

Category : **Cardiovascular: Other**

A266 - Factors affecting intensive care unit readmission among patients with ventricular assist device: ten years' experience

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Introduction:

Mechanical support systems are needed due to insufficient number of donor hearts and patients are admitted to ICU after ventricular assist device (VAD) implantation. We aimed to analyze factors associated with ICU readmission among patients with VAD.

Methods:

After Ethics Committee approval, perioperative data of patients who underwent VAD between November 2008-December 2018 at Baskent University Faculty of Medicine were analyzed retrospectively. The reasons for ICU readmission and association of perioperative factors with mortality were evaluated.

Results:

Eighty-nine patients underwent VAD implantation. Out of the 89 patients, 76 were male with a mean age of 46.1 ± 16.5 years. After discharge from ICU, 53 (59.6%) patients were readmitted to hospital, and 44 (49.4%) were readmitted to ICU due to complications. The mean time between readmission to ICU after discharge was 221.1 ± 207.5 days. Out of 89 patients, 23.6% of them were readmitted to ICU due to device-related problems, 14% due to bleeding and 11.4% due to infection. At ICU admission the mean APACHE II score was 10.4 ± 8.9 , and the SOFA score was 4.2 ± 3.8 . The need for mechanical ventilation (MV) was observed in 14 (31.8%) patients and the mean duration of MV was 4.4 ± 14.5 days. The incidence of acute kidney injury (AKI) was 25% and 22.7% of them needed renal replacement therapy (RRT). In multivariate regression analysis, need for prolonged postoperative mechanical ventilation (PPMV) (OR: 11.439, CI: 1.046-125.096, $p=0.046$); need for RRT before VAD implantation (OR: 0.36, CI: 0.001-0.911, $p=0.044$) were found to be risk factors for ICU readmission. Need for PPMV was associated with mortality (OR: 4.882, CI: 1.334-17.873, $p=0.017$). 30-day survival was 76.4% and 1-year survival was 62%.

Conclusion:

ICU readmission after VAD implantation occurred almost half of the patients. Requirement for RRT before VAD implantation and PPMV were associated with ICU readmission.