

Percutaneous Implantation of the Self-Expandable CoreValve for High-Risk Patients with Severe Aortic-Valve Stenosis: Early Israeli Experience.

Danenberg, H¹; Finkelstein, A²; Kornowski, R³; Segev, A⁴; Dvir, D³; Gilon, D¹; Keren, G⁵; Sagie, A³; Feinberg, M⁴; Schwammenthal, E⁴; Banai, S⁵; Lotan, C¹; Guetta, V⁴

¹Hadassah Medical Center, Jerusalem, Israel; ²Tel Aviv Medical Center, Tel-Aviv, Tel-Aviv, Israel; ³Rabin Medical Center, Petah-Tikva, Israel; ⁴Sheba Medical Center, Tel Hashomer, Israel; ⁵Tel Aviv Medical Center, Tel-Aviv, Israel

Background: The prevalence of aortic stenosis increases with advancing age. Once symptoms occur the prognosis in patients with severe AS is poor. The current and recommended treatment of choice for these patients is surgical aortic valve replacement (AVR). However, many patients, mainly the very elderly and those with major co-morbidities, are considered to be at high surgical risk and are therefore declined treatment. Recently, a transcatheter alternative to surgical AVR has emerged.

We report the first year experience and 30-day outcome of transcatheter aortic self-expandable CoreValve implantation in Israel.

Methods & Results: Transcatheter aortic valve implantation (TAVI) using the Corevalve system has been performed in Israel since September 2008. During this year 55 patients underwent corevalve TAVI in four Israeli centers. Mean age was 81.7±7.1 years, 35 females and 20 males. The mean valve area by echo was 0.63±0.16 cm². The calculated mean logistic Euroscore was 19.3±8%. Procedural success was 98%. Following TAVI mean transvalvular gradient decreased from baseline levels of 51±13 to 9±3 mmHg. Symptomatic improvement was evident in most patients with reduction in functional capacity grade from 3.2±0.6 at baseline to 1.4±0.7. One patient died on the first day post procedure (1.8%) and all-cause 30 day mortality was 5.5% (3 of 55 patients). One patient had a significant post procedural aortic regurgitation of > grade 2. The most common post-procedural complication was complete heart block which necessitated permanent pacemaker implantation in 37% of patients.

Conclusions: The Israeli first year experience of transcatheter aortic valve implantation using the CoreValve self-expandable system presents an effective and safe procedure for the treatment of severe aortic stenosis in patients at high-surgical risk.