Kardiovaskuläre Medizin 2006;9:238

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Straight into the heart: Sinus of valsalva injury

Case description

A healthy 19-year-old patient was admitted to the emergency department after a knife attack. In the physical examination of the patient a new systolic-diastolic murmur and three deep thoracic knife wounds were found. The CT-scan showed possible myocardial damage. Left-sided anterior-lateral thoracotomy was performed and a 2 cm long wound directed from the apex of the right ventricle to the pulmonary trunc was sewed. Postoperative Doppler-echocardiography revealed a shunt from the right sinus of valsalva of the aortic root (Ao) into the right ventricular outflow tract (RVOT) at the level of the commissure between the right and the left coronary cusp with a high-pressure gradient (fig. 1). Decision was made to follow-up the patient three month after discharge. In the physical examination during follow-up the systolic-diastolic murmur was no longer evident and the shunt was no longer detectable with Doppler-echocardiography, suggesting spontaneous closure of the shunt (fig. 2). This is the first description of a spontaneous closure of a left-right shunt originating from the sinus of valsalva into the right ventricular outflow tract.

Key words: aorta; echocardiography; shunts; valsalva

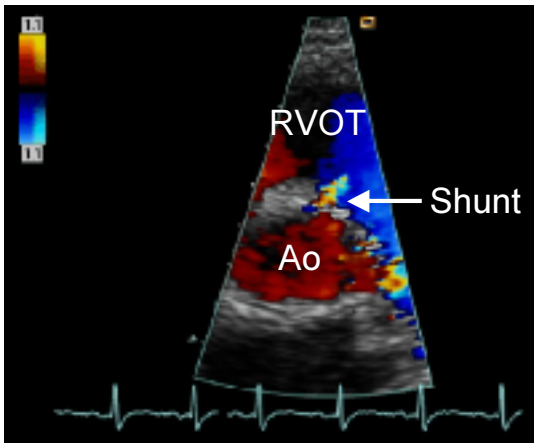

Figure 1
Transthoracic short-axis view of the heart showing the shunt (Arrow) between the aortic root (Ao) and the right ventricular outflow tract (RVOT) at the level of the commissure.

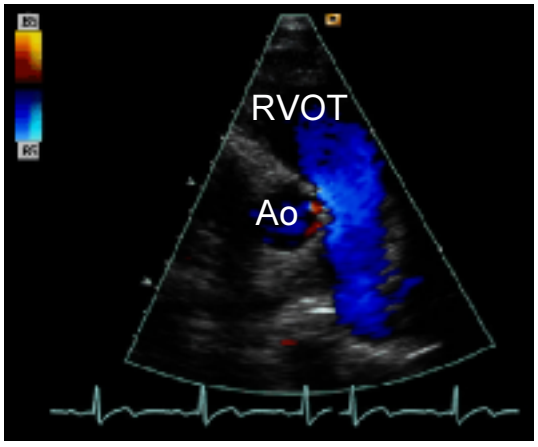

Figure 2
Transthoracic short-axis view of the heart showing that the shunt between the aortic root (Ao) and the right ventricular outflow tract (RVOT) at the level of the commissure is not longer detectable.

The authors have no conflict of interest to disclose.

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