Multimodality Imaging of an Isolated Pulmonary Native Valve Infective Endocarditis Due to Staphylococcus Hominis

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INTRODUCTION

Isolated pulmonary IE is extremely rarely reported\(^{1,2}\). Moreover, the right side heart infectious endocarditis involves the tricuspid valve. The absence of predisposing factors (intravenous drug abuse, alcoholism or catheter related infection) makes difficult an early diagnosis especially in patients without underlying heart disease. Up to 2014, only few cases have been reported.

CASE REPORT

A 71-year-old man was admitted because of fever with a 4 kg weight loss during the last 8 weeks. Physical examination on admission was unremarkable with no sign of septic shock; no heart murmur was detected. Biological samples showed an inflammatory anaemia (haemoglobin: 10.3 g/dL, C-Reactiv Protein: 37 mg/L, fibrinogen: 6.2 g/L). Because of the fever, a systematic thoracic computed tomography scan was performed. It revealed an unexpected mass in the right ventricular outflow tract, with no lung abscess (Figure 1 A, B). Blood cultures were positive for staphylococcus hominis oxacillin sensible. Transthoracic echocardiography (Figure 1 C) showed a vegetation on the ventricular side of a pulmonary valvular leaflet. No valvular mutilation, no significant pulmonary regurgitation and no stenosis were seen. The tricuspid valve was vegetation free.

We confirmed the diagnosis of isolated pulmonary native valve infective endocarditis (IE) by transesophageal echocardiogram (TOE) (Figure 1 D). Three-dimensional (3D) live acquisitions showed a sessil mass attached to a three leaflets pulmonary valve (Figure 1 E, F). An intravenous (IV) antibiotic therapy (gentamycin for 2 days and penicillin M) was given for six weeks, and no cardiac surgery was mandatory. Negative CRP was obtained 3 days later and blood cultures remained sterile 5 days later.

DISCUSSION

Isolated pulmonary endocarditis is an extremely rare entity\(^{1,2}\).
Moreover, the right side heart endocarditis involves the tricuspid valve and comes on a specific terrain (drug abuse, IV catheter, cirrhotic). The absence of underlying heart disease makes difficult an early diagnosis\cite{3,4}. One case is described on a bicuspid pulmonary valve\cite{5}. The most common pathogens reported are staphylococcus aureus, streptococcus viridans and coagulase-negative staphylococcus\cite{5}. The involvement of enterococcus fecalis is reported in a few cases\cite{5}. Treatment cannot being based on current guidelines due to the rarity of this pathology. Specific management is needed, usually using antibiotics only. Sometimes surgical management is required to control sepsis. In our case the diagnosis was initially suspected by a thoracic CT scan, before being confirmed by TTE and TOE. As we show here multimodality imaging is required to manage this rare pathology, with the pivotal role of 3D TOE to confirm the absence of structural valvular disease.

List of abbreviations
IE: Infective endocarditis; IV: intravenous; TOE: transesophageal echocardiography; 3D: three-dimensional.

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CONFLICT OF INTERESTS
There are no conflicts of interest with regard to the present study.

REFERENCES

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