

Cardiovascular Images

A Man in His 30s With a New Continuous Murmur and Fever

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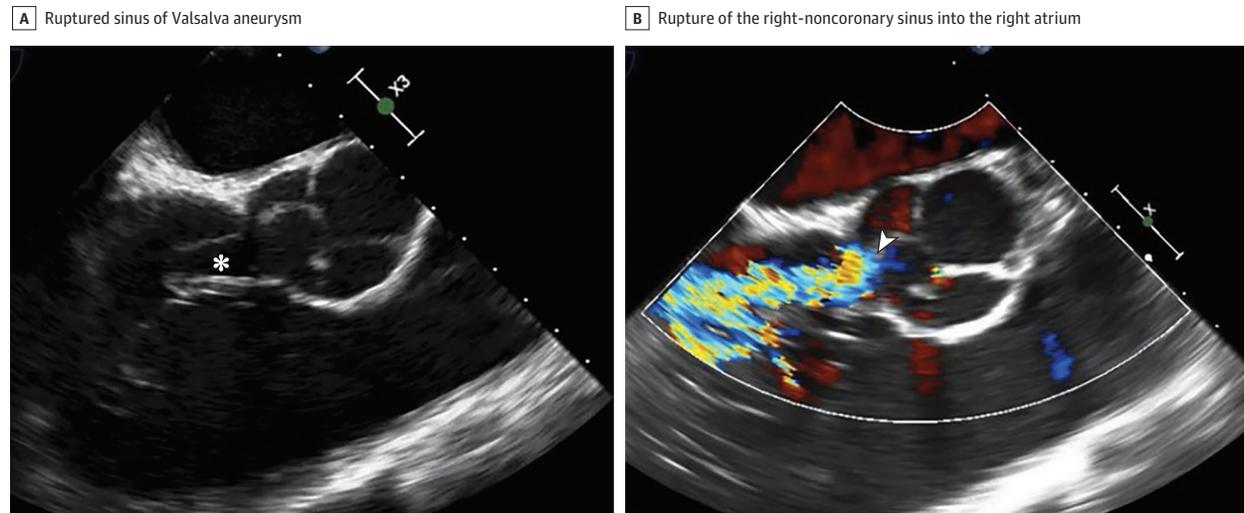


Figure. A, Sinus of Valsalva aneurysm with rupture into the right atrium. A transesophageal echocardiogram shows a ruptured sinus of Valsalva aneurysm (asterisk) in a young patient with a bicuspid aortic valve. B, Rupture of the right-noncoronary sinus into the right atrium created an aorto-right atrium fistula with a high-velocity flow (arrowhead).

What is the cause of the continuous murmur in this patient with a fever? Fever and a new heart murmur in a young patient appropriately raise a concern of infective endocarditis. Initial diagnostic workup includes blood cultures and transthoracic echocardiography,¹ which may show a regurgitant jet across an affected heart valve. However, jet appearance and the association with patient history and physical examination findings may suggest alternative diagnoses.

In this patient with a fever, who had no history of injection drug use and negative culture results, examination showed a jugu-

lar venous pressure of 12 cm H₂O and a harsh, continuous murmur that was loudest left of the midsternum.² Initial transthoracic echocardiography showed an eccentric, high-velocity jet adjacent to the tricuspid valve without vegetations or intrinsic valve disease, for which a diagnosis of severe tricuspid regurgitation of unclear mechanism was provided. The diagnosis was confirmed on transesophageal echocardiography (Figure), which showed a bicuspid aortic valve with a rupture of the right-sided noncoronary sinus into the right atrium.³

ARTICLE INFORMATION

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