Invasive aspergillosis is an opportunistic infection with a high mortality rate that usually occurs in the immunocompromised host. Several cases of fungal infections have been reported after cardiac surgery. We present here a case of Aspergillus fumigatus tricuspid valve endocarditis associated with permanent pacemaker leads. Tricuspid valve vegetectomy was done and the pacing leads were also removed. Culture from the excised vegetation grew Aspergillus fumigatus. The patient was started on IV Amphotericin B for eight weeks. The patient was subsequently followed up in the out-patient clinic, and remains afebrile after one year, with no evidence of any vegetation.

**ABSTRACT**

Invasive aspergillosis is an opportunistic infection with a high mortality rate that usually occurs in the immunocompromised host. Several cases of fungal infections have been reported after cardiac surgery. We present here a case of Aspergillus fumigatus tricuspid valve endocarditis associated with permanent pacemaker leads. Tricuspid valve vegetectomy was done and the pacing leads were also removed. Culture from the excised vegetation grew Aspergillus fumigatus. The patient was started on IV Amphotericin B for eight weeks. The patient was subsequently followed up in the out-patient clinic, and remains afebrile after one year, with no evidence of any vegetation.

**KEYWORDS**: Aspergillus, endocarditis, invasive aspergillosis, fungal endocarditis, tricuspid valve vegetectomy.

**Introduction**

Invasive aspergillosis is an opportunistic infection with a high mortality rate that usually occurs in the immunocompromised host. Several risk factors have been associated with the acquisition of invasive aspergillosis, including neutropenia, cardiac surgery, organ transplantation and prolonged treatment, with high doses of corticosteroids or antineoplastic and immunosuppressive agents. Several cases of fungal infections have been reported after cardiac surgery. The incidence of infective endocarditis in valvular prosthesis ranges from 7 to 25%. The higher risk period comprises of the first six months following valvular replacement, with an incidence of prosthetic valve endocarditis ranging from 1.4 to 3.1% in the first year and decreasing to 0.35% after one year. Fungi may account for up to 10% of the cases, with a predominance of Candida albicans and Aspergillus spp. The major predisposing factors for fungal infection are cardiac surgery, the use of intravenous drugs, prolonged intravenous antibiotic therapy, parenteral nutrition and severe immunosuppression.

**Case Report**

A 65-year-old male presented with complaints of moderate-to-high grade fever for the past four months in the emergency. He was a known case of coronary artery disease, hypertension and type 2 diabetes mellitus, controlled on diet. He had undergone a previous coronary artery bypass graft five years ago, and had also had a permanent pacemaker implantation five years ago at a different hospital. He was admitted to the hospital for evaluation of the pyrexia and further management. On physical examination at presentation, the patient's temperature was 100°F and blood pressure was 106/68 mm Hg. His heart rate and respiratory rate were 100/min and 20/min, respectively. Ejection systolic murmur in the mitral area was heard, with no other significant findings. The cardiovascular system was normal. Initial laboratory findings revealed a white blood cell count of 16,700/mm³, with a normal temperature and blood pressure. His white blood cell count was normal but with a predominance of neutrophils. His platelet count was also normal. His blood urea and creatinine were 73 mg/dL and 1.5 mg/dL, ESR was 50, and CRP was 15.4 mg/dL.

**Discussion**

Fungal infection following implantation of a cardiac prosthesis is rather poor, and hardly exceeds 50%. Fungi may account for up to 10% of the cases, with a predominance of Candida albicans and Aspergillus spp. The major predisposing factors for fungal infection are cardiac surgery, the use of intravenous drugs, prolonged intravenous antibiotic therapy, parenteral nutrition and severe immunosuppression. After cardiac surgery, the incidence of fungal endocarditis is rather poor, and hardly exceeds 50%.

**References**