

The role of nurses and timely reaction to complications after transcatheter aortic valve implantation: a case report

 **Matija Vrbanić***,
 **Zoran Marić**,
 **Ljiljana Švađumović**,
 **Biljana Šego**,
 **Darko Navoj**,
 **Vlatka Funduk**,
 **Kristijana Radić**,
 **Ivica Benko**,
 **Marina Budetić**

Dubrava University Hospital,
Zagreb, Croatia

KEYWORDS: transcatheter aortic valve implantation, role nurse, timely response.

CITATION: *Cardiol Croat.* 2024;19(1-2):29. | <https://doi.org/10.15836/ccar2024.29>

***ADDRESS FOR CORRESPONDENCE:** Matija Vrbanić, Klinička bolnica Dubrava, Avenija Gojka Šuška 6, HR-10000 Zagreb, Croatia. / Phone: +385-1-2902-545 / E-mail: mvrbanic@kdb.hr

ORCID: Matija Vrbanić, <https://orcid.org/0000-0002-3229-9436> • Zoran Marić, <https://orcid.org/0000-0002-9121-4631>
Ljiljana Švađumović, <https://orcid.org/0000-0002-9068-2716> • Biljana Šego, <https://orcid.org/0000-0002-0806-1233>
Darko Navoj, <https://orcid.org/0000-0001-8899-6524> • Vlatka Funduk, <https://orcid.org/0000-0001-7070-188X>
Kristijana Radić, <https://orcid.org/0000-0002-6098-254X> • Ivica Benko, <https://orcid.org/0000-0002-1878-0880>
Marina Budetić, <https://orcid.org/0000-0002-1165-7097>

Introduction: The role of nurses during the transcatheter aortic valve implantation (TAVI) procedure is crucial in ensuring patient safety, comfort, and overall procedure success. Nurses are integral members of the multidisciplinary team involved in TAVI, typically including interventional cardiologists, cardiothoracic surgeons, anesthesiologists, radiological technologists, and support staff.^{1,2}

Case report: We will present the case of 79-year-old female with severe aortic stenosis for whom it was decided that optimal treatment method is the percutaneous implantation of aortic valve - TAVI. The procedure was performed with protection of the left anterior descending coronary artery (LAD). During coronary wire protection, there was perforation of the distal part of the LAD, which at that moment did not manifest as hemodynamic instability in the patient. Post-procedurally, during the patients stay in the Intensive Coronary Care Unit, there was hemodynamic and rhythmic instability with the development of significant tamponade. The patient was urgently moved from the Intensive Coronary Care Unit to the Invasive Laboratory; she was hypotensive, and significant pericardial effusion was found by ultrasound. Nurses must be ready to immediately respond to all complications or adverse events that may occur during or after the procedure, such as arrhythmias, hypotension, or allergic reactions.

Conclusion: The nurses are the cornerstone of patient care during TAVI procedures. Their timely reactions, skilled responses, and dedication to patient safety are indispensable. As TAVI progresses, nurses must remain at the forefront of their field to provide the best possible care.

RECEIVED:
September 28, 2023

ACCEPTED:
October 7, 2023



LITERATURE

1. Stanišić P. Procjena funkcionalnog statusa u bolesnika s teškom aortalnom stenozom nakon transkateterske implantacije aortalnog zalistka [Diplomski rad]. Rijeka: Sveučilište u Rijeci, Fakultet zdravstvenih studija u Rijeci; 2020.
2. Lauck SB, McGladrey J, Lawlor C, Webb JG. Nursing leadership of the transcatheter aortic valve implantation Heart Team: Supporting innovation, excellence, and sustainability. *Healthc Manage Forum.* 2016 May;29(3):126-30. <https://doi.org/10.1177/0840470416632004>