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native valve endocarditis caused by aspergillus fumigatus, management dilemma

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Topic(s):
Acute Cardiac Care – CCU, Intensive, and Critical Cardiovascular Care

Citation:
Fungal endocarditis (FE) is the most serious form of infective endocarditis (IE) accounting for approximately 50% mortality rate associated with predisposing host conditions. Despite the optimal therapeutic strategies, the survival rate remains low. Brain abscess is considered a complex complication of IE. FE is mostly caused by Candida albicans and Aspergillus fumigatus. The most essential identified risk factor for Aspergillus endocarditis is previous valvular surgery, which was found in 40% to 50% of the cases. However, native valve FE caused by Aspergillus is not common, and only few cases have been reported.

We hereby report a case of native valve FE caused by Aspergillus Fumigatus with complications following Wegener's disease, and treated prostate cancer. Presented with a brain abscess that manifested as a one-month history of headache with changes in vision, loss of taste, and weakness. During investigations, brain MRI showed right frontal abscess, but surgical drainage was delayed after the patient refused initially. Suddenly, the patient had a stroke and a right frontal craniotomy with excision of the brain lesion were done. Drained culture showed Aspergillus fumigatus, and voriconazole was initiated. Later, echocardiography was done and showed large vegetation seen on the anterior mitral leaflet. Due to the patient’s several risk factors, including recent stroke, low platelet count, steroid-induced immunosuppression and renal impairment, a multidisciplinary meeting was set, and finally, the cardiac surgeon accepted the case. Eventually, a replacement of the mitral valve with bio-prosthesis was done. The patient survived after successful management with the combination of surgical and medical therapy.

In 2016 update of the infectious Diseases Society of America guidelines for the management of aspergillosis, Voriconazole or Amphotericin as initial therapy was strongly recommended for the treatment of Aspergillus endocarditis, along with early surgical intervention. However, there conflicting data on the prognosis between the combination therapy and medical therapy only. It is recommended in the literature that the medical approach should be combined with surgical one for better treatment of Candida endocarditis and has the potential to improve outcome. Despite that, there seems to be lack of understanding and experience in regard to the diagnosis and the treatment of native valve Aspergillus endocarditis. However, early diagnosis with the help of a serum test, early medical treatment with highly efficacious Voriconazole, and appropriate indication of surgical debridement might increase the chance of survival.

Aspergillus endocarditis is a rare fatal fungal infection. Despite the advancement in molecular technology and imaging studies, the course of this condition and delayed clinical recognition remain an obstacle. Clinicians should be alert to this condition to accomplish better outcome.
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