

## Two Precious Points in Cardiology

Helder Santos<sup>1\*</sup>, Hugo Miranda<sup>1</sup>, Inês Almeida<sup>1</sup>, Mariana Santos<sup>1</sup>, Joana Chin<sup>1</sup>, Lurdes Almeida<sup>1</sup>

<sup>1</sup>Cardiology Department, Centro Hospitalar Barreiro Montijo E.P.E, Barreiro, Portugal.

**Correspondence to:** Helder Santos, Cardiology Department, Centro Hospitalar Barreiro Montijo E.P.E, Barreiro, Portugal; E-mail: helder33689@gmail.com

**Received date:** July 21, 2020; **Accepted date:** July 29, 2020; **Published date:** August 5, 2020

**Citation:** Santos H, Miranda H, Almeida I, et al. (2020) Two precious points in Cardiology. J Med Res Surg. 1(4): pp. 1-2.

**Copyright:** ©2020 Santos H, et al. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution and reproduction in any medium, provided the original author and source are credited.

### Abbreviations:

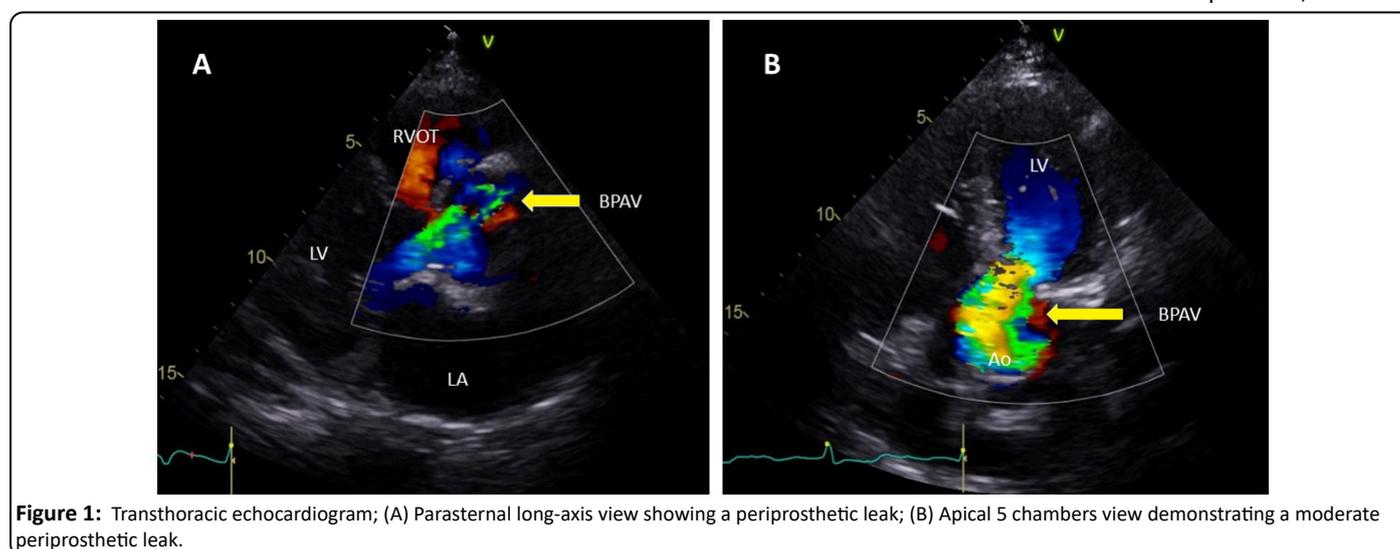
LA: Left Atrium; LV: left Ventricle; RVOT: Right Ventricular Outflow Tract, BPAV: Bio-Prosthesis Aortic Valve, Ao: Aorta; PA: Pulmonary Artery

