

## Impact of Vessel Size on Endovascular Therapy for Femoro-popliteal Lesions

**Purpose:**TASC-2 classification helps us determine the management of endovascular therapy (EVT) for femoropopliteal lesions. However, it has not been described about the vessel size. Little is known about the relationship between the vessel size and EVT outcomes.**Methods:**REAL-FP is retrospective multicenter analysis of endovascular therapy for femoropopliteal lesions at 13 Japanese medical centers from January 2004 to December 2011. 2742 patients, 3471 limbs were registered and we analyzed the relationship between the vessel size and EVT outcomes. We classified into four, group 1 (vessel size 4mm or less), group 2 (4 to 5.5mm), group 3 (5.5 to 7mm), and group 4 (over 7mm), according to the vessel diameter. The outcome measures were primary and secondary patency.**Results:**The mean follow interval was 834  $\pm$  656 days. Mean lesion length 120.0  $\pm$  89.4mm was mm and mean vessel diameter was 5.19  $\pm$  1.32mm. At 3 years, compared to group 2, 3, and 4, small vessel group (group 1) had significant worse cumulative primary patency (41.2% $\pm$ 2.8%, 65.2% $\pm$ 1.5%, 64.3% $\pm$ 1.8%, 66.3% $\pm$ 9.3%, respectively,  $p < 0.0001$ ) and secondary patency (79.3% $\pm$ 2.3%, 89.4% $\pm$ 1.0%, 91.2% $\pm$ 1.2%, 94.8% $\pm$ 3.6%,  $p < 0.0001$ ). After adjustment for age, gender, Rutherford classification, diabetes, hemodialysis, TASC2 classification, stent use, vessel size was still significant risk factor (primary patency 0.78[0.71-0.86],  $p < 0.0001$ , secondary patency 0.64[0.54-0.77],  $p < 0.0001$ ).**Conclusions:**The results of our study suggest vessel size is related to EVT outcomes. Probably, there is the necessity that we determine a treatment strategy in consideration of the vessel diameter.