Postoperative patient care after aortic valve replacement via upper ministernotomy

Milka Grubišić*,

Dragana Jurčić,

Paula Filar

Dubrava University Hospital, Zagreb, Croatia **KEYWORDS:** aortic valve replacement, mini sternotomy, analgesia.

CITATION: Cardiol Croat. 2024;19(1-2):45. | https://doi.org/10.15836/ccar2024.45

*ADDRESS FOR CORRESPONDENCE: Milka Grubišić, Klinička bolnica Dubrava, Avenija Gojka Šuška 6, HR-10000, Zagreb, Croatia. / Phone: +385-91-6677-239 / E-mail: qrubisic@kbd.hr

ORCID: Milka Grubišić, https://orcid.org/0000-0003-2926-1258 Paula Filar, https://orcid.org/0009-0006-6077-1802

Aortic valve replacement through sternotomy is the gold standard for surgical management of aortic valve diseases. Upper mini sternotomy enables smaller postoperative drainage, easier patient mobilization, faster postoperative recovery, and earlier postoperative hospital discharge.² This paper aims to demonstrate the advantages of the upper mini sternotomy approach when compared to the conventional sternotomy approach and to show the specificities of postoperative nursing care for these patients. Upper mini sternotomy can be performed through the third or fourth intercostal space. Less surgical trauma and the utilization of parasternal intercostal block enable earlier extubation, and patient mobilization into a semi-sitting position in the early postoperative period. On the first postoperative day, in most cases, thoracic drains are removed, and patients are transferred from the Intensive Care Unit to the Department of Cardiac Surgery. They are mobilized on the same day, which, according to the most recent clinical studies, significantly prevents loss of muscle mass and enables faster postoperative recovery. A smaller surgical incision that does not include the xiphoid lowers the risk of surgical site infection when compared to a conventional sternotomy. A surgical nurse actively participates in the postoperative care of these patients by taking care of postoperative drainage in the early postoperative period, assessing the need for additional pain medication, changing the surgical dressing during the whole hospital stay, and helping with patient mobilization. Furthermore, a surgical nurse, in collaboration with surgeons, actively participates in the decision-making process for potential earlier hospital discharge, which is also one of the advantages of a mini sternotomy. Upper mini sternotomy significantly contributes to a faster postoperative recovery and therefore should be considered a standard surgical approach in patients with an indication for aortic valve replacement unless a contraindication exists.

RECEIVED: September 24, 2023 ACCEPTED: October 7, 2023



- Filip G, Bryndza MA, Konstanty-Kalandyk J, Piatek J, Wegrzyn P, Ceranowicz P, et al. Ministernotomy or sternotomy in isolated aortic valve replacement? Early results. Kardiochir Torakochirurgia Pol. 2018 Dec;15(4):213-218. https://doi.org/10.5114/kitp.2018.80916
- Khoshbin E, Prayaga S, Kinsella J, Sutherland FW. Mini-sternotomy for aortic valve replacement reduces the length of stay in the cardiac intensive care unit: meta-analysis of randomised controlled trials. BMJ Open. 2011 Nov 24;1(2):e000266. https://doi.org/10.1136/bmjopen-2011-000266