Introduction

Prosthetic valve endocarditis makes up 20% of all cases of endocarditis. Furthermore, the sensitivity of a Transesophageal Echocardiogram (TEE) in finding abnormalities in subacute bacterial endocarditis is 85-90% and the specificity is around 90%. On the other hand, a Transthoracic Echocardiogram (TTE) has a sensitivity of 45-75% and specificity from 85-98%. Thus, the rationale for obtaining a TEE after a negative TTE is due to the poorer sensitivity of the TTE. The current expert recommendation is that TEE should be the preferred diagnostic tool over a TTE for infectious endocarditis after a failed TTE.

Case Report

A 66-year-old male underwent a successful bovine aortic valve replacement in 2013. In 2015, the patient was admitted to the hospital with neurological symptoms consistent with a TIA. He had a standard work up for TIA which included a TTE. All of the tests were unremarkable and he was discharged home on clopidogrel. Two weeks later, the patient came into the hospital with right knee pain and the old valve was cultured and grew Pseudomonas aeruginosa despite antibiotics. Subsequently, the patient transferred to a tertiary care center where a third TEE was performed which was still negative for bacterial endocarditis because of the two negative TTEs.

This case demonstrates that even when testing appears to be “normal,” the patient’s physical examination and history can lead the clinician to the appropriate diagnosis.

Discussion

Interestingly, despite the high sensitivity and specificity associated echocardiography, no abnormalities were appreciated on the three TEEs performed in this patient. Another puzzling element to this case is when testing appears to be “normal,” the patient’s physical examination and history can lead the clinician to the appropriate diagnosis.

Conclusions

- TEEs are superior compared to TTEs when diagnosing bacterial endocarditis. However, TEEs will not catch all cases of bacterial endocarditis and care should be made to evaluate the entire clinical picture.

References


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For Further Information

Christopher Fiorina
Email: cf@pcom.edu
Cell: 724-996-3600