

## **Recent Experience with the "On-X" Mechanical Heart Valve Prosthesis**

*Kassif, Yigal<sup>1</sup>; Sternik, Leonid<sup>1</sup>; Kuperstein, Rafael<sup>2</sup>; Levin, Shany<sup>1</sup>; Raanani, Ehud<sup>1</sup>  
<sup>1</sup>Sheba Medical Center, Cardiac Surgery, Ramat Gan, Israel; <sup>2</sup>Sheba Medical Center, Cardiology, Ramat Gan, Israel*

**Introduction:** The On-X is newly presented mechanical valve prosthesis. This valve is declared to have superior performance - both hemodynamically and biologically (hemolysis and thrombogenicity) - than competitor valves. We show herein our three years' experience with this newly developed valve.

**Patients:** From August 2008 till Oct. 2011 - 27 On-X valves were implanted in 26 patients in our institution. Seventeen Aortic valves were implanted, 7 of them in concomitance with other cardiac procedure (4 MVR, 2 Ascending Aorta replacement, one Tricuspid valve repair). Ten mitral valves were implanted, of which 8 were implanted concomitantly with other valve operation (2 AVR, 2 composite AVR, 4 Tricuspid valve annuloplasty). Nine of these operations were re-do cases, two involved CABG, two involved MAZE procedure and one was a replacement of Aortic valve during endocarditis. Anti coagulation policy included INR 2-3 for isolated Aortic valve patients, and 2.5-3.5 for Mitral or double valve patients.

**Results:** One patient (AVR for endocarditis) died with postoperative multi organ failure. There was no other hospital or 30 days mortality. Except from one case of hemodialysis (the deceased patient), and one case of pacemaker implantation (a MVR case) - no other serious complications occurred. Two months to three years postoperative ECHO examinations - revealed excellent valve performance, with no significant intra or paravalvular leaks. Pressure gradients were at maximum of mild stenosis for all valves sizes in both positions (Peak AV gradient 19+/-8mmHg, mean MV gradient 5+/-2mmHg). There were no reoperations for any reason up to three years of follow up. Follow-up was completed for 23 patients (92%). There were no cases of bleeding that required hospitalization, nor thromboembolic or severe hemolysis events were reported.

**Conclusions:** Short and midterm results for the On-X valves are excellent, in both Aortic and Mitral position.