PERIPHERAL ARTERY DISEASE: ENDOVASCULAR TREATMENT

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Outcome of spot versus full-coverage nitinol stenting after endovascular therapy for femoropopliteal artery disease

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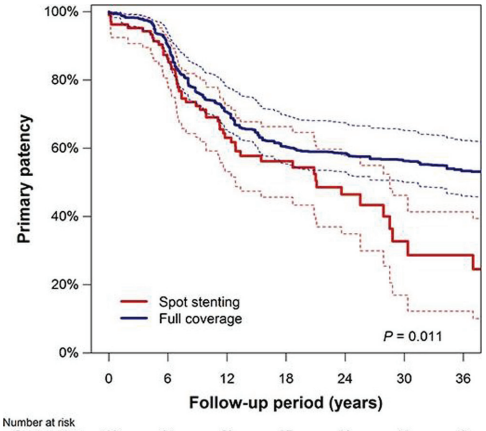
Objective: This study is to investigate the outcomes comparison between spot and full-coverage nitinol stenting after endovascular therapy (EVT) for femoropopliteal (FP) lesions using propensity score matching.
Methods: This study was a multicenter, retrospective study. We analyzed a clinical database of 1554 patients undergoing femoro-popliteal (FP) endovascular therapy (EVT) for symptomatic PAD (Rutherford category 2 to 4) between January 2010 and December 2016, at 4 hospitals in Japan. Of the 1554 patients, 1168 patients had bare-metal or drug-eluting stent(s) implanted. The current study excluded 17 patients with missing data on baseline characteristics, and consequently analyzed a total of 1151 patients undergoing FP stenting. The primary endpoint of the current study was loss of primary patency after stent implantation, the secondary endpoint was clinically driven target lesion revascularization (CD-TLR) using propensity score matching. Interaction analysis was additionally performed to explore the effect of baseline characteristics on the association between spot stenting and primary outcome.
Results: After propensity score mashing, spot stenting demonstrated a significantly lower primary patency rate compared to full stent coverage (P=0.006). The freedom rate from CD-TLR was also significantly lower in the group with spot stenting than those with full stent coverage (P=0.038) Subsequent interaction analysis identified (1) chronic total occlusion (CTO), (2) lesion location A (proximal), and (3) lesion length (≥138mm) were inversely associated with the inferiority of spot stenting to full stent coverage in primary patency.



Number at risk							
Spot stenting	106	84	52	37	23	10	8
Full coverage	902	766	572	451	367	298	254
Estimate							
Spot stenting	99%	86%	63%	56%	46%	33%	29%
Full coverage	100%	90%	71%	60%	58%	56%	53%

Conclusion: Primary patency and CD-TLR was significantly lower spot stenting compared with full coverage stenting for FP lesions. The subsequent interaction analysis suggested that CTO, lesion location A, lesion length (≥138mm) might be suited to spot stenting strategy.

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Clopidorel-based antiplatelet therapy is not enough for stent patency in patients undergoing femoropopliteal arterial endovascular interventions

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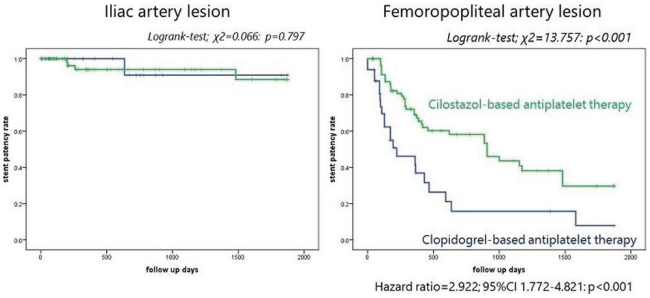
Background: Clopidgrel is used as the prevention of stent restenosis after endovascular treatment (EVT). We sought to compare the effect of clopidgrel with cilostazol for stent patency after EVT of lower limb artery.
Methods and results: 387 lesions of 235 patients were enrolled undergoing EVT in our hospital. They were divided into two groups with clopidgrel-based and cilostazol-based antiplatelet therapy. 88% of clopidgrel-based group was administered in combination with aspirin. On Kaplan-Meyer methods, the 5-years patency rate of clopidgrel-based therapy group was significantly lower than that of cilostazol-based therapy group (Logrank-test; $\chi 2$=7.340: p=0.007). There were no differences in the patency rate of iliac artery into two groups (Logrank-test; $\chi 2$=0.066: p=0.797). However, the patency rate of femoropopliteal artery of clopidgrel-based therapy group was significantly lower than that of cilostazol-based therapy group (Logrank-test; $\chi 2$=13.757: $p<0.001$). On Cox proportional hazard analysis, clopidogrel-based antiplatelet therapy was extracted as the negative prognostic factor for the patency of culprit lesion after EVT (Hazard ratio=2.223; 95% CI 1.371–3.603: p=0.001). In particular, clopidogrel-based antiplatelet therapy had a significant negative effect on the patency of femoropopliteal artery after EVT (Hazard ratio=2.922; 95% CI 1.772–4.821: $p<0.001$).



Kaplan-Meyer curve for stent patency

Conclusions: Clopidogrel-based therapy as antiplatelet therapy after EVT is not useful for the patency of culprit lesion, especially of femoropopliteal lesion.

P3566
Impact of baseline characteristics on efficacy of cilostazol for patients performing endovascular therapy for femoropopliteal lesions

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Background: Several studies have reported that cilostazol improves the outcomes of endovascular therapy (EVT) for femoropopliteal (FP) lesions. However, there is a paucity of data about impact of baseline characteristics on efficacy of cilostazol.
Purpose: The objective of this study was to investigate the relationship between baseline characteristics and efficacy of cilostazol on EVT outcomes.
Methods: This study was an observational study examining consecutive patients performing EVT for de novo FP lesion from July 2004 to March 2016. Study population included 1770 patients 2014 limbs. Excluded due to lack of data about outcomes (n=11), or not de novo FP lesion (n=4), subjects were 1769 patients 1999 limbs with (n=583) or without (n=1414) cilostazol. Primary outcome measure was restenosis at 1 year. Subgroup analyses were performed to identify the relationship between baseline characteristics and efficacy of cilostazol on EVT outcomes.
Results: The incidence of restenosis at 1 year was significantly lower in cilostazol group than non cilostazol group (21.5% versus 30.7%, p=.0001). Similarly, the incidences of target lesion revascularization and major adverse limb events (MALE) were also lower in cilostazol group (14.7% versus 22.9%, p=.0001 and 19.6% versus 25.0%, p=.03). After adjustment for confounders, the risk for restenosis in cilostazol group was significantly lower than non cilostazol group (hazard ratio (HR), 0.72; 95% confidential interval [CI], 0.57–0.90). For the subgroup analysis, HR for restenosis in non-ambulatory status (HR, 0.72; 95% CI, 0.42–1.18), non-diabetes (HR, 0.72; 95% CI, 0.51–1.01), poor runoff (HR, 0.75; 95% CI, 0.54–1.03), or critical limb ischemia (HR, 0.78; 95% CI, 0.54–1.11) did not show the statistically significance on the efficacy of cilostazol.
Conclusion: Our study showed that cilostazol contributed to the improvement of outcomes of EVT for FP lesions as previous studies. However, subgroup analyses suggest that there is a possibility that cilostazol does not lead to improvement of EVT outcomes in some specific subgroups.

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Long term usefulness of target lesion revascularization for asymptomatic restenosis of superficial femoral artery after endovascular therapy

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Background: It is known that the primary patency rate of endovascular therapy