Peripheral Arterial Disease in Korean Patients Undergoing Percutaneous Coronary Intervention: Prevalence and Association with Coronary Artery Disease Severity

Eun Kyoung Kim, Pil Sang Song, Jeong Hun Yang, Young Bin Song, Jin-Ho Choi, Hyeon-Cheol Gwon, Sang Hoon Lee, Kyung Pyo Hong, Jeong Euy Park, Seung-Hyuk Choi

Division of Cardiology, Department of Medicine, Samsung Medical Center, Sungkyunkwan University School of Medicine, Seoul, Republic of Korea.

Background:
Peripheral artery disease (PAD) is an important marker for the risk stratification of patients with coronary artery disease (CAD). We investigated the prevalence of PAD in patients with CAD and the relationship between ankle-brachial pressure index (ABPI) and CAD severity.

Methods:
A total of 711 patients with CAD undergoing percutaneous coronary intervention from August 2009 to August 2011 were enrolled. PAD diagnoses were made using the ABPI.

Results:
The prevalence of PAD was 12.8% (right ABPI: 0.71 ± 0.15, left ABPI: 0.73 ± 0.15) in all patients. Patients with PAD had a higher prevalence of left main coronary disease (14.3% vs. 5.8%, p = 0.003), more frequently had left main coronary disease (14.3% vs. 5.8%, p = 0.003), and had a higher SYNTAX score. Using multivariate analysis, we determined that left main CAD (OR 2.954, 95% CI 1.418 – 6.152, p = 0.004) and multivessel CAD (OR 3.251, 95% CI 1.383 – 7.053, p = 0.002) were both independently associated with PAD.

Conclusions:
PAD of the lower leg is highly prevalent in patients receiving PCI with CAD and strongly associated with disease severity.

The high prevalence of PAD in patients who undergo PCI confirms the importance of active screening for PAD using ABPI.

Clinicians should keep in mind that CAD patients undergoing PCI would have other co-morbid vascular manifestations like PAD.