whipplei as a causal agent of culture-negative endocarditis, especially in the presence of rheumatologic disease and absence of overt gastrointestinal symptoms. Furthermore, in cases of recently diagnosed rheumatologic disease with iatrogenic immunosuppression, risk factors for T. whipplei exposure should be evaluated. The limitations of serum polymerase chain reaction assay as a diagnostic tool for T. whipplei further supports a high suspicion should be maintained in culture-negative endocarditis.

CONCLUSIONS: A history of culture-negative endocarditis, in the presence of recently diagnosed and treated rheumatologic disease, without gastrointestinal symptoms should raise suspicion for Whipple’s Endocarditis.


DISCLOSURES: No relevant relationships by SIJAN BASNET, source=Web Response
no disclosure on file for Ronald Herb;
No relevant relationships by Abigail Sullivan, source=Web Response
No relevant relationships by Emily Zagorski, source=Web Response

DOI: https://doi.org/10.1016/j.chest.2019.08.135

Copyright © 2019 American College of Chest Physicians. Published by Elsevier Inc. All rights reserved.