Impact of Endovascular Therapy on the Correlation between Exercise Ankle-Brachial Index and Endothelial function in Patients with Peripheral Artery Disease. : from EndoPAD study.

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Background

- Ankle brachial index (ABI) can detect patients with peripheral artery disease who complain intermittent claudication or not.
- Although, it is well known that Endovascular therapy (EVT) improves the Ex-ABI, few paper showed that EVT improve endothelial function.

Aim

- To reveal, whether EVT improve Endothelial function or not, and whether improvement of Endothelial function related with those of Ex-ABI.

Materials & Methods

Design: prospective single center Analysis
Enroll Period: From May 2015 to October 2015
Subjects: consecutive PAD patients with Rutherford 2 or 3 who underwent EVT
Enrollment: 28 patients

Study protocol

<table>
<thead>
<tr>
<th>Measurement of Ex-ABI and RHI</th>
<th>11 patients (13 limbs)</th>
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<tr>
<td>1 month after EVT</td>
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<td>3 month after EVT</td>
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Results

| % change of RHI was significantly correlated with % change of Ex-ABI (r=0.585, p=0.036) at 3 month after EVT. |
| F-P lesions (76.9%) had the significant strong correlation (r=0.674, p=0.032) at 3 month after EVT. |
| CTO lesion had the remarkable strong correlation (r=0.948, p=0.014) at 1 month after EVT. |

Discussion

- Patients with intermittent claudication may benefit from EVT with improvements in ABI, intermittent claudication distance, and maximum walking distance.
- Diabetes, current smoking, and lipid-lowering medication were associated with abnormal PAT ratio, but there was no association between age and abnormal PAT ratio.
- Exercise program improve the endothelial function.

Limitation

- Prospective and follow up survey.
- Single center analysis and the number of enrolled patients were small.
- Although Ex-ABI was improved after EVT, we couldn’t confirm the improvement of exercise habits.

Conclusion

- EVT might improve not only ABI data and claudication, but also endothelial function by the improvement Ex-ABI, especially in the F-P lesion.

Disclosure

The authors have no conflicts of interest to disclose concerning the presentation.