

A Severe but Predictable Complication of an Inflammatory Bowel Disease*

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ABSTRACT

We present a case report of broad medical interest since pertain to a severe but predictable complication of a not unusual disease as well as the inflammatory bowel diseases (IBD) whose incidence and prevalence are increasing worldwide and which require close-cooperation of different specialists to prevent severe complications.

Keywords: Infective Endocarditis; Inflammatory Bowel Disease; Floppy Mitral Valve

1. Introduction

Inflammatory bowel disease (IBD), a disease commonly encountered in modern society and whose frequency in developed countries has been increasing since the mid-20th century, can promote infective endocarditis (IE) by increasing transmucosal permeability and thus facilitating bacterial invasion to the bloodstream. Moreover, the need of immunosuppressive drugs and the use of invasive procedures and devices, such as central venous catheter (CVC), are additional promoting factors. With this Case Report we want to underline the importance of early diagnosis of cardiac abnormalities in patients with IBD, as well as the prophylaxis for IE when procedures possibly resulting in bacteremia are planned.

2. Case Report

A 50-year-old men was admitted to our medical unit because of recurrent febrile shivering episodes. Patient's history revealed an inflammatory bowel disease (IBD) diagnosed in 1985 as ulcerative pancolitis treated with total colectomy and ileo-rectal anastomosis in 1992 for fulminant colitis. Despite immunosuppressive therapy with a TNF inhibitor (adalimumab), multiple surgical re-interventions were required for bowel occlusions and enteric fistulae, leading to ileal resection and an ileostomy. Consequently a central venous catheter (CVC) Groshong was positioned for adequate fluids administra-

tion aimed at balancing the conspicuous gastrointestinal losses. Few months later a new hospitalization occurred for sepsis sustained by Meticillin Sensitive Staphylococcus Aureus (MSSA) treated for two weeks with linezolid and ciprofloxacin and with the removal of the CVC which resulted infected.

Two weeks after discharge fever relapsed and he was admitted to our hospital. Cardiovascular examination was unremarkable but for fever (38°C), with no clinical or radiological evidence of heart, lung or abdominal active diseases. Laboratory findings showed elevated inflammatory parameters and wide-spectrum antimicrobial therapy was started with meropenem, teicoplanin and fluconazole leading to a reduction of fever and a decrease of inflammatory markers. Several microbiological blood cultures showed growth of MSSA. After acute onset of ankle and hand pain, upon the suspicion of septic embolizations, a trans-thoracic echocardiography was urgently performed, revealing both mitral and tricuspidal large mobile vegetations on the atrial side of the anterior leaflets (2.2 × 1.1 and 1.6 × 1.0 cm, respectively), with moderate tricuspid regurgitation (**Figures 1(A)** and **(B)**), confirmed by a trans esophageal echocardiogram. No PFO or other intracardiac shunts were evident to justify a bilateral involvement. A total body CT-scan further demonstrated an asymptomatic splenic infarction. The large size of vegetations and the evidence of septic embolism required urgent cardiac surgery. Of relevance, an immediately preoperative STEMI occurred, secondary to new embolization. At surgical examination the mitral valve

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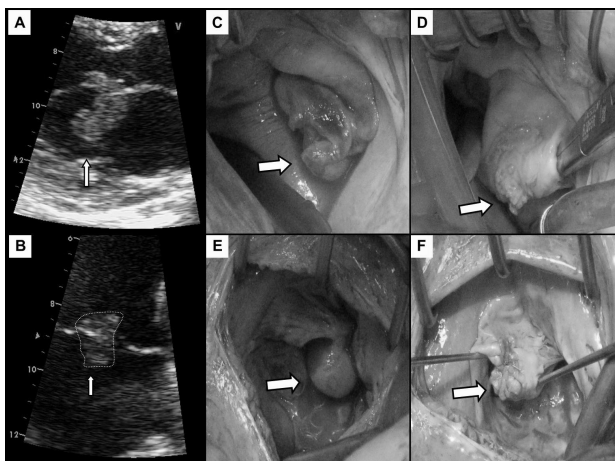


Figure 1. Trans thoracic echocardiogram showing mitral (A) and tricuspidal (B) large mobile vegetations on the atrial side of the anterior leaflets; vegetation on the anterior leaflet of the mitral valve (C); multiple erosions on the atrial surface of the free margin of the leaflet of the mitral valve (D); floppy vegetation of the tricuspid valve (E); the underlying coin lesion on the anterior leaflet was repaired by autologous pericardial patch (F).

appeared involved by a grossly gelatinous vegetation on the anterior leaflet (**Figure 1(C)**). After removal of the vegetation, multiple erosions on the atrial surface of the free margin of the leaflet (**Figure 1(D)**) required bio-prosthetic valve replacement. Tricuspid disease was characterized by a coin-lesion on the anterior leaflet under a floppy vegetation (**Figure 1(E)**). The true hole presented fibrotic margins as a sub-acute endocarditic process, so that repair was feasible by means of autologous pericardial patching (**Figure 1(F)**). Mitral leaflet pathology confirmed sub acute infective endocarditis (IE) and revealed a floppy valve due to myxomatous degeneration. Cultures of the vegetations confirmed the growth of MSSA.

The patient was discharged 2 weeks after operation and he was treated with antimicrobial therapy (teicoplanin) for further 20 days. After six months he was in a good state of health.

3. Discussion

IBD, whose incidence and prevalence are increasing worldwide [1], can promote IE by increasing transmucosal

permeability and thus facilitating bacterial invasion to the bloodstream, by the immunosuppressive drugs regimen reducing the response to bacteria, by the need of repeated surgical interventions and the use of invasive procedures and devices, such as CVC [2-5]. Of interest, the rare bivalvular infection in this patient was predisposed by a primary form of myxomatous degeneration of the mitral valve revealed by pathologist (floppy mitral valve) which could have been easily identified previously with an echocardiogram.

Patients with history of chronic IBD (ulcerative colitis and Crohn's disease) should be considered at high risk for IE and the concomitant presence of mitro or tricuspidal valve prolapse should be always assessed. We underline the importance of minimizing both corticosteroid exposure and the use of permanent CVC. Furthermore, if invasive procedures or CVC are needed, the prophylaxis for IE should be mandatory particularly in presence of cardiac factors predisposing to IE (*i.e.* floppy mitral valve).

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