right anterolateral mini thoracotomy became safe technique. In our study we compared mini-MV surgery with conventional technique regarding cross clamp time, bypass time, total blood loss, reopening for bleeding, and hospital and ICU length of stay. In our institution between 2010 and 2015, 147 patients underwent minimally invasive mitral surgery through right lateral mini-thoracotomy 8 cm incision and 118 patient underwent conventional mitral valve surgery through median sternotomy in minimally invasive technique: mean age was 38 ± 20 vs 59 ± 21, 70.7% were female (n = 104) vs 39.8% (n = 47), 23.8% were associated with tricuspid valve regurgitation (n = 33) vs 55% in conventional technique (n = 65), 0.08% were able to use endovascular clamp (n = 12), mean Euroscore predicted risk of mortality 14.7 ± 13.6% vs 8.7 ± 10.9%. Minimally invasive mitral valve repair surgery was accomplished in 77.5% (n = 114) vs 46.15% (n = 55 ) and replacement of mitral valve in 22.4% (n = 30) vs 53.8% (n = 64 ), concomitant procedures consists of tricuspid valve surgery in 23.8% (n = 35) vs 55% (n = 65), primary mitral valve repair included implantation of rigid annuloplasty ring in 79.6% vs 38.9% (n = 46), duration of cardiopulmonary bypass in minimally invasive surgery was 123 ± 64 min vs 116 ± 62 min, cross clamp time was 64 ± 27 min vs 59 ± 23 min, postoperative mechanical ventilation time 4 ± 1.5 h vs 6.5 ± 2 h, ICU lenght of stay (LOS) was 48 ± 12 h vs 3 ± 1 days. Minimally invasive mitral surgery can be performed very safely with excellent early results. mini-MV surgery can be performed with a reasonable operative time, good perioperative course with decrease in postoperative ICU and hospital LOS.

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4. Suture-less bio-prosthetic aortic valve replacement: Early clinical and hemodynamic outcome

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Suture-less bio-prostheses (SBP) are a recent addition in the surgical armamentarium in the surgical treatment of severe aortic valve disease that offer rapid deployment, shorter bypass & ischemic times and excellent hemodynamic performance even in small aortic annulus. We present our initial experience and short-term clinical and hemodynamic results with the use of suture-less bio-prostheses. Between May 2011 and August 2015, 61 patients, with mean age of 72.6 years and severe aortic stenosis underwent aortic valve replacement with a SBP. 28 were males and 19 were females. Mean euroSCORE was 11.5. 55% had coronary artery disease, 8.5% had severe mitral regurgitation and 6.4% had severe tricuspid regurgitation. Left ventricular dysfunction was present in 28% patients and 83% had elevated right ventricular systolic pressure. Average size of aortic annulus was 21.7 mm. 42.5% patients underwent isolated aortic valve replacement while 57.5% had concomitant procedures including coronary artery bypass grafting (25 patients). Average cross clamp time in isolated aortic valve replacement was 34 min and total bypass time was 46 min. Mean gradient across the prostheses was an average of 8.9 mmHg intra-operatively with 4.3% prevalence of mild para-prosthetic leak and 10.6% prevalence of mild prosthetic regurgitation. In-hospital mortality was 2.1% (1 patient). At follow-up, average mean trans-aortic gradients were 15 mmHg and prevalence of mild prosthetic and para-prosthetic leak was 10.5%. Average left ventricular diastolic dimensions changed from 4.93 mm pre-operatively to 4.42 mm post-operatively (p = 0.023) and left ventricular systolic dimensions changed from 3.39 mm pre-operatively to 3.05 mm post-operatively (p = 0.124). Use of suture-less bio-prosthesis for aortic valve replacement produces excellent hemodynamic results with low incidence of para-prosthetic leakage and prosthetic regurgitation. Persistent low trans-aortic gradients and regression of left ventricular diastolic dimensions seen on follow up is likely to offer long-term survival benefit.

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5. Mitral valve replacement for mitral stenosis: 15 years single center experience

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Mitral valve replacement (MVR) with either a bioprosthetic or a mechanical valve is the treatment of choice for severe mitral stenosis. This study aimed to evaluate and compare the early and late outcome of mitral valve replacement (mechanical versus bioprosthetic) for severe mitral stenosis. A retrospective cohort study was performed on prospectively collected data involving mitral stenosis patients who have undergone MVR with either bioprosthetic (BMV) (n = 50) or mechanical (MMV) (n = 145) valves in our institute from 1999 to 2012. Data were analyzed for early and late mortality, NYHA functional classes, stroke, early and late valve-related complications, and survival. Chi Square test, logistic regression, Kaplan Meier curve, and dependent proportions tests were performed. A total of 195 patients were included in the study with a follow-up of 190 patients (97.5%). One patient died early post-operatively; twelve patients died late in the post-operative period, BMV group (6) and the MMV (6). The Late mortality had significantly