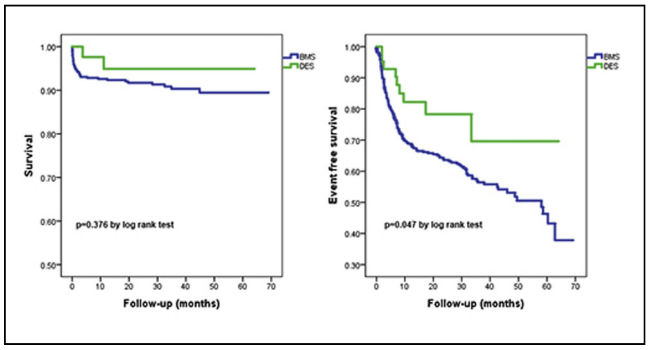

CONCLUSION The long-term mortality rate is comparable between DES and BMS in patients with STEMI. Compared with BMS, however, DES is associated with a trend toward a lower rate of recurrent myocardial infarction, revascularization, and heart failure.

TCTAP A-157

Short Term Outcomes After Percutaneous Interventions in Patients with Metabolic Syndrome

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BACKGROUND The metabolic syndrome (MS) is a cluster of metabolic perturbations largely resulting from an excess accumulation of abdominal fat, and it is characterized by insulin resistance, hypertriglyceridemia, low high-density lipoprotein cholesterol, and the presence of small dense low-density lipoprotein particles and it has been shown to result in a dramatic increase of type 2 diabetes and cardiovascular disease (CVD). The aim of this study was to assess the impact of metabolic syndrome on the clinical outcomes after coronary artery stenting.

METHODS We have investigated 132 patients (m=61; mean age 61.4 years old) who have undergone coronary artery stenting with MS compared to the subjects without MS (control group; n=52; m=27; mean age 61.8 years old) during the 3 years (mean follow-up 2.8 years). Metabolic syndrome was defined by the "Harmonized" definition of the MS.

RESULTS Patients who have had metabolic syndrome were associated with a significant restenosis (odd ratio (OR) 1.29, Confidential Interval (CI) 95%, 0.98-1.76) and adverse cardiac events (OR 1.28; CI 95%, 0.98-1.71) than those of patients without of this syndrome (restenosis: OR 1.10; CI 95%, 0.96-1.42; adverse cardiac events: OR 1.12; CI 95%, 0.99-1.52; $p<0.05$).

CONCLUSION After stent implantation, metabolic syndrome is an important risk factor for adverse cardiac events and restenosis rate in patients with coronary artery disease.

TCTAP A-158

Short Term Outcomes After Coronary Artery Stenting in Patients with Metabolic Syndrome

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BACKGROUND Metabolic syndrome (MS) is a condition linking insulin resistance, dyslipidemia, hyperglycemia, and hypertension that increases the risk of developing diabetes, cardiovascular disease, and subsequent cardiovascular morbidity and mortality. We aimed to study the effect of metabolic syndrome (MS) on short-term outcomes after coronary artery stenting with drug-eluted stents (DES).

METHODS We have investigated 132 patients with MS (m=61; mean age 61.4 years old) compared to those of 52 patients without it (m=27; mean age 61.8 years old) in the interventional cardiology department of the Republican specialized scientific-practical medical center of therapy and medical rehabilitation. Metabolic syndrome was defined by the "Harmonized definition of the MS". The medium follow-up period was 2.8 years. A composite event consisted of repeat revascularization, non-fatal myocardial infarction, and cardiac death.

RESULTS MS components showed a significant relationship to the composite event. When compared with no MS factors, the adjusted hazard ratio for one and five MS components was 1.32 (95% CI: 0.91-1.78) and 1.82 (1.24-2.82), respectively. Cox regression analysis showed that MS as a significant predictor of major adverse cardiovascular events.

CONCLUSION Metabolic syndrome increases composite event risk in patients who have undergone coronary artery stenting with DES. The risk is worse with increasing number of MS components.

VALVULAR HEART DISEASE (AORTIC, MITRAL, ETC) (TCTAP A-159 TO TCTAP A-168)

TCTAP A-159

First Human Cases of New Self-expandable Percutaneous Pulmonary Valve Implantation Using Knitted Nitinol-wire Stent Mounted with a Tri-leaflet Porcine Pericardial Valve

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BACKGROUND Severe pulmonary regurgitation (PR) and associated right ventricular (RV) dilatation in native right ventricular outflow tract (RVOT) is challenging and still on clinical trial. We report first human cases of new self-expandable percutaneous pulmonary valve implantation (PPVI) using newly made knitted nitinol-wire stent mounted with a tri-leaflet porcine pericardial valve developed in South Korea.

METHODS We reviewed 10 cases of new self-expandable PPVI at the Seoul National University Children's Hospital. This self-expandable valved-stent was newly developed by our research team with the cooperation of the TaeWoong medical company in South Korea. This valved-stent was made by knitted nitinol-wire backbone with tissue valve using porcine pericardium with multiple steps for tissue preservation including decellularization and alpha-galactosidase treatment.

RESULTS Ten patients underwent total correction of Tetralogy of Fallot previously and showed severe PR (mean PR fraction: 44.6%, range: 35.4-56) and enlarged RV volume (mean indexed RV end-diastolic volume; 184.1 mL/m^2, range: 161-209.8). Their median age at PPVI was 21.8 years old (range: 13-36). At the targeted RVOT area, 5 patients were implanted with 28 mm diameter valved-stent and 5 patients were implanted with 26 mm diameter valved-stent loaded in the 18 French delivery cable. There were no significant peri-procedural complications in all patients. After the procedure, there was no significant pulmonary stenosis or PR from cine-angiography and echocardiography in all patients. Chest X-ray showed good valved-stent position at targeted RVOT area. All patients discharged 4 days after PPVI without any problem. Two patient completed 6 months follow-up after PPVI and showed decreased indexed RV end-diastolic volume from 181.7 to 126.7 mL/m^2 and 167.5 to 112.6 mL/m^2, respectively from cardiac MRI.

CONCLUSION First human implantation of the new self-expandable percutaneous pulmonary valve using knitted nitinol wire mounted with a tri-leaflet porcine pericardial valve developed in South Korea was feasible and effective at short-term follow-up. A clinical trial for feasibility to evaluate the safety and short-term effectiveness of this self-expandable valved-stent for 10 patients is complete for the congenital heart disease with pulmonary valve disease in South Korea.

TCTAP A-160

Novel Technique to Avoid Perforation of the Right Ventricle by the Temporary Pacing Lead During Transcatheter Aortic Valve Implantation

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