

The detection of emboli by the Doppler guidewire can clear the efficacy of a distal protection device in AMI

¹Sakurabashi Watanabe Hospital

Atsunori Okamura¹, Motoo Date¹, Yoshiharu Higuchi¹, Hiroyuki Nagai¹, Makito Ozawa¹, Masahiko Shibuya¹, Katsuomi Iwakura¹, Kenshi Fujii¹

Purpose: We recently reported that the Doppler guidewire (DGW) can detect emboli as high-intensity transient signals (HITS) and the number of HITS during PCI was associated with poor recovery of left ventricular function in AMI. In the present study, we cleared the efficacy of FILTRAP™ during PCI by using DGW in AMI. **Methods:** We studied 45 patients with first AMI who underwent PCI within 6 hours after the symptom onset. After coronary thrombectomy, FILTRAP™ was used in 20 patients (FILTRAP group), and was not used in 25 patients who were monitored by DGW to detect HITS. Peak CPK was measured after PCI. **Results:** The average number of HITS was 21 ± 23 counts ranging from 0 to 83 counts in the 25 patients without FILTRAP™. They were divided into 2 groups according to the number of HITS: HITS < 15 (n=13) and HITS > 15 (n=12). There was no significant difference in peak CPK between the 3 groups. In patients with RCA culprit lesions, peak CPK was significantly lower in FILTRAP group (n=11) and HITS < 15 group (n=6) compared to HITS > 15 group (n=8) (1811 ± 1403 , 1474 ± 782 , 3782 ± 3174 IU/L, $P < 0.05$, respectively). In patients with LCA culprit lesions, there was no significant difference in peak CPK between the 3 groups. **Conclusion:** The wide range of the number of emboli during PCI concealed the efficacy of FILTRAP™ in AMI. The classification according to the number of distal emboli in the control group can clear the efficacy of it.