Aortic valve replacement in patients with low ejection fraction: short to medium term results
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Objectives: The aim of our research was to investigate the effect of preoperative low ejection fraction (<30%) on postoperative mortality and quality of life in patients who underwent aortic valve replacement.

Methods: Between December 2009 and July 2013, 10 patients with ejection fraction (EF) <30% underwent aortic valve replacement, in which 2 patients underwent mitral valve replacement, 4 patients underwent coronary artery bypass grafting simultaneously. This group of patients included 8 male and 2 female, with age from 37 to 74 years old. Preoperative trans-thoracic echocardiography (TTE) showed left ventricular ejection fraction was 0.27±0.03, aortic valve area was 12.75±0.75mm², and left ventricular end diastolic diameter was 75.8±21.85mm. Preoperative diagnosis included 5 aortic stenosis (1 with mitral stenosis, 3 with mitral insufficiency, and 1 with aortic bicuspid anomaly), 3 aortic insufficiency (1 with mitral insufficiency, and 1 with aortic bicuspid anomaly), and 2 aortic stenosis combined with insufficiency. Preoperative heart function (NYHA) of patients were 5 with grade III, and 5 with grade IV. Diameter of aortic valve annulus measured in surgery ranged from 20 to 35mm, mean value was 27.5±5.9 mm. 9 cases were replaced with mechanical valves (Diameter: 19mm ~ 21mm), 1 case was replaced with bioprostheses (Diameter: 21mm).

Results: Postoperative ejection fraction increased with 0.24±0.101, and there was not a single patient died during follow-up. Postoperative hospital stays were 10±2.15 days, with no serious complication happened. 8±51 months (mean 32.6 months) follow-up showed all 10 patients had good quality of life, TTE showed no residual leakage and endocarditis. Postoperative heart function (NYHA) were improved to grade I-III.

Conclusions: Aortic valve replacement can be performed in patients with ejection fraction (EF) <30% with reasonable mortality rates. Meanwhile, it can help these patients improve ejection fraction and quality of life. The short to medium term results were desirable.

GW25-e1609
Endovascular Repair versus Open Repair of Aortic Pseudoaneurysm: A single centre experience
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Objectives: Aortic pseudoaneurysms are a rare life threatening disease if left untreated. The dubious etiology of the aortic wall injury that led to the pseudoaneurysm remain unclear. To report the etiology, pathogenic location, and spontaneous rupture rate of aortic pseudoaneurysms.

Methods: We retrospectively reviewed consecutive aortic pseudoaneurysms patients from March 1997 to September 2012 at our university-affiliated first medical centre.

Results: A total of 31 patients were diagnosed aortic pseudoaneurysms with computed tomography angiography (CTA) or MRI. There were 24 male and 7 female, their mean age was 46 (range 17-78) years. We found that infection was the most often etiologies to occur (n=8, 25.8%), other etiologies were inflammatory (Bechet diseases, n=5), trauma (n=4), surgical interventions (n=4), congenital defects (n=3), atherosclerosis (n=3), tuberculosis (n=5) and vascular leiomysarcoma (n=1). The pathogenic location was in the ascending thoracic aorta in 2 (6.5%) cases, the aortic arch in 6 (19.35%) cases, the descending thoracic aorta in 10 (32.26%) cases, the suprarenal abdominal aorta in 5 (16.13%) cases, and the infrarenal abdominal aorta in 8 (25.81%) cases. spontaneous rupture rate was 29.03% (9/31) and 2 cases died from this rupture. Among them, Some 13 patients underwent endovascular aneurysm repair (EVAR) wherein 13 patients underwent open repair surgery, the other 5 patients underwent conservative treatments. The median follow-up time was 15.5 months (range: 10-102 months). The follow-up rate in EVAR and open surgery was 84.61%, 92.31%, respectively. The overall mortality rates of 31 patients of aortic pseudoaneurysms was 29.03% (9/31), then the hospital mortality rate was 16.13% (5/31), and one patient died after EVAR, both in open repair surgery and in conservative treatments, 4 patients died.

Conclusions: According to the current limited experience of small series, most pseudoaneurysms of the aorta may occur secondary to infection, inflammatory, trauma and surgical interventions. Aortic pseudoaneurysms with the high spontaneous rupture rate tend to be intractable and difficult to treat, EVAR and open repair maybe beneficial and effective than conservative treatments.

GW25-e1610
The Effect of Berbamine on Acetylcholine-Induced Atrial Fibrillation in Rabbit
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Objectives: Berbamine (Ber), a natural compound from Barbarea, exhibits numerous pharmacological effects on preventing and treating arrhythmias. However, its role in atrial fibrillation (AF) has not been fully understood. The present study assessed the efficacy of Ber for AF and explored the potential mechanisms.

Methods: Adult New Zealand white rabbits (weight: 2.5-3.5 kg) were used in this study. SF multiple electrode catheters were placed at right atrium through jugular vein and connected with Electrophysiology (EP) Recording System. The effective refractory period (ERP) was recorded at baseline and intravenous injection (IV) Ber. AF was elicited by atrial burst pacing at IV Ach or Ber + Ach, or Ber. The Ach-induced AF was divided into sustained 1 min AF and sustained 10 min AF, according to the duration. We compared the termination rate of AF by Ber, amidodarone (Ami), or terminating automatically.

Results: Compared with baseline, Ber prolongs RR and ERP (195±10.3 ms vs. 155±11.3 ms, P<0.01) and prolongs ERP to 85±5.5 ms, both P<0.01). The rate of sustained 1 min AF was clear lower at the group of Ber + Ach than Ach (4/10 vs. 50/55, P<0.01). The termination rate of the induced sustained AF was higher at Ber or Ami than terminating automatically (sustained 1 min AF: 6/8 vs 6/7 vs. 12/35, sustained 10 min AF: 8/10 and 8/9 vs. 1/5, all P<0.05). There is no significant difference of the termination rate between Ber and Ami for both of sustained 1 and 10 min AF.

Conclusions: Berbamine could prolong RR and ERP, so as to prevent and terminate the Ach-induced AF. There was no significant difference between Ber and Ami to terminate the Ach-induced AF.