

A first reported aetiology of septic shock diagnosed with TEE and ultrasonic contrast agent

Julien Higny, Martin Benoît, Jean-Philippe Henry, Grégory Kalscheuer, Bénédicte Delaere, Isabelle Michaux, Laurent Jamart, Florence Dive & Maria-Luiza Luchian

To cite this article: Julien Higny, Martin Benoît, Jean-Philippe Henry, Grégory Kalscheuer, Bénédicte Delaere, Isabelle Michaux, Laurent Jamart, Florence Dive & Maria-Luiza Luchian (29 May 2024): A first reported aetiology of septic shock diagnosed with TEE and ultrasonic contrast agent, Acta Cardiologica, DOI: [10.1080/00015385.2024.2313933](https://doi.org/10.1080/00015385.2024.2313933)

To link to this article: <https://doi.org/10.1080/00015385.2024.2313933>



View supplementary material 



Published online: 29 May 2024.



Submit your article to this journal 



Article views: 16



View related articles 



View Crossmark data 

A first reported aetiology of septic shock diagnosed with TEE and ultrasonic contrast agent

Julien Higny^a, Martin Benoît^a, Jean-Philippe Henry^a, Grégory Kalscheuer^b, Bénédicte Delaere^c, Isabelle Michaux^d, Laurent Jamart^e, Florence Dive^f and Maria-Luiza Luchian^a

^aDepartment of Cardiovascular Disease, CHU UCL Namur, Yvoir, Belgium; ^bDepartment of Cardiac, Vascular and Thoracic Surgery, CHU UCL Namur, Yvoir, Belgium; ^cDepartment of Infectious Diseases, CHU UCL Namur, Yvoir, Belgium; ^dDepartment of Intensive Care Medicine, CHU UCL Namur, Yvoir, Belgium; ^eDepartment of Cardiovascular Disease, CHRSM - Site Meuse, Namur, Belgium; ^fDepartment of Intensive Care Medicine, CHU UCL Namur, Dinant, Belgium

ARTICLE HISTORY Received 26 January 2024; Accepted 30 January 2024

KEYWORDS Endocarditis; left atrial appendage; closure device; transesophageal echocardiography

Description

Septic shock of unknown origin represents a diagnostic challenge for critical care practitioners. Critical care echocardiography has become fundamental in the management of hemodynamically unstable patients. Transesophageal echocardiography (TEE) has gained importance, particularly in critically ill patients under mechanical ventilation. We illustrate a unique case of infective endocarditis of a left atrial appendage (LAA) occluder complicated with multiple organ failure. This complication has rarely been reported in the literature.

A 74-year-old man was admitted to our ICU for confusion, hypotension, dyspnoea and fever. Physical examination revealed an arthritis of the right wrist. Blood analysis demonstrated an inflammatory syndrome (CRP: 295 mg/L) with hyperleukocytosis (12,490/ μ L), kidney failure (creatinine: 2.06 mg/dL), lactic acidosis (pH: 7.31, lactate: 2.6 mmol/L) and staphylococcus aureus bacteremia. Lifesaving support included fluid

resuscitation, vasopressor, flucloxacillin, mechanical ventilation. The medical history included atrial fibrillation and interventional LAA closure. Transthoracic echocardiography was not contributive. TEE was performed for its incremental value in terms of diagnosis and monitoring. 2D imaging showed an anechoic mass (1.7 $\times$ 1.0 cm) located on the LAA occluder (Panel A/Video 1). Strikingly, contrast-enhanced TEE confirmed the circumscribed collection consistent with abscess (Panel B, Videos 2–3).

To our knowledge, this is the first reported case of septic shock with LAA closure device-associated endocarditis. The incidence of device-related infection is expected to rise because of the increase in percutaneous implantation of cardiac devices. Our experience demonstrates that TEE was key in diagnosis of this rarely reported cause of septic shock. Contrast-enhanced imaging played a pivotal role to illustrate these unique clinical images.

