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Newer Generations versus First Generation Drug-eluting Stents in Small Vessel Disease

[1]Korea University Guro Hospital

Se Yeon Choi[1], Seung-Woon Rha[1], Amro Elnagar[1], Byoung Geol Choi[1], Sung Il Im[1], Sun Won Kim[1], Jin Oh Na[1], Seong Woo Han[1], Cheol Ung Choi[1], Hong Euy Lim[1], Jin Won Kim[1], Eung Ju Kim[1], Chang Gyu Park[1], Hong Seog Seo[1], Dong Joo Oh[1]

Background: Newer generation drug-eluting stents (DES) have been developed to improve the efficacy and safety. Small vessel disease is one of the off-labeled indications of current DESs and there are limited data regarding outcomes of newer generations DES on small vessels (2.25 mm). Methods: A total 141 patients (pts) who underwent percutanous coronary intervention (PCI) with DES sizing 2.25mm were enrolled for this study. Study population was divided into twoi groups; Paclitaxel-eluting stents (PES group, TaxusTM: n=110 pts) were compared with those of Zotarolimus-eluting stents (ZES, Endeavor ResoluteTM : n=26 pts) & Everolimus eluting stents (EES, Promus ElementTM: n=5 pts). Angiographic and clinical outcomes of PES group were compared with those of EES and ZES group at 6 & 12 months respectively. Results: Baseline characteristics & post procedure complications were similar between the two groups except there was a trend toward higher incidence of intimal dissection in the PES group. At 6 months, there were no significant differences in angiographic outcomes between the two groups except a trend toward smaller MLD in the newer DES group. Similar results were found at 12 months clinical follow up. Conclusions: In our study, there was no significant difference between first & newer generations DESs at 6 months angiographic & 12 months clinical follow up following exclusive usage of 2.25mm stents in small vessel disease. More extended follow up with larger study group will be needed to make final conclusion.