

New Risk Stratification in Patients with Femoropopliteal PAD. Can We Fight Against the Poor Prognosis?

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In general, patients with peripheral arterial disease (PAD), including asymptomatic subjects, remain to be at a high risk of cardiovascular (CV) events and mortality. A recent meta-analysis¹⁾ also reported a 5-year cumulative CV mortality of 13% in PAD patients regardless of symptoms. In addition, the REACH registry²⁾ has reported that PAD patients with atrial fibrillation (AF) have a worse prognosis than patients with PAD alone. It goes without saying that revascularization for PAD improves walking distance and/or symptoms such as claudication, but does not improve the prognosis of patients. Therefore, strict risk management is recommended to reduce the risk of future cardiovascular events.

Although PAD has a poor prognosis, there have been only a few reports on risk stratification in PAD patients so far, and the COPART risk score³⁾ is a representative one. In addition, most of these clinical research data are from western countries. The progression of arteriosclerosis is slower in Japanese patients than in western patients, and it is necessary to be careful when applying the western risk stratification to Japanese patients as it is. In that respect, it is incredibly significant that Tomoi *et al.*⁴⁾ showed that AF and the CHA2DS2-VASc scores are independent risk factors that increase major adverse cardiovascular events (MACE), but not major adverse limb event in Japanese patients with PAD who underwent endovascular treatment in the femoropopliteal (FP) region. However, currently, the type of intervention required for PAD patients who are judged to be at high risk of MACE based on the CHA2DS2-VASc score remains unclear. Needless to say, optimal medical therapy (OMT) for risk factors of arteriosclerosis should be mandatory. As the authors

have mentioned, knowing whether more aggressive interventions for heart failure, including new types of drugs such as angiotensin receptor-neprilysin inhibitors and/or sodium-glucose cotransporter 2 inhibitors as well as anti-arteriosclerosis treatment, can improve the prognosis of patients with PAD is interesting. In this regard, large-scale prospective investigations are expected in the future.

On the other hand, this study also has several limitations. Although the authors limited the subject of the present study to PAD patients with FP region, it is thought that the risk stratification should be more generalized by expanding the study to include patients with aortoiliac (AI) region. Second, it is necessary to investigate whether all factors of CHA2DS2-VASc score can be risk factors for MACE of FP-PAD patients. For example, is being a female alone, which is one of the constituents of the CHA2DS2-VASc score, a real risk for MACE? Nevertheless, the results of this study are a milestone in risk stratification of FP-PAD patients in Japan, and the enhancement of OMT for high-risk patients should be considered. It is hoped that this risk stratification will be developed by well-designed prospective studies in the future.

Conflicts of Interest

None.

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