



TCTAP A-074
The Clinical Outcome of Percutaneous Coronary Intervention for Very Elderly Ischemic Coronary Artery Disease Patients in Japan

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BACKGROUND Our country is a super-aged society and this is an unlike any other in the world. We must consider the treatment strategy for their disease enough. In this study, we examined the clinical outcomes of percutaneous coronary intervention (PCI) for very elderly ischemic coronary artery disease patients in Japan.

METHODS From October 2014 to October 2015, 143 patients with 196 lesions had been implanted drug-eluting stent for ischemic coronary artery disease in our hospital. The patients were divided into the very elderly patients (VE) group (≥ 80 year: 37 patients, 50 lesions) and the non-VE group (106 patients, 146 lesions). The groups were compared for lesions characteristics, procedure characteristics, and the incidence of major adverse cardiac events (MACE) at 1 year.

RESULTS The tortuous lesion (VE group: 45% vs. non-VE group: 22%, $P=0.04$) and calcified lesion (52% vs. 34%, $P=0.03$) were significantly higher in the VE group than the non-VE group. Contrast volume (111.6 ± 46.15 ml vs. 89.2 ± 54.67 ml, $P=0.03$) and radiation dose (1.54 ± 1.61 Gy vs. 0.98 ± 0.45 Gy, $P=0.02$) were significantly higher in the VE group. But, there were no significant differences in post-minimal lumen diameter, post % diameter stenosis, and the incidence of MACE between the two groups.

CONCLUSION As for the very elderly patients, the lesion morphology is complicated, but there was no significant difference in the clinical outcome. It is thought that PCI for the very elderly patient is an allowable treatment strategy in Japan.

CONGENITAL HEART DISEASE (ASD, PDA, PFO, VSD) (TCTAP A-075 TO TCTAP A-078)

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Transcatheter Closure of Complex Atrial Septal Defects: Morphological Predictors of Outcome with Modified Techniques of Device Deployment



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BACKGROUND The success of transcatheter closure (TCC) in ostium secundum atrial septal defects (OS-ASD) is largely determined by the morphology of the defects. Modified techniques are being used for circumventing the anatomic complexities and increasing success. We planned a prospective study looking at different morphological features of complex ASD identified in TEE and their association with the outcome of TCC of ASD with such modified device delivery techniques after conventional techniques failed.

METHODS We prospectively looked at various morphological complexities associated with modified techniques of TCC of OS ASD and to study if these anatomic variables can predict the outcome of TCC by logistic regression analysis. Seven parameters, viz. defect size, an absence of aortic rim, septal aneurysm, septal malalignment, deficiency of posterior rim and deficient inferior vena caval rims were analyzed for the outcome. Size more than 44 mm and complete absence of inferior vena caval rim were exclusion criteria. We used balloon assistance in 72% cases and pulmonary vein deployment technique in 23%. In 5% cases, a modified sheath was used. In all these patients a conventional technique had failed.

RESULTS TCC was successful in 84% (67 out of 80) of patients with modified techniques. Out of the seven parameters studied, mean defect size, absent aortic rim, septal aneurysm and multiple defects did not show any difference in the outcome. Mean defect size was 31.8 ± 3.2 mm (22.9-39.1) with success and 32.6 ± 4.5 mm (CI 23.1-39.7) with failure ($P=0.06$). Patients with malalignment had a high failure rate of 71.4% ($P<0.001$). The proportion of patients with deficient posterior rim was 44% (35/80). The success rate was 68.6% with deficient posterior rim vs. 95.6 with adequate posterior rim ($P=0.019$). The inferior vena caval rim was deficient in 19 (24%) and procedure failed in 52.6% of these patients ($P<0.001$). The odds ratio for procedural failure was 25.3 (4.3- 143.8) in patients with septal malalignment, 8.3 (1.4- 48.5) with deficient inferior caval rim and 4.1 (2.5-19) for a deficient posterior rim.

CONCLUSION The modified techniques for device deployment offered good chances of success in TCC of OS ASD (84%) after a failed standard approach. Mean defect size and presence of a septal aneurysm did not affect an outcome as absent aortic rim. But a presence of septal malalignment, an absence of posterior and or inferior vena caval rim predicted failure of TCC with modified device delivery.

TCTAP A-076

Transcatheter Closure of Patent Foramen Ovale: Clinical Efficacy for Prevention of Recurrent Cryptogenic Stroke or Migraine Headache



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BACKGROUND Transcatheter closure of patent foramen ovale (PFO) for prevention of recurrent cryptogenic cerebrovascular events (CVE) has not been officially approved in Japan. However, previous studies suggested that >10000 patients/year are suffered from a cryptogenic stroke due to PFO in Japan. Additionally, several studies revealed the improvement for a migraine after PFO closure.

METHODS Since 2007, we have performed transcatheter closure of PFO in 34 patients. Mean age at procedure was 45 years, including 26 patients with stroke, 3 with TIA, 4 with a migraine and 1 with brain abscess. A presence of interatrial right-to-left shunts was demonstrated by transesophageal contrast echocardiography in all. PFO closure was performed using Amplatzer Septal Occluder (n=15), Amplatzer Cribriform device (n=5) or Amplatzer PFO Occluder (n=14).

RESULTS All procedures were successfully performed. During the follow-up period (40 ± 11 months), no device-related complications were observed. Recurrent TIA attack without evidence of MRI stroke finding was observed in 1. In 11 of 15 patients complicated with a migraine before, complete resolution or significant reduction was observed.