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TSCVA
全方位心胸麻醉整合照護
Comprehensive Perioperative Cardiothoracic Anesthesia Integrated Care

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主題：

Low-Flow, Low-Gradient Aortic Stenosis

摘要：

We often encounter patients with aortic stenosis, but not all cases are straightforward. Low flow, low gradient aortic stenosis refers to a condition where patients exhibit reduced stroke volume and a small aortic valve area despite the presence of severe aortic stenosis. It is commonly seen in elderly patients with aortic stenosis who also have reduced left ventricular ejection fraction (LVEF) or impaired contractile function. These patients may exhibit symptoms such as angina, dyspnea, and syncope, which can be debilitating and significantly impact their quality of life. It presents unique challenges in perioperative management, and understanding its intricacies is crucial for providing optimal care to patients undergoing anesthesia. Echocardiography is a primary tool for assessing the severity of aortic stenosis by measuring parameters such as the aortic valve area, the transvalvular mean pressure gradient, and the velocity ratio. However, interpreting echocardiographic findings in low-flow, low-gradient cases can be challenging, as they may underestimate the severity of aortic stenosis. CT imaging is crucial in evaluating patients with low flow, low gradient aortic stenosis. It provides detailed anatomical information about the

aortic valve, including valve calcification, annular dimensions, and aortic root morphology. CT also helps assess the feasibility of TAVR by evaluating the access route, such as the iliofemoral or transapical approach, based on vessel size and tortuosity.

TAVR has revolutionized the treatment of aortic stenosis, offering a less invasive alternative to surgical aortic valve replacement. In the context of low flow, low gradient aortic stenosis, TAVR has emerged as a valuable option in select patients who are deemed high risk for surgery or have significant comorbidities. Anesthesiologists play a crucial role in the perioperative management of TAVR, ensuring optimal patient outcomes through careful assessment, hemodynamic monitoring, and collaboration with the heart team. As we advance our understanding of this complex condition, ongoing research, and multidisciplinary collaboration will further enhance our ability to provide optimal care to these patients.