

CAVD patients and controls were identified by two independent investigators. Pooled results were reported as weighted mean difference (WMD) and the corresponding 95% confidence intervals (95% CI).

RESULTS Ten studies involving 6349 participants were included. Pooled analysis demonstrated that Hcy levels were significantly elevated in patients with CAVD compared with controls (pooled WMD: 2.98, 95%CI: 1.59 to 4.38). Significantly higher Hcy levels were found both in mild-to-moderate CAVD patients (WMD: 0.62, 95% CI: 0.11 to 1.13) and severe CAVD patients (WMD: 3.15, 95% CI: 2.44 to 3.86) than in controls. In addition, Hcy levels were significantly higher in severe CAVD patients than in mild-to-moderate CAVD patients (WMD: 3.23, 95% CI: 1.14 to 5.32).

CONCLUSIONS The present meta-analysis revealed that Hcy levels significantly increased in CAVD patients with the progression of the disease.

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Comparison of two anticoagulation strategies for pregnant women with mechanical valves



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OBJECTIVES To evaluate safety endpoints in pregnant women with mechanical heart valves treated with traditional treatment (vitamin-K antagonists throughout pregnancy) and sequential treatment (first trimester heparin followed by vitamin-K antagonists).

METHODS We searched in Medline, Embase, Cochrane databases, and proceedings of major international meetings for clinical trials that comparing traditional treatment and sequential treatment. We conducted the search until January 2017. Two independent reviewers reviewed the titles, abstracts and collected the data from studies that met the inclusion criteria. Conflicts between reviewers were resolved by consensus. We extracted study duration, patient characteristics and clinical outcomes. Internal validity was assessed. The primary safety outcomes were maternal mortality, thromboembolic complications, live births and neonatal adverse events. Odds ratios(OR) and 95% confidence interval(CI) were used as the summary statistic. Random-effects model was used for this meta-analysis.

RESULTS We finally identified 22 trials published in English. It was indicated that traditional treatment had a better performance than sequential treatment in maternal mortality (OR:0.45; 95% CI: 0.12-1.01, p=0.06). Meanwhile, it was showed that there were less thromboembolic complications with traditional treatment(OR: 0.52; 95% CI: 0.32-0.96; p=0.02). We noticed a trend towards favoring sequential treatment for live births (OR:0.82; 95% CI:0.56-1.17;p=0.25). However, we found no statistically significant difference in neonatal adverse events.(OR: 0.93; 95% CI:0.62-2.14; p=0.52).

CONCLUSIONS In broad terms, it is indicated that traditional treatment is associated with significantly lower rates of maternal mortality and also with less live births. Traditional treatment seemed to bring less thromboembolic complications probably due to the risk from crossover therapy in sequential treatment. Last but not the least, there is no significant difference in neonatal adverse events between traditional treatment and sequential treatment. Considering the swing of anticoagulation strategy, further studies are still needed to clarify the ideal treatment for pregnant women with mechanical valves.

GW28-e1195

The prognostic analysis of elderly high-risk severe aortic stenosis treated by different therapy procedure



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OBJECTIVES To provide China's early experience of TAVI technology, verify the validity of the TAVI treatment.

METHODS We retrospectively analyzed elderly high-risk patients with SAS hospitalized between September 2012 and June 2015. According to the treatment method, patients were divided into TAVI group, SAVR group and the drug therapy group. Patients were followed-up, and the primary end point was death from any cause at 1 year, and secondary end point included cardiac function class(NYHA), vascular complication, valvular function, non-fatal

myocardial infarction, new atrial fibrillation, stroke, bleeding, pacemaker implantation, acute renal failure, and readmission. The survival curves were performed with the use of Kaplan-Meier estimates and were compared between groups with the use of the log-rank test.

