Reviewer’s report

Title: Aspergillus Mural Endocarditis Presenting With Multiple Cerebral Abscesses

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Reviewer: Rajesh Sekar

Reviewer's report:

This is a well-written case report on Aspergillus endocarditis with isolated mural involvement and without any valvular involvement in a host with an underlying hematological malignancy. Given the high mortality and poor clinical prognosis associated with Aspergillus endocarditis, any discussion highlighting the diagnostic and treatment approaches of this rare and fatal condition will certainly be of interest to readers across multiple clinical specialties and, more importantly, to the readers of Journal of Cardiothoracic Surgery. With a concise presentation of Aspergillus endocarditis in a host with an underlying hematological malignancy, the authors provide a brief review of the literature and well-summarized discussion on the prevalence, predisposing factors, diagnostic approaches, and treatment modalities for Aspergillus endocarditis. Given that diagnosis of Aspergillus endocarditis is challenging and requires a high index of clinical suspicion, I find the case report providing valuable learning points in this regard - the use of galactomannan antigen assay as an adjunctive test in the setting of blood cultures that are almost always negative, transesophageal echocardiography as part of the routine workup, and the use of histological and tissue culture confirmation as the gold standard of diagnosis. The case report also highlights that treatment of Aspergillus endocarditis requires the combination of early antifungal therapy and aggressive surgical debridement for any chance of survival. Previous studies have also confirmed that surgical debridement is imperative for the survival of almost all cases of Aspergillus endocarditis. The initial diagnostic approach including the echocardiogram finding of a pedunculated mass in the inferior wall of the left ventricle, intra-operative finding of a smooth mass adherent to the wall of the left ventricle, details on the dose and regimen of antifungal therapy, and final histopathologic findings are well presented in a succinct fashion. In conclusion, I find this case report providing valuable learning points with a clear discussion and relevant references on a rare and highly mortal subset of fungal endocarditis, namely, Aspergillus endocarditis. I'm confident that the readers of Journal of Cardiothoracic Surgery will certainly find this case report to be very informative and I highly recommend this case report for publication in the Journal of Cardiothoracic Surgery.

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