Authors: Masahide Nagano, Seiji Hokimoto, Michio Mizobe, Kenichi Tsujita, Koichi Kaikita, Kazuko Nakagawa, Hisao Ogawa, The KICS investigators, Kumamoto University, Kumamoto, Japan

**Background:** Stent thrombosis (ST) has emerged as a severe complication of percutaneous coronary interventions (PCI). The occurrence of ST is lower in Japan than Western countries, so there are few data to predict ST after Drug-Eluting Stent (DES) implantation, including a factor of prescription. Japanese patients with ischemic heart disease tend to be administered calcium channel blockers (CCB) instead of beta-blocker because of high frequency of coronary spasm.

**Methods:** We used data from the Kumamoto Intervention Conference Study (KICS) registry. KICS is a multi-center registry enrolling consecutive procedures undergoing PCI in 16 centers in Japan. Consecutive 4,365 patients were enrolled from April 2008 to March 2010. Among them, we analyzed 2,017 patients who underwent DES implantation.

**Results:** The incidence of definite/probable ST throughout a median 364-day follow-up period was 0.6% (12 patients). There were 5 patients with early ST (EST, within 30 days), 5 patients with late ST (LST, between 31-365 days), and 2 patients with very late ST (VLST, over 1 year). ST patients were administered less CCB compared with non-ST patients (25.0%, 56.0%, respectively, p=0.017). By multiple regression analysis, smaller stent diameter (p=0.017), prior CABG (p=0.039), pre-stenosis≥99% (p=0.046), lack of aspirin (p=0.009), and lack of CCB (p=0.046) were significant and independent predictors for ST incidence. Especially in case of LST, only lack of CCB (p=0.016) was an independent predictor. Furthermore, we obtained data of CYP2C19 polymorphism about 5 patients and there were 3 carriers with CYP2C19 loss-of-function allele.

**Conclusion:** These results suggest that lack of CCB may be independently associated with an increased risk of ST after DES implantation in Japanese patients.