TAVI performed without systematic intensive care unit admission: an update of a single center experience

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Topic(s):
Aortic Valve Intervention

Citation:

Background
Systematic admission to the intensive care unit (ICU) was considered as a standard of care after transcatheter aortic valve implantation (TAVI). However, regarding to improvements in procedural results, our team pointed out feasibility and safety of TAVI without ICU admission in selected patients referred in our center in 2015

Purpose
The aim of this study was to evaluate the evolution of our practice after the first study to confirm the feasibility and safety of TAVI without ICU admission in selected patients referred in our center in 2015

Methods
We evaluate prospectively 451 consecutive patients undergoing TAVI between January 2017 and December 2017. The same "low-risk" criteria were applied to this cohort of patients to allow admission to conventional cardiology unit: stable clinical state, transfemoral access, no right bundle branch block at baseline, left ventricular ejection fraction > 40% and no complications occurring during the procedure. Any new conduction disturbance was considered as indication for ICU.

Results
The mean age was 81.8 +/- 7.5 years and the mean logistic Euroscore was 9.1 +/- 3.3%. The balloon-expandable Sapien 3 was used in 181 patients (40.1%) and the transfemoral route was the main vascular approach (n=412, 91.3%). According to the predefined criteria, 289 patients (64.1%) were considered at "high-risk". In-hospital major complications occurred in 52 patients (11.5%) including 3 deaths (0.7%), 6 major vascular complications (1.3%), 1 stroke (0.2%), 7 heart failures (1.5%), 2 tamponades (0.4%), 2 ventricular perforations (0.4%) and 31 high-degree conduction disorders (6.9%) including 26 patients undergoing immediate pacemaker implantation allowing a non-ICU decision. All complications occurred in the "high-risk" group (figure) and the negative predictive value of the "low-risk" criteria to predict complications was 100%. In multivariate analysis, right bundle branch block (p<0.00001), first degree atioventricular block (p=0.02), low LVEF (p=0.01) were found as pre procedural predictive factors of adverse events.

Conclusion
Our results confirm that with a rigorous selection of patients and using simple criteria, TAVI can be routinely performed without ICU admission in nearly 40% of patients with a stable proportion of patients not referred to ICU between 2015 and 2017.
Abstract: 95
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Purpose
The aim of this study was to evaluate the evolution of our practice after the first study to confirm the feasibility and safety of TAVI without ICU in a large population of patients.

Methods
We evaluate prospectively 451 consecutive patients undergoing TAVI between January 2017 and december 2017. The same “low-risk” criteria were applied to this cohort of patients to allow admission to conventional cardiology unit: stable clinical state, transfemoral access, no right bundle branch block at baseline, left ventricular ejection fraction > 40% and no complications occurring during the procedure. Any new conduction disturbance was considered as indication for ICU.

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Conclusion
Our results confirm that with a rigorous selection of patients and using simple criteria, TAVI can be routinely performed without ICU admission in nearly 40% of patients with a stable proportion of patients not referred to ICU between 2015 and 2017.

ICU: intensive care unit