PREVALENCE AND CLINICAL IMPACT OF CORONARY ARTERY ANEURYSM AFTER SIROLIMUS-ELUTING STENT IMPLANTATION: LONG-TERM CLINICAL AND ANGIOGRAPHIC FOLLOW-UP

i2 Oral Contributions
Georgia World Congress Center, Room B315
Sunday, March 14, 2010, 5:06 p.m.-5:18 p.m.

Session Title: New Technologies
Abstract Category: PCI - DES
Presentation Number: 2904-08

Authors: Masao Imai, Kazushige Kadota, Suguru Otsuru, Yoji Okamoto, Hiroshi Tasaka, Daishi Hasegawa, Seiji Habara, Hiroyuki Tanaka, Takeshi Maruo, Akitoshi Hirono, Yoshiharu Nishibori, Shingo Hosogi, Yasushi Fuku, Naoki Oka, Harumi Katoh, Hiroyuki Yamamoto, Satoki Fujii, Tsuyoshi Goto, Katsumi Inoue, Kazuaki Mitsudo, Kurashiki Central Hospital, Kurashiki, Japan

Background: The relationship between coronary artery aneurysm (CAA) after sirolimus-eluting stent (SES) implantation and long-term clinical events remain unknown. This study assessed the long-term clinical and angiographic findings in patients who developed CAA after SES implantation.

Methods: This study retrospectively analyzed 3613 lesions (2285 consecutive patients) after SES implantation from November 2002 to December 2006. According to our follow-up protocol of coronary angiography (CAG), early follow-up CAG was scheduled at 3 months for CTO and LMT stenting cases, midterm at 8 months, and late at 20 months. Totally, 86% (3131/3613) of the lesions underwent some timings of follow-up, 681 lesions underwent early and midterm follow-ups, and 2450 lesions underwent late follow-up. CAA is identified by the size of luminal diameter which is 1.2 times larger than that of the adjacent reference segments.

Results: The prevalence of CAA after SES implantation was 2.2% (68/3131). The number of CAA was 24 lesions (35%) in LAD, 38 (55%) in RCA, and 6 (8%) in LCX. The cumulative restenosis rate in CAA was 20% (14/68). The target lesion revascularization rate was 25% (17/68). The incidence of stent fracture was 39% (27/68). The incidence of stent thrombosis was significantly higher in the CAA group than in the non-CAA group (7.3% [5/68] vs 0.5% [16/3063], p<0.001). CAA increased in size during the follow-up period in 47% (32/68) of the lesions.

Conclusions: After SES implantation, CAA is rare and can be incidentally detected by follow-up CAG. However, CAA could be associated with coronary events such as restenosis, stent fracture, and stent thrombosis. Increase in size of CAA after SES implantation may influence the long-term clinical adverse events.