

The usability of optical frequency domain imaging (OFDI) guided PCI for AMI patients

Purpose: Optical frequency domain imaging (OFDI) is a valuable imaging device to evaluate the detailed information of intracoronary. We investigated the usability and efficacy of OFDI guided PCI compared to intravascular ultrasound (IVUS) guided PCI for AMI patient.

Methods: Retrospective study was performed in consecutive 115 AMI patients in our hospital who underwent emergency PCI by either OFDI guided (n=15) or IVUS guided (n=100), but not both between December 2013 and January 2015. The selection which imaging device uses was depended on operator.

Results: In patient and lesion characteristics, there were no differences except for the rate of hypertension history (OFDI group 28.6% vs IVUS group 72.8%, $p=0.0019$). Procedure time, fluoroscopy time, radiation exposure level and contrast volume were not different significantly. The decision whether to use Filtrap was also depended on operator and there was no significant distinction of the usage rate of Filtrap between two groups. There were also no significant differences in the rate of Filtrap clogging in the patients who apply Filtrap and the rate of the transient flow reduction just after balloon dilatation or stenting in the patients who did not apply Filtrap. But the total rate of Filtrap clogging and without transient flow reduction just after balloon dilatation or stenting who did not apply Filtrap was significantly higher in OFDI group (93.3% vs 69.0%, $p=0.040$).**Conclusion:** OFDI guided PCI for AMI patients was usable and enable to make more appropriate decision whether to use Filtrap in comparison with IVUS guided PCI.