

Abstract 2

Large Single Center Experience with Unprotected Left Main Coronary Artery Drug-Eluting Stenting in 289 Patients.

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BACKGROUND: Since the development of drug-eluting stents, left main stenting (LM DES) has become more prevalent. Randomized trials comparing LM DES with coronary bypass surgery are ongoing but most registry studies have shown good short-term outcomes.

METHODS: A total of 289 consecutive patients with significant unprotected left main coronary artery disease underwent DES placement between May 2003 and April 2008. Repeat angiography was recommended at 4-6 months and 72% actually had an angiogram in the follow-up period that ranged from 5 to 62 months (mean 25.9 ± 14 mo). Data was extracted by review of medical and office charts and death certificates. Descriptive analysis was performed on all variables using mean ± SD for continuous variables and percentages for dichotomous variables. Univariate analysis was used to compare the groups that required TLR versus none.

RESULTS: Mean age of patients was 68.2 years and 65% were males. Other baseline characteristics included hyperlipidemia (83.7%), hypertension (82.4%), diabetes (38.1%), current smoking (19.7%), peripheral vascular disease (18.2%), cerebrovascular disease (16.5%), and history of heart failure (16.5%). Prior PCI had been performed in 62.3% of patients and 35.6% had a prior MI. Nearly two-thirds (64.4%) also had significant disease in two or three major coronary arteries. Nearly half of patients presented with unstable angina (33.8%) or an acute MI (15.4%). Mean number of LM stents per patient was 1.07; By univariate analysis, multiple stent use was associated with higher target lesion revascularization (TLR) rate (p=0.001). Some cases of significant restenosis were detected on routine follow-up angiograms at 4-6 months but mean time to TLR was 14 months. Overall, TLR occurred in only 7.6%. However, due to high burden of CAD, 30.4% had non-LM PCI during follow-up. Angiographic analysis is ongoing to determine if certain stenting techniques are associated with higher TLR and mortality rates. Also a logistic regression analysis is being prepared to determine the predictors of TLR or TLR and cardiac death.

CONCLUSION: In this large series of consecutive patients with many high-risk features, unprotected LM stenting was associated with a relatively low TLR rate. Multiple implantation of stents was associated with a higher TLR rate. Mean time to TLR was 14 months due to many cases of late restenosis.