**TCT-782**
Clinical impact of repeat infrapopliteal interventions for critical limb ischemia

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Obtainment of Wound Blush is the most important angiographic endpoint for wound healing

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**BACKGROUND** Though its patency rates are relatively low, endovascular therapy (EVT) has become a first line approach of revascularization in patients with critical limb ischemia (CLI). EVT for infra-popliteal lesion has high rate of restenosis and requirement for repeat intervention, however the clinical impact were not well characterized. The aim of this study was to assess the clinical impact after infra-popliteal EVT for patients with CLI.

**METHODS** We retrospectively analyzed a multicenter database about CLI patients who underwent EVT for isolated infra-popliteal lesions from April 2004 to December 2012. Of a total of 1332 cases, 34 cases were excluded due to missing data on variables of interest. Consequently, 1298 limbs of 1065 patients were included in the current analysis.

**RESULTS** The prevalence of tissue loss was 76% and 33% were accompanied by infection. Mean follow-up period was 1.7 ± 1.6 years, and 143 limbs underwent major amputations and 499 underwent repeat intervention. The Cox regression analysis revealed that repeat intervention was significantly associated with future risk for major amputation; the unadjusted hazard ratio was calculated to be 3.04 (95% confidence interval: 2.01 to 4.43). From the stratification analysis, repeat intervention significantly increased future risk of major amputation in cases with regular dialysis, whereas it did not in those without regular dialysis. From the multivariate analysis, repeat intervention in cases with regular dialysis independently increased the future risk of major amputation, whereas that in those without regular dialysis was not.

**CONCLUSIONS** In the patients with CLI due to infra-popliteal lesions, requirement for repeat intervention was increasing the future risk of major amputation. However, this correlation was not applicable to non-dialysis patients.

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**BACKGROUND** Several reports have been published of the acceptable patency and limb salvage rates following infra-popliteal interventions for the treatment of critical limb ischemia (CLI). However, the optimal angiographic endpoint of endovascular therapy (EVT) remains unclear. The aim of this study was to assess the optimal angiographic endpoint of EVT for wound healing.

**METHODS** This was a subanalysis of prospective multicenter OLIVE registry assessing the patients who received infrainguinal EVT for CLI. We analyzed the data of 185 limbs with ischemic ulcerations classified as Rutherford category 5 or 6, who underwent EVT alone, without bypass surgery. The wound healing rate after EVT was estimated by the Kaplan-Meier methods. The association between final angiographic data and wound healing was assessed by the Cox proportional hazard model.

**RESULTS** The overall wound heal rate was 73.5%. The probabilities of wound heals. Wound blush as an angiographic endpoint in EVT may be a novel predictor of wound heals in patients with CLI.
Carotid artery stenting (CAS) has evolved into an alternative modality for the treatment of symptomatic and asymptomatic high-grade carotid artery stenosis, particularly in patients considered to be at a high surgical risk for carotid endarterectomy (CEA). There is limited data on the outcomes of patients with moderate and severe chronic kidney disease (CKD) (stage 3 and 4) undergoing CEA or CAS.

**METHODS** The Healthcare Cost and Utilization Project’s National Inpatient Sample was screened for hospital admissions of patients undergoing CAS and CEA from 2003-2012. Clinical characteristics and outcomes were identified in patients with stage 3 and 4 CKD. The primary outcome of interest was major adverse cardiac and cerebrovascular events (MACCE) (in-hospital death, acute myocardial infarction (AMI) and acute cerebrovascular accident (CVA)).

**RESULTS** Our study population consisted of 3,608 patients that underwent CEA and 746 patients that underwent CAS. Patients undergoing CAS had significantly higher rates of coronary artery disease and peripheral vascular disease (Table). CAS patients experienced significantly higher rates of MACCE compared with patients that underwent CEA, mainly driven by a higher rate of in-hospital strokes (Table). In a multivariable analysis, CAS (OR 1.52, 95% CI 1.25-1.84) was independently predictive of MACCE.

**CONCLUSIONS** In patients with moderate and severe CKD, CAS was associated with similar rates of in-hospital mortality and AMI rates but higher rates of stroke when compared with CEA.

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Comparison of hybrid endovascular and open surgical repair for proximal aortic arch diseases

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**BACKGROUND** To compare the outcomes of hybrid endovascular and open surgical repair for proximal aortic arch diseases.

**METHODS** A total of 55 consecutive patients with an aortic arch aneurysm or aortic dissection involving any of zone 0 to 1 (39 male, age 63.4±14.3 years) who underwent a hybrid endovascular repair (n=35) or open surgical repair (n=20) from 2006 to 2014 were included in a retrospective analysis. Perioperative and late outcomes were compared.

**RESULTS** The two groups had similar baseline characteristics, except age and EuroSCORE II, which were higher in the hybrid group. Perioperative mortality or stroke did not differ significantly between the two groups, but tended to be lower in the hybrid repair group than in the open repair group (31.4% vs. 30.0%, p=0.144). Incidences of other morbidities did not differ. During follow-up, similar overall survival was observed between the hybrid group and the open repair group (87.3% vs. 79.7% at 1 year and 83.8% vs. 72.4% at 3 years; p=0.319). However, significantly lower reintervention-free survival was observed for hybrid repair compared with open repair (83.8% vs. 100% at 1 year and 65.7% vs. 100% at 3 years; p=0.022).

**CONCLUSIONS** Comparable perioperative and late outcomes were observed for hybrid endovascular repair of proximal aortic disease compared with open surgical repair, despite a higher reintervention rate during follow-up. Therefore, hybrid repair may be considered as an acceptable treatment alternative to surgery, particularly in patients at high surgical risk.