

**Transfemoral and Transapical Transcatheter Aortic Valve-implantation: The Israeli experience using Edwards-Sapien Valve System**

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**Background:** Transcatheter aortic-valve implantation (TAVI) was introduced as an alternative for surgery in patients with severe symptomatic aortic-stenosis at high surgical risk. We describe the first year experience with transfemoral and transapical TAVI in Israel using the Edwards-Sapien device.

**Methods:** TAVI procedures with an Edwards-Sapien valve system have been performed in Israel since July 2008. So far, 25 patients have undergone these procedures (18 transfemoral and 7 transapical) in 3 Israeli centers. The patient group (52% women) was characterized by relatively older age (65-88 years, mean 81.9±5.2 years), and high prevalence of severe comorbidities (60% diabetes mellitus, 32% post sternotomy, 65% chronic renal failure, 30% chronic pulmonary disease). The calculated logistic EuroSCORE was relatively high (7-59.9%, mean 21.5±15%).

**Results:** The rate of procedural success was 95%. Although no patient died within 30-days after the procedure, one patient suffered from debilitating major stroke (4%) and died 32 days following the procedure. Permanent pacemaker implantation was required in only 1 patient (4%). The median length of hospital stay was 5 days. After the procedure the mean valve area increased from 0.59±0.14 cm<sup>2</sup> to 1.65±0.25 cm<sup>2</sup> (p<0.001) and the mean valve gradients decreased from 88/51mmHg (peak/mean) to 15/5 mmHg (p<0.001). There was no significant (grade≥2) post-procedural aortic-regurgitation. At follow-up symptomatic improvement was evident in almost all patients with improvement in functional capacity grade from NYHA class 3.2±0.6 at baseline to 1.4±0.7 (p<0.001).

**Conclusions:** The first-year Israeli experience with TAVI using the Edwards-Sapien system suggests that this is an effective and safe procedure for the treatment of severe aortic stenosis in suitable carefully screened patients at high-surgical risk.