Abstract for Case Report

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Title: The Silent Saboteur: A Case of Infective Endocarditis With Misleading Signs

Introduction:

Infective endocarditis (IE) is a life-threatening condition that sometimes presents with non-specific symptoms, complicating early diagnosis. It requires a high index of suspicion, especially in patients presenting with common infections such as urinary tract infections (UTIs), who exhibit unusual clinical signs like refractory hypotension and persistent fever. This case report underscores the importance of considering alternative diagnosis and highlights the crucial role of bedside echocardiography in the emergency department (ED) .

Case Presentation:

A 44-year-old man with no known comorbidities presented to the ED with symptoms of a UTI despite completing a course of antibiotics. On arrival, the patient was hypotensive. Despite adequate fluid resuscitation, his blood pressure remained low, necessitating inotropic support. Urine analysis revealed a positive nitrite test, indicating a bacterial infection. During the assessment of hydration status, a bedside Point-of-Care Ultrasound (POCUS) incidentally discovered vegetation on the anterior leaflet of the mitral valve. This unexpected finding led to the diagnosis of infective endocarditis. Although blood cultures showed no growth, the patient’s persistent temperature spikes and need for inotropic support reinforced the diagnosis of culture-negative infective endocarditis. He was started on intravenous antibiotics. A follow-up echocardiogram after the completion of antibiotic therapy showed the resolution of the mitral valve vegetation

Discussion:

Infective endocarditis (IE) occurs when bacteria or fungi enter the bloodstream and attach to damaged heart areas, commonly the mitral and aortic valves. In this case, the UTI likely led to bacteremia, which caused IE. UTIs, often caused by Escherichia coli, can ascend from the urethra to the bladder and kidneys, sometimes entering the bloodstream and reaching the heart, particularly if there is preexisting cardiac damage. This leads to the formation of vegetations on the heart valves, resulting in IE. The progression from UTI to IE poses a diagnostic challenge, emphasizing the importance of bedside echocardiography in the ED.

Conclusion:

This case illustrates the presentation of IE can be atypical, even in patients with common infections like UTIs. It underscores the invaluable role of POCUS in the early detection and treatment of serious conditions that might be missed with standard diagnostics.

Keywords: Infective endocarditis, Point-of-Care Ultrasound (POCUS), Bedside Echocardiography

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