

A Case Report on Libman-sacks Endocarditis Superinfected

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Authors' contributions

All the authors contributed to the conduct of this work. All authors also declare that they have read and approved the final version of the manuscript.

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Case Study

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ABSTRACT

Libman-Sacks endocarditis is a rare cardiac manifestation systemic lupus erythematosus, in which there is a sterile vegetation in the heart valves. There is a significant risk of infective endocarditis. Our patient was a 63 year old woman with persistent fever with and generalized crusty, pruritic lesions. She was febrile at 38.9 °C, had a mitral systolic murmur 3/6 and aortic diastolic murmur 2/6. We have objectified an inflammatory syndrome, blood cultures were negative. The dosage of anti-nuclear antibody was positive with a mottled appearance, as well as anti-DNA antibodies. The Doppler echocardiography had objectified vegetations in the mitral, aortic and tricuspid valves. Clinical, biological and morphological improvements were obtained after antibiotic and corticosteroid combination. We can conclude that LibmanSacks endocarditis evolution is favorable in the absence of an associated antiphospholipid syndrome (APS). Always fear in all cases a superinfection. The treatment is based on the combination antibiotic-corticosteroid-synthetic antimalarial.

Keywords: Libman-sacks endocarditis; infective endocarditis; systemic lupus erythematosus.

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ABBREVIATIONS

CRP : C-reactive protein

PCT : Procalcitonin

PNN : polynuclear neutrophils

SLE : systemic lupus erythematosus

1. INTRODUCTION

Libman-Sacks endocarditis is defined by the existence of non-infectious vegetations developed especially on the mitral valve but also at the expense of other valves, pillars and chords. The fear is superinfection but also the occurrence in a context of anti-phospholipid syndrome that should always be sought. Our goal was to report a clinical case of superinfected Libman-Sacks endocarditis.

2. CASE REPRESENTATION

A 63-year-old woman, mother of 03 children, diabetic on oral antidiabetics for 10 years, and chronic renal failure at the hemodialysis stage for 3 years, is not known to have a valve disease, was hospitalized in the cardiology department at the Ibn Rochd University Hospital in Casablanca for a positive infectious assessment made of a C-reactive protein at 52 mg/l; Procalcitonin (PCT) = 4.91 ng/ml; white blood cells at 10 650 /mm³ predominantly Neutrophils at 9 079 / mm³.

She reported aggravating dyspnea and edema of the lower limbs that had progressed for 01 month, evolving in a febrile context with deterioration of the general condition. There was no notion of palpitations, loss of consciousness, or chest pain.

Clinical examination found a patient with a blood pressure of 103/70 mmHg, a heart rate of 93 bpm, T° = 38.9°C, a holosystolic murmur at 3/6 at the mitral focus, a diastolic murmur at 2/6 in the aortic focus, without signs of heart failure. The pulses were present and symmetrical with no vascular murmur. Skin examination found crusty, generalized itching lesions and area of alopecia on the scalp. low back pain, with arthralgia in both upper limbs

The electrocardiogram showed a regular sinus rhythm without repolarization disturbances.

The presence of a mitral murmur led to the performance of a trans-thoracic echocardiography, which objectified a cavitory image on the atrial side of the large mitral valve suggesting either a false aneurysm or an abscess associated with moderate mitral insufficiency (Fig. 1), a vegetation on the right coronary cusp of the aortic valve measuring 30 mm long very mobile (Fig. 2) and a vegetation of 13 mm on the posterior leaflet of the tricuspid valve (Fig. 3).



Fig. 1. Abscess on the atrial side of the large mitral valve



Fig. 2. Vegetation on the right coronary cusp of the aortic valve measuring 30 mm in length



Fig. 3. Vegetation on the posterior leaflet of the tricuspid valve measuring 13 mm.

