MINIMALLY INVASIVE AORTIC VALVE REPLACEMENT – IMPROVING PATIENT SAFETY AND SATISFACTION

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Objectives. Minimally invasive surgery for isolated aortic valvular disease represents a valuable therapeutic option for patient with high risk sternal instability, prolonged ventilation and sleep sterrial wound infection. However, due 10 limited surgical exposure, the procedure is technically demanding. The aim of this study was to assess safery, efficacy and effectiveness of the aortic valve replacement procedures performed throught partial upper sternotomy (mAVR).

Method. From 02.2004 do 12.2011 – 117 patient who underwent mAVR were retrospectively analyzed. A propensity score matching was performed to compare mAVR with conventional, sternotomy approach.

Results. mAVR was feasible in all 117 Cases. There were 54 females and 63 male patients with mean age of 59,29±-17,36. Mean NYHA was 2,4±0,7. 26,9% were diabetic 10% had severe pulmonary disease, 32,2% were obese. Aortic valve insufficiency was encountered in 48,9% of cases. Mean EuroScore was 4,73±2,46 mechanical valve was used in 41% of pts with mean size of 23. 3,3% of all pts were reoperated due to bleeding and 13,3% of pts required inotropic support. A propensity matched population (age, NYHA, DM, COPD, ES, LVEF) ol classic AVR (sternotomy) was introduced to compare early outcome. Total cardiopulmonary bypass (CPB) time (min) was slightly longer in the minimally invasive group (AVR vs mAVR: 93,50±27,01 V5. 104,62±31,28 min; p=0.01) , as well as X-Clamp time (59,99±16,29 vs. 66.89±23,23min; p=0.07). There were no differences in mechanical ventrilation and slight reduction of total hospital stay.

Conclusions. A minimally invasive aortic valve replacement through upper ministernotomy does not shorten extracorporeal circulation or aortic cross clamp time, it slightly reduces overall hospital stay, thrus minimizing patient discomfort. providing better cosmesis faster recovery. Minimally invasive aortic valve replacement should therefore be used as a standard to isolated aortic valve disease.