### Clinical Image

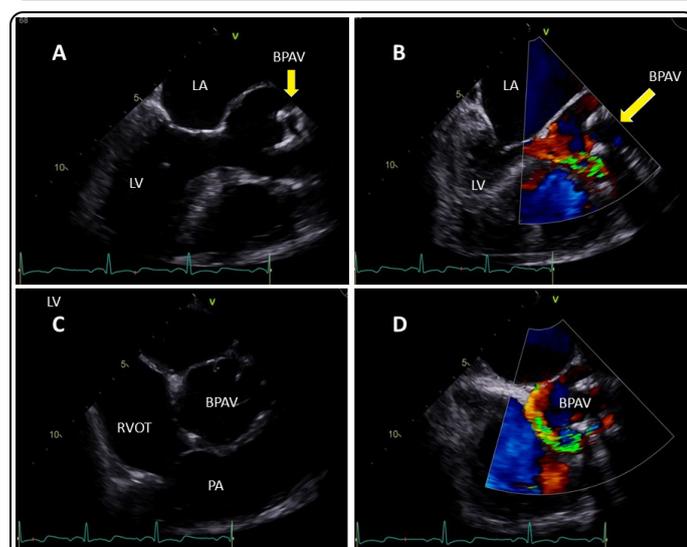
A 74 year-old women with medical history of aortic replacement for severe aortic stenosis with a bio-prosthesis six years before and chronic kidney disease. Presented in the cardiology outpatient clinic complaining of dyspnea to minimal exertion, in class II, until them always in class I NYHA. She underwent a

Transthoracic Echocardiogram (TTE), which showed a moderate periprosthetic leak, suggesting an anterior prosthetic valve dehiscence (Figure 1). Progressively increasing shortness of breath, paroxysmal nocturnal dyspnea, fatigue, being performed 4 months later a Transesophageal Echocardiogram (TEE) that revealed a supra-annular bio-prosthesis aortic implantation with severe valve dehiscence between the III and I hours associated with rocking motion (Figure 2). The patient was admitted and referred to cardiac surgery, being submitted to bio-prosthesis replacement.

Prosthetic valve dehiscence is a rare complication, that can



**Figure 1:** Transthoracic echocardiogram; (A) Parasternal long-axis view showing a periprosthetic leak; (B) Apical 5 chambers view demonstrating a moderate periprosthetic leak.



**Figure 2:** Transesophageal echocardiogram; (A) mid-esophageal long-axis demonstrating a supra-annular bio-prosthesis aortic implantation; (B) mid-esophageal long-axis showing a supra-annular bio-prosthesis aortic implantation associated to periprosthetic leak; (C) mid-esophageal short-axis view demonstrating a supra-annular bio-prosthesis aortic implantation; (D) mid-esophageal short-axis view showing a severe valve dehiscence.

in 0.1-1.3 % of patients undergoing aortic valve replacement (1). Generally, valve dehiscence is associated to infective endocarditis, with local destruction and several complications that conferred a poor prognostic to these patients (2). Non-infectious dehiscence can have different etiologies, since other infections to surgery complications and occur in the first months to several years later. The presence of rocking of the prosthesis is usually associated with 40% dehiscence and severe regurgitation (3). In clinical practice TTE is the exam of choice for the evaluation of cardiac valves, nevertheless in some cases the acoustic shadowing produced by the prostheses can underestimated the dehiscence and the prostheses dysfunction, should always considered the clinical status.

### Disclosure statement:

No funding was received in the publication of this article.

### Conflicts of interest:

None of the authors have any conflict of interest.

### Acknowledgements:

The authors thank to every health professionals in Centro Hospitalar Barreiro-Montijo E.P.E for the contribution to this report.

---

## References:

1. Tominaga R, Kurisu K, Ochiai Y, et al. (2005) A 10-year experience with the Carbomedics cardiac prosthesis. *Ann Thorac Surg.*79(3): pp. 784-789.
2. Vardas Pe (2009) Prosthetic aortic valve endocarditis complicated with annular abscess, sub-aortic obstruction and valve dehiscence. *Hellenic J Cardiol.*50(2): pp. 319-323.
3. Lancellotti P, Pibarot P, Chambers J, et al. (2016) Recommendations for the imaging assessment of prosthetic heart valves: a report from the European Association of Cardiovascular Imaging endorsed by the Chinese Society of Echocardiography, the Inter-American Society of Echocardiography, and the Brazilian Department of Cardiovascular Imaging. *Eur Heart J Cardiovasc Imaging.*17(6): pp. 589-590.