



Conduction abnormalities after TAVI

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Abstract:

Transcatheter aortic valve implantation is a procedure that allows the aortic valve replacement via minimally invasive technique. We can distinguish several access methods: transfemoral, transapical, subclavian, direct aortic as well as transcaval. Patients who underwent TAVI have a lower mortality rate in comparison with those who have non-operated severe aortic stenosis. Although advantages prevail over disadvantages, the procedure may entail conduction abnormalities. The most common are: left bundle branch block and high-grade atrioventricular block. The proximity of the aortic valve to the conduction pathways (possible injury as a result from interventional equipment interactions) as well as the anatomical variants of AV nodes may predispose patients who underwent TAVI to higher risk of conduction abnormalities. We can distinguish several factors that have the evident impact on previously described complications, such as: pre-existing RBBB, type of the transcatheter valve, annular size, depth of the implantation and the degree of mitral and aortic valve calcifications. The electrocardiographic recordings that are the cause of concern are narrow QRS complexes (especially before TAVI) as well as fluctuating changes in PR interval. Among risk factors for LBBB development we can underline the self-expandable prostheses (in comparison with balloon-expandable ones) and larger implant depth. The behavior of heart blocks has been noticed to change dynamically during and after aortic valve replacement. Patients who presented conduction abnormalities before TAVI, were in the higher risk group. Majority of the heart blocks are reversible. The management of conduction abnormalities after transcatheter aortic valve implantation is based on the clinical status of our patient and ECG monitoring. Temporary pacemakers and PPM are being implanted if needed.

Biography:

Dr Stefania Czapp has graduated from Medical University of Gdańsk in 2021 and now she is doing her postgraduation internship in Szpital Morski im. PCK in Gdynia (Poland). She has the big interest in Cardiosurgery and is planning to do her PhD in this field of science in Poland.

About University:

The Medical University of Gdańsk (MUG) is the largest medical university in northern Poland, located in one of the most beautiful cities in Europe with an old town and beautiful sandy beaches. According to the 2020 higher education ranking of the Perspektywy Education Foundation, the MUG is the first medical school in the country and ranks among the top ten of the best Polish state universities. The Medical University of Gdańsk has been acknowledged as the member of an elite group of the best 10 Polish universities awarded in the prestigious Excellence Initiative – Research University competition. Every year, many young people make efforts to study at the largest medical school in Northern Poland. The MUG educates more than 6000 undergraduate and postgraduate students at 4 Faculties:

Faculty of Health Sciences, Faculty of Medicine, Faculty of Pharmacy and the Intercollegiate Faculty of Biotechnology.

Importance of Research:

The article contains the most actual knowledge about conduction abnormalities after TAVI procedure. Knowing the particular risk factors, we are able to predict the complications and introduce the appropriate treatment in order to improve the quality and save the patient's life.

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