

Herz 2015 · [Suppl 2] 40:181
 DOI 10.1007/s00059-013-4031-8
 Received: 17 November 2013
 Accepted: 22 November 2013
 Published online: 19 June 2014
 © Urban & Vogel 2014

Z. Wang · J. Hu · Y. Qin · X. Zhao

Department of Cardiovasology, Changhai Hospital, Second Military Medical University, Shanghai

Bicuspid aortic valve endocarditis complicated by ruptured sinus of Valsalva aneurysm

A 21-year-old man was admitted to our hospital with a high fever of 2-week duration. On physical examination, a grade 3/6 continuous murmur was heard in the left lower sternal border. Laboratory investigations revealed leukocytosis (white blood cell count, 29,800 /mm³; neutrophils, 90%) along with elevated C-reactive protein levels (45.1 mg/dl). Transthoracic echocardiography showed a bicuspid aortic valve (BAV) accompanied by perivalvular abscess; multiple vegetations of the aortic leaflet (14×12 mm) and anterior mitral leaflet (9×8 mm) were found.

A ruptured sinus of Valsalva aneurysm (SOVA) originating from the non-coronary sinus and communicating with the right atrium was seen. Color Doppler imaging confirmed the presence of an aorto-right atrial fistula (■ Fig. 1). The patient was transferred to the cardiothoracic surgery unit and prepared for surgery. The severely damaged valves were excised and replaced with mechanical valves, and the aneurysm was repaired

with a bovine pericardial patch. After surgery, the patient was given intravenous antibiotics for 6 weeks. His post-operative course was uneventful. He was doing well at the 3-month follow-up visit.

SOVA is usually congenital, but it can also occur secondary to infection, trauma, and other acquired cardiac diseases [1]. In our case, the patient's initial symptom was fever, followed by breathing difficulties after a few days. Thus, we infer that the aortic perivalvular abscess resulted in a ruptured SOVA. The prognosis of ruptured SOVA is poor and patients usually succumb to acute cardiac failure [2]. Early diagnosis and treatment are generally associated with a good outcome.

Corresponding address

Prof. X. Zhao
 Department of Cardiovasology,
 Changhai Hospital,
 Second Military Medical University
 168 Changhai Road,
 200433 Shanghai
 China
 liuchang081@126.com

Conflict of interest. Z. Wang, J. Hu, Y. Qin, and X. Zhao state that there are no conflicts of interest.

The accompanying manuscript does not include studies on humans or animals.

References

1. Goldberg N, Krasnow N (1990) Sinus of Valsalva aneurysms. *Clin Cardiol* 13(12):831–836
2. Moustafa S, Mookadam F, Cooper L et al (2007) Sinus of Valsalva aneurysms—47 years of a single center experience and systematic overview of published reports. *Am J Cardiol* 99:1159–1164



Fig. 1 **a** Transthoracic echocardiography (TTE; angled parasternal long-axis view) showing vegetations on the aortic leaflet and anterior mitral leaflet. **b** TTE (four-chamber view) showing a sinus of Valsalva aneurysm (arrows) with a characteristic “wind-sock” arising from the aortic root. **c** Color Doppler imaging (four-chamber view) showing a sinus of Valsalva aneurysm (arrows) arising from the noncoronary sinus and bulging into the right atrium