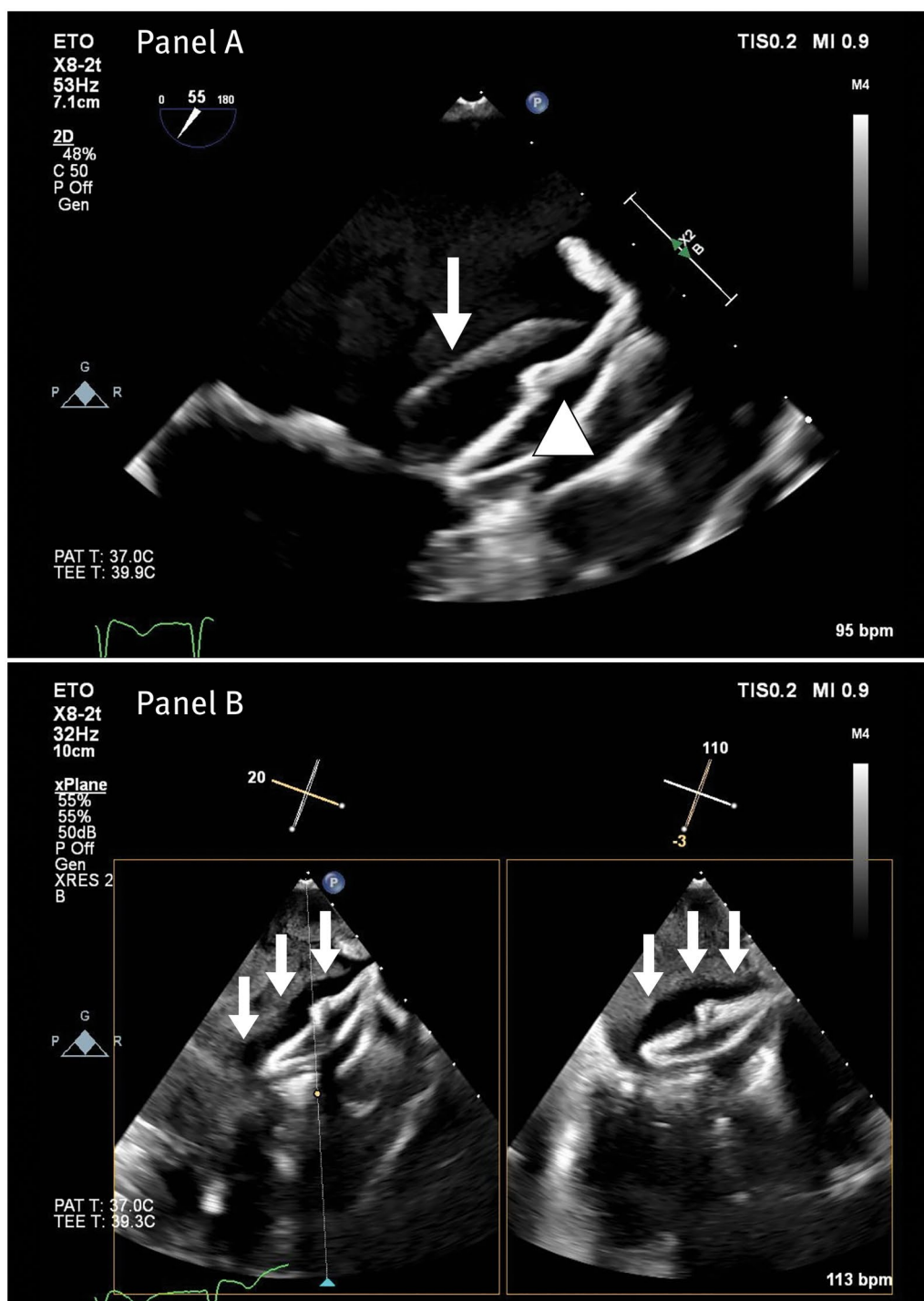


Figure 1. Panel A. TEE images of the LAA occluder illustrating an anechoic mass (arrow) consistent with abscess circumscribed with a pyogenic membrane (arrowhead). Panel B. Post- contrast-enhanced evaluation with xPlane demonstrating the circumscribed anechoic mass (arrows).

Disclosure statement

This manuscript has been approved by all authors and has not been previously published. To our knowledge, no conflict of interest, financial or other, exists.

Data availability statement

The data underlying this article are available in the article and in its [online supplementary material](#).