

Comment to the article: Complicated transcatheter aortic valve implantation endocarditis and possible challenges

Makaleye yorum: Komplike transkateter aort kapak implantasyon endokarditi ve olası zorluklar

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With great interest, we read the article by Bozkurt et al.^[1] titled “Surgical Approach to Complicated Transcatheter Aortic Valve Implantation Endocarditis,” published in *Turkish Journal of Thoracic and Cardiovascular Surgery*. We would like to highlight the importance of this issue in cardiovascular surgery.

Transcatheter aortic valve implantation (TAVI), which has become widely used as an alternative to surgical treatment in recent years, may have serious complications. Acute-subacute prosthetic valve endocarditis is one of these complications, and its treatment is quite challenging.^[2] In this case, aortic root pseudoaneurysm on computed tomography, aortic root abscess on transesophageal echocardiogram, and positive blood cultures indicate endocarditis. Furthermore, a small, asymptomatic TAVI annular rupture appears to have occurred in this case. The patient's surgical treatment was successful, for which we congratulate the authors. The absence of postoperative bleeding, blood product transfusion, and the patient's ability to be weaned from cardiopulmonary bypass (CPB) indicate that the operation was performed successfully. It is not difficult to predict that the treatment of such cases of prosthetic valve endocarditis is challenging and the mortality rate is high. It is possible that this patient

may have developed vasoplegic syndrome (VS), a clinical entity.

This is thought to be an immunoinflammatory and neurohumoral response of the body to prolonged trauma or tissue damage.^[3] Vasoplegic syndrome is a condition that can occur after cardiac surgery and is often fatal. This condition is characterized by low systemic vascular resistance, insensitivity to vasopressor drugs, resistant hypotension and hyperlactatemia despite normal or increased cardiac output.^[3] In this case, despite remaining normotensive with inotropic support until the seventh postoperative hour, the patient's need for high-dose vasoconstrictors after the seventh hour, acute renal failure, acidosis, insensitivity to inotropic drugs, and circulatory collapse suggest VS. Vasoplegic syndrome after CPB has been reported to develop in 5 to 20% of cases and is associated with the preoperative clinical condition (high surgical risk score), history of angiotensin-converting enzyme (ACE) inhibitor use, chronic renal failure, anemia, redo cardiac surgery, prolonged cross-clamping and CPB duration, and massive blood transfusion.^[4] It can be speculated that, in this case, the high surgical risk score due to advanced age (81 years old), female sex, and redo surgery, as well as prolonged cross-clamping and CPB duration, may have facilitated the development of VS.

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In conclusion, it should be noted that the surgical risk increases in such complicated cases after TAVI and, therefore, the possibility of developing VS should be considered.

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