An enormous fungal vegetation of the tricuspid valve: a cardiac surgical repair with a CorMatrix valve

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A 36-year-old white man was admitted to a rheumatology department with suspicion of antiphospholipid syndrome. Three months before hospitalization, he experienced pulmonary embolism. His medical history included acute necrotizing pancreatitis complicated by cardiorespiratory failure and total hip replacement following avascular necrosis of femoral head. On admission, the patient complained of fatigue, fever, sweating, and cough with minor hemoptysis. Blood tests showed increased levels of inflammatory markers. Transthoracic echocardiography, performed during the diagnostic workup of recurrent fever, revealed a floating mass (30 × 30 mm in size) on the tricuspid valve, causing mild regurgitation with no signs of obstruction (tricuspid regurgitation peak gradient, 29 mm Hg) (FIGURE 1A). An immediate consultation with a cardiac surgeon was recommended, and the patient was referred for urgent surgical debridement. During the procedure, an infectious vegetation was revealed and a biological CorMatrix conduit was implanted (FIGURE 1B) (maximal pressure gradient, 7 mm Hg; mean pressure gradient, 3 mm Hg).

Initially, an empirical antibiotic therapy was prescribed (ampicillin, gentamicin, and cloxacillin), according to the European Society of Cardiology guidelines. The intraoperative tissue was sent for histopathologic examination, and the culture was positive for *Candida tropicalis*. *Candida tropicalis* was also grown from prolonged (3-week long) blood cultures taken on admission. Moreover, the patient's medical history revealed that the fungi were also grown from the blood culture during treatment of acute pancreatitis in 2014, which confirmed recurrent systemic fungal infection.

Antifungal therapy included a 2-week course of amphotericin B with flucytosine, followed by 4 weeks of flucytosine monotherapy. Fluconazole was prescribed as a long-term therapy.

Infective endocarditis of the right heart is usually associated with intravenous drug abuse,[1,2]

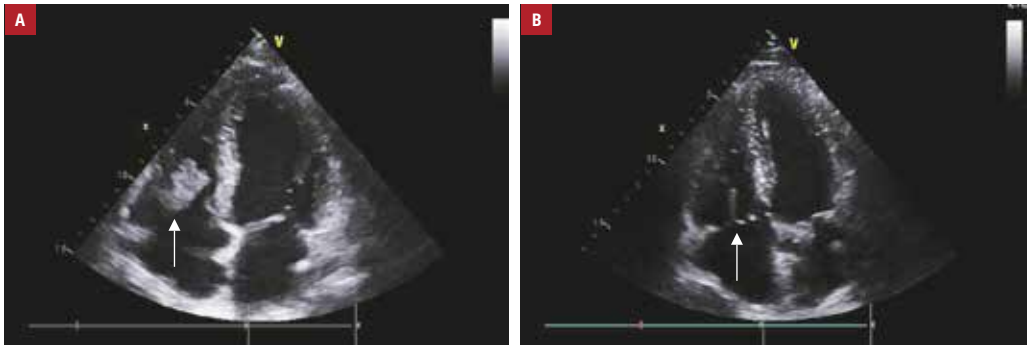

FIGURE 1 Transthoracic echocardiogram (4-chamber view): **A** – a mass on the tricuspid valve (arrow); **B** – a CorMatrix tricuspid valve (arrow)

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but the patient denied the use of drugs. One of the clinical signs of infective endocarditis is pulmonary embolism,[2] which the patient experienced a few months before admission. Moreover, the patient was suspected of antiphospholipid syndrome (later excluded), which may be associated with Libman–Sacks endocarditis.[3] However, in most cases of Libman–Sacks endocarditis, vegetations are smaller and sterile, and they primarily affect the mitral or aortic valve, rarely the tricuspid valve.

Fungal infection accounts for less than 1% of all infective endocarditis cases, and it is associated with a high mortality rate (>50%).[1] The most common organisms responsible for fungal endocarditis are *Candida albicans*, *Aspergillus* species, and *Histoplasma capsulatum*.[1] Fungal endocarditis usually affects people with immunodeficiency disorders such as AIDS, those on immunosuppressive therapy, and patients with hematologic disorders.[1] Treatment includes a combined antifungal therapy (for *Candida*, amphotericin B with flucytosine or echinocandin; for *Aspergillus*, voriconazole) following a cardiac surgery. Most of the reported cases of fungal endocarditis required a cardiosurgical intervention.[1,4] According to the European Society of Cardiology guidelines, a lifelong oral antifungal therapy should be considered.[1] A review of past cases showed that the average duration of antifungal therapy was between 1 and 2 years, and the disease recurred when the treatment was stopped.

Our patient underwent a surgery due to necrotizing pancreatitis a few years before the index hospitalization. Only 1 report of a patient with fungal tricuspid endocarditis (*Candida parapsilosis*) 2 years after abdominal surgery was found in the literature.[5]

ARTICLE INFORMATION

CONFLICT OF INTEREST None declared.

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