

IMAGE IN CARDIOLOGY

## Infective endocarditis complicated by aortic dissection and aorto-right ventricular fistula



### Endocardite infecciosa complicada por disseção aórtica e por fístula entre o ventrículo direito e a aorta

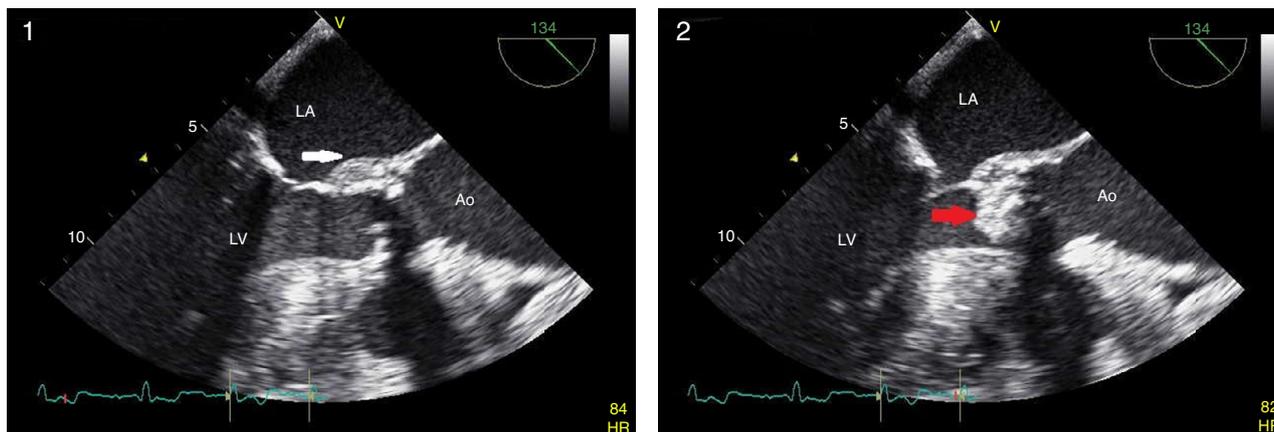
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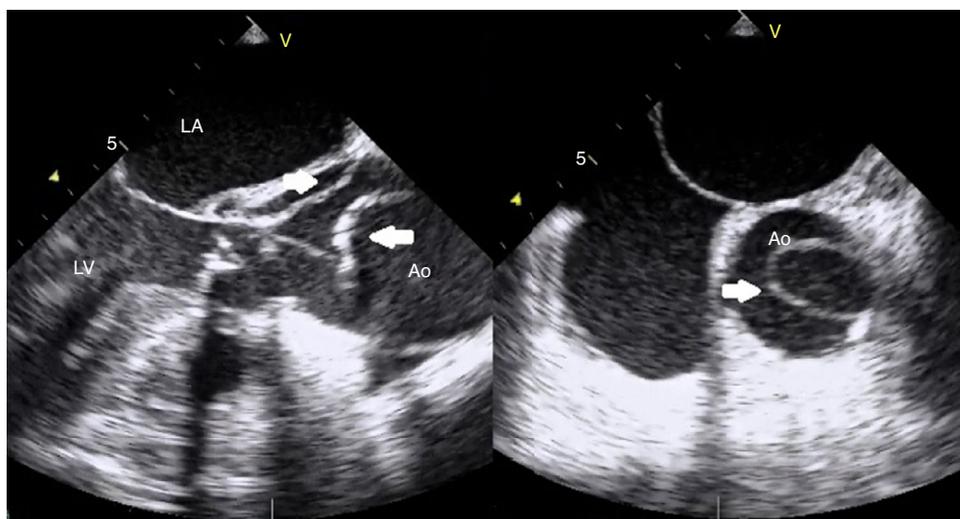
Infective endocarditis (IE) is a serious and complex disease with high morbidity and mortality. Heart failure, perivalvular extension and embolic events are well-known complications of IE. By contrast, the association of IE and acute aortic dissection (AAD) is extremely rare.

We present the case of an 83-year-old woman with hypertension, atrial fibrillation and recent hospitalization due to complicated urinary tract infection, who presented in the emergency department due to sudden depression of mental status. On physical examination she presented confusion,

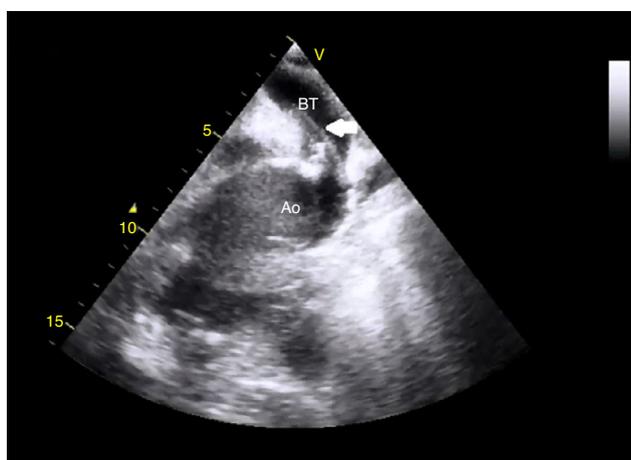


**Figures 1 and 2** Transesophageal echocardiogram showing aortic valve endocarditis with perivalvular abscess and dilatation of the ascending aorta. Ao: ascending aorta; LA: left atrium; LV: left ventricle; red arrow: vegetations; white arrow: perivalvular abscess.

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**Figure 3** Transesophageal echocardiogram showing acute dissection of the ascending aorta.



**Figure 4** Transthoracic echocardiogram showing aortic dissection extending to the brachiocephalic trunk. Ao: ascending aorta; LA: left atrium; LV: left ventricle; white arrow: intimal flap.

fever, a harsh systolic aortic murmur with associated diastolic murmur and mild signs of congestive heart failure. Head computed tomography revealed a recent ischemic area. Transthoracic followed by transesophageal echocardiography revealed multiple sessile masses on the ventricular surface of a calcified bicuspid aortic valve, compatible with vegetations; moderate aortic regurgitation; an image compatible with a perivalvular abscess; and severe (52 mm) dilatation of the ascending aorta, without intimal flap (Figures 1 and 2, Video 1). Transthoracic and transesophageal echocardiograms were repeated on the third day due to development of acute pulmonary edema, and

revealed a de novo aortic dissection extending from the aortic root to the brachiocephalic trunk (Figures 3 and 4; Videos 2 and 3), and a fistula from the aortic root to the right ventricle (Videos 4 and 5). The patient was referred immediately for cardiac surgery but considered unsuitable due to mental status; her clinical status deteriorated progressively culminating in death.

In this case, the patient presented with severe complications of IE. Associated aortic dissection is uncommon, with few cases described in the literature.

### Ethical disclosures

**Protection of human and animal subjects.** The authors declare that no experiments were performed on humans or animals for this study.

**Confidentiality of data.** The authors declare that no patient data appear in this article.

**Right to privacy and informed consent.** The authors declare that no patient data appear in this article.

### Conflicts of interest

The authors have no conflicts of interest to declare.

### Appendix A. Supplementary material

Supplementary material associated with this article can be found in the online version at <http://dx.doi.org/10.1016/j.repc.2016.08.012>.