THORACOTOMY CONFERRS BETTER ACUTE PROCEDURAL OUTCOME THAN STERNOTOMY FOR TRANSAOORTIC TRANSCATHETER AORTIC VALVE REPLACEMENT

Objectives: This study sought to compare the acute outcome of thoracotomy and sternotomy for transaortic (TAo) transcatheter aortic valve replacement (TAVR).

Background: TAo is a viable alternative approach for TAVR. Thoracotomy and sternotomy are the main surgical access techniques employed; however, there is no comparative outcome data available currently.

Methods: Patients consecutively undergoing TAo-TAVR in a single center were studied. Procedural and endpoint variables were assessed between thoracotomy and sternotomy groups. Endpoints were defined based on the Valve Academic Research Consortium-2 definitions.

Results: A total of 40 TAo-TAVR cases were reviewed: 18 in the thoracotomy group and 22 in the sternotomy group, among them 30 day follow-up data were available in 16 and 16, respectively. Although device success, early safety and clinical efficacy were broadly similar, the sternotomy group experienced longer hospital stays; 6 days (4.8-8) vs. 10 day (6-12) (p = 0.01) and more frequent bleeding complications; 10 vs. 19 (p = 0.029) of major and over bleeding, and 0 vs. 5 (p = 0.04) of life-threatening or disabling bleeding.

Conclusions: Incision selection for TAo-TAVR is multifactorial including the aortic orientation and re-do surgery. Although both incisions are feasible, thoracotomy conferred better acute procedural outcomes. Where feasible, a thoracotomy approach may be the preferred surgical access for TAVR.