RESULTS There were 242 patients conform to the enrolled criteria, 81 patients undergo TAVI(including 57 cases of transfemoral approach, 12 cases of Transaortic approach, 12 cases of transapical approach), 59 patients undergo SAVR, and 102 patients treated by drug. The rates of combined diabetes were 27.2% in the TAVI group and 11.9% in the SAVR group(P=0.027), and combined chronic obstructive pulmonary disease were 18.5% and 6.8% respectively (P=0.045). The rates of renal failure were higher in the SAVR group than the TAVI group, 13.6% vs. 4.9% respectively (P=0.072). More patients combined with complex valve dysfunction in the SAVR group. The average risk score of the Society of Thoracic Surgeons(STS) was 7.28 in the TAVI group, and 5.67 in the SAVR group(P=0.036), indicating higher operating risk in the TAVI group than in the SAVR group. The rates of perioperative vascular complications were 6.3% in the TAVI group and 0% in the SAVR group (P=0.057). The new pacemaker implantation and mild para-valvular regurgitation were more frequent with TAVI group, 11.3% vs. 0% (P=0.025) and 29.6% vs. 1.7% (P<0.001)respectively. Adverse events that were more frequent after SAVR at 1 year included new onset atrial fibrillation (2.3% vs. 0% P=0.674) and rehospitalization (21.3% vs. 3.0% P=0.005). At 1 year, the rates of stroke were 3.0% in the TAVI group and 6.8% in the SAVR group(P=0.628). The rates of death from any cause were 3.8% in the TAVI group and 5.2% in the SAVR group at 1 month (P=1.000), and 5.8% and 9.8% respectively at 1 year(P=0.636). The mortality at 1 year was 54.9% in the drug therapy group. The New York Heart Association (NYHA) functional status were improved significantly in both groups at 1 year.

CONCLUSIONS In elderly high-risk patients with SAS, the prognosis were very poor when treated only by drug; transcatheter and surgical procedures for aortic-valve replacement were associated with similar short-term and long-term prognosis, although there were important differences in peri-procedural risks.

CARDIOMYOPATHY

GW28-e0050

Assessment 2D and 3D global longitudinal Strain of abnormal LV myocardial deformation properties Using 3D Speckle-Tracking Echocardiography in young HCM



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OBJECTIVES Hypertrophic cardiomyopathy (HCM) is a disease predisposes to unexplained left ventricular (LV) hypertrophy and dysfunction and non-dilated ventricular chambers associated unusual myocardial mechanics. The most serious complications of HCM is sudden death for young subclinical patients, thus, observing and analyzing LV strain has particular values of diagnostic and prognostic for young HCM patients. The objective of this study was to determine which strain component assessed by 2-dimensional speckle-tracking echocardiography (2DSTE) and 3-dimensional speckle-tracking echocardiography (3DSTE) was the most powerful predictor for young HCM.

METHODS We enrolled 96 young subjects (45 HCM (32 males; 25 ± 6 yrs) and 41 controls (27 males; 26 ± 4 yrs)) underwent TTE performed strain analysis using both 2DSTE and 3DSTE. Two-dimensional and 3-dimensional global longitudinal, circumferential, and radial strain and global 3-dimensional strain of the LV were measured in each patient using QLab and TOMTEC software by two-independent-specialists.

RESULTS Data analysis for the new 3D-STE methodology: (-21.94 ± 3.4% vs 27.8 ± 5.1%, P > 0.001 (2D GLS), -19.3 ± 3.4% vs 26.3 ± 4.2%, P < 0.001 (3D GLS), -85.2±43.7% vs 106.3 ± 26.82%, P < 0.001 (3D GRS), -30.7 ± 5.7% vs 34.3 ± 6.4%, P > 0.001, (3D GCS), respectively. 3D GLS but not GRS, GCS significantly correlated with LVMI, E/Ea and LVOT-PG (P<0.05) in young HCM subjects.

CONCLUSIONS LV global 3D systolic strain analysis using the new 3D-STE methodology is feasible and reproducible. 3D GLS is more sensitive index than 2DGLS for young HCM.