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MORTALITY TRENDS OVER TIME WITH TRANSCATHETER VERSUS SURGICAL AORTIC VALVE REPLACEMENT

Poster Contributions

Poster Hall B1

Saturday, March 14, 2015, 3:45 p.m.-4:30 p.m.

Session Title: Coronary II

Abstract Category: 30. TCT@ACC-i2: Aortic Valve Disease

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Background: The temporal trend in patient profile and clinical use of transcatheter aortic valve replacement (TAVR) versus surgical aortic valve replacement (SAVR) is currently unknown. We aim to evaluate the risk factor profile, and risk-adjusted mortality rate of patients referred for TAVR versus SAVR over time, starting with the early TAVR experience.

Methods: Data from consecutive TAVR and SAVR procedures from 2007-2013 at a single-center, high-volume TAVR site was evaluated for trends in risk-adjusted mortality, using the Society of Thoracic Surgery (STS) observed/expected ratio in TAVR and SAVR. The STS predicted risk of mortality (PROM) was also evaluated over time for TAVR versus SAVR.

Results: Over time the STS PROM in TAVR patients had some variability, but remained high, ranging from 8.7% to 11.3%. The STS PROM in SAVR patients declined steadily since 2009 from 6.7% to 3.6%. (Figure, right) The Risk-adjusted mortality for SAVR since 2009 decreased steadily, parallel to the reduction in PROM. However, the risk-adjusted mortality of TAVR also varied over time, but since 2010 has been consistently higher than that of SAVR. (Figure, left)

Conclusion: While still less than 1.0, over time the risk-adjusted mortality for TAVR has surpassed that of SAVR. Given the almost 2 fold higher PROM in TAVR patients compared to SAVR throughout the study years, separation of high-risk patients for TAVR has allowed SAVR outcomes to improve.