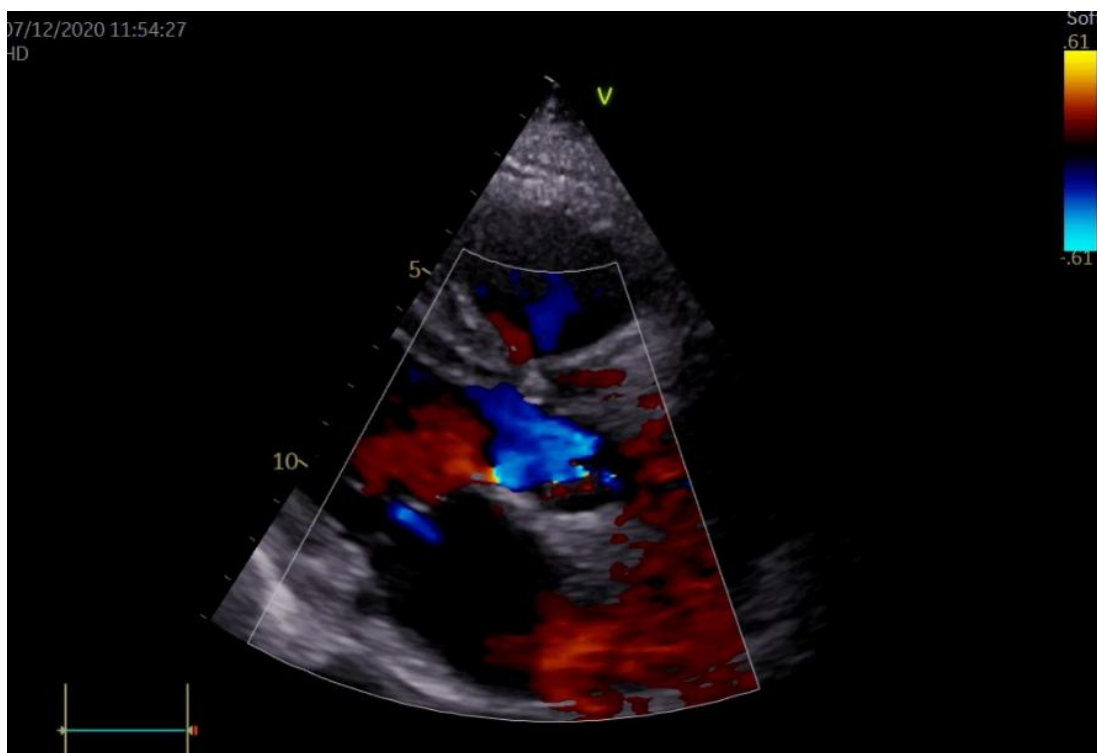


Fig. 4. Color Doppler image

Biologically, an inflammatory syndrome was noted with a CRP of 80 mg/l. The complete blood count showed anemia at 8.2g / dl normochromic aregenerative normocytic. The coombs'test was positive, with thrombocytopenia at 40,000 / mm³, leukocytes at 15,100 / mm³ including 4600 / mm³ of Neutrophils and 1470 / mm³ of lymphocytes. There was severe renal impairment with creatinine 37.5 mg / l (creatinine clearance 12 ml / min).

The infectious assessment showed positive blood cultures for staphylococcus coagulase negative.

The immunoassay confirmed the presence of high levels of antinuclear antibody at 1280 IU / ml and anti-DNA antibodies. The search for antiphospholipid syndrome (APS) was negative.

The diagnosis of infectious Libman-Sacks endocarditis was made based on clinical and biological.

Signs images of vegetations, positive blood cultures and positive immunoassay.

Probabilistic antibiotic therapy was started with Ceftazidime 2g and Vancomycin 800 mg both in

post-dialysis, corticosteroid therapy and synthetic anti-malarial drugs with a good clinical-biological evolution.

3. DISCUSSION

SLE is an autoimmune disease that causes inflammatory multiorgan lesions. Over the past several decades, with increasing survival and advances in diagnostic techniques, particularly echocardiography, SLE-associated heart disease has become more evident.

Valve disease is one of the main manifestations of Libman-Sacks endocarditis (LSE) and can occur as valve thickening, non-infectious masses or vegetations (LSE), regurgitation, or valve stenosis. [1]

Libman-Sacks endocarditis, known as non-bacterial endocarditis, is a cardiac manifestation characteristic of systemic lupus. Libman-Sacks vegetations develop mainly on the mitral valve, followed by the aortic valve, but can develop on any other valve, on the subvalvular apparatus or on the surface of the endocardium [1]. The vegetations are often small and are only seen on a transesophageal ultrasound, but larger

vegetations can also be seen [2,3]. Roldan et al. found a 43% prevalence of Libman-Sacks endocarditis in a series of 69 lupus patients by systematically performing a transesophageal ultrasound [4]. For other authors, Libman-Sacks endocarditis represents less than 10% of patients with lupus. This difference could possibly be explained by the systematic performance of transesophageal cardiac ultrasound in Roldan et al, unlike in the other authors.

The association of LSE and antiphospholipid syndrome has been extensively studied and has been reported in several studies [1,5,6], although others have found no association.

Pathological examination of the vegetations shows deposits of fibrin, an infiltrate of mononuclear inflammatory cells, fibrosis, neo-vessels and sometimes deposits of immunoglobulins and complement [7,8,9].

Differentiating between Libman-Sacks endocarditis and infectious endocarditis is mandatory. In this sense, three biological elements are important: white blood cell count, CRP level and blood cultures. Leukocytes tend to decrease during lupus activity, which is not the case in infective endocarditis. A high CRP level suggests an infectious cause, as lupus patients are less able to show an exuberant response of this protein. However, to settle the diagnosis, blood cultures are essential [2]. In our case, we had objectified a neutrophilic polynucleosis, a high CRP and positive blood cultures.

4. CONCLUSION

When the clinical and biological inflammatory syndrome persists under antibiotic therapy during infective endocarditis, the workup should be supplemented by testing for native antinuclear and anti-DNA antibodies, then for any associated antiphospholipid syndrome. In any case, during Libman-Sacks endocarditis, there is always the fear of bacterial superinfection. Treatment will therefore be based on the combination: antibiotics, corticosteroids and synthetic antimalarials.

CONSENT

Informed patient consent has been obtained and preserved by the author(s).

ETHICAL APPROVAL

As per international standard or university standard written ethical approval has been collected and preserved by the author(s).

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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Rakotoarimanana: Libman-Sacks

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