

PORT-ACCESS MINIMALLY INVASIVE APPROACH FOR MITRAL VALVE REPLACEMENT IN SITUS INVERSUS: A CASE REPORT

- *Fatma Akça, Salih Anıl Boğa, Onur Büyükçakır, Ali İhsan Hasde, Mehmet Cahit Sarıcaoğlu, Mustafa Bahadır İnan, Sadık Eryılmaz*
- Ankara University, Faculty of Medicine, Department of Cardiovascular Surgery, Kırıkkale High Specialization Hospital

Background : Situs inversus totalis (SI) is a rare congenital anomaly characterized by the mirror-image transposition of the heart, thoracic, and abdominal organs. Data on valvular heart diseases in these patients are limited and median sternotomy remains the conventional approach, minimally invasive techniques can also be effectively utilized, providing better orientation and visualization, particularly in cases with atypical anatomy.

Case presentation: A sixty-seven-year-old female underwent mitral valve replacement (MVR) via a left mini-thoracotomy using a port-access 3D minimally invasive technique originally described by Carpentier. Venous cannulations were performed through the left internal jugular and left common femoral vein. A 5 cm incision was made in the left 4th intercostal space, and a 3D endoscope was placed at the mid-axillary line. The mitral valve was accessed through Waterson's groove, and MVR with a bioprosthetic valve was performed due to severe annular and valvular calcification, which precluded repair.

Conclusion: Minimally invasive port-access techniques provide a safe and effective option for better surgical and cosmetic outcomes in complex cardiac cases. The use of 3D video-endoscopy enhances surgical exposure by offering magnified vision, depth perception, and improved spatial orientation, enabling more precise and efficient procedures.

