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Overlapping vs. one long stenting in long coronary lesions
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Intervention of long coronary lesions remains problematic, and optimal treatment strategy is yet to be determined. Despite advancement of stent technology, data are few regarding the efficacy of overlapping stents vs. a single long stent in long coronary lesions. This study was performed to evaluate the results of those strategies for long coronary lesions and to determine the predictors of in-stent restenosis (ISR). Sixty-four lesions (> 20 mm) in 64 patients were treated with either one long stent (group 1, n = 32) or two overlapping stents (group 2, n = 32). Overlapping stents were used at tortuous or calcified lesions and at lesions with diameter discrepancy or significant dissection. Immediate results, follow-up clinical and angiographic outcomes, and predictors of ISR were evaluated. Procedures were successful in all patients in both groups. Clinical and angiographic follow-ups were performed in 54 (84%) cases and 50 (78%) cases, respectively. During the follow-up, major adverse cardiac event occurred in 36% of group 1 and 29% of group 2 (P = 0.56). Six-month ISR rates were 39% in group 1 and 41% in group 2 (P = 0.91). Age (>/= 65 years old) was an independent risk factor of ISR (54% vs. 23%; OR = 4.4; P = 0.04), and distal reference diameter (RD) of less than 2.5 mm tended to predict ISR in multivariate analysis (60% vs. 25%; OR = 3.5; P = 0.06). In conclusion, stent overlapping can be used with outcome similar to that of one long stent in long coronary lesions. The optimal result may be obtained by considering the patient's age and the distal vessel diameter of the lesion.
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The Canadian study of the sirolimus-eluting stent in the treatment of patients with long de novo lesions in small native coronary arteries (C-SIRIUS)
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OBJECTIVES: We assessed the safety and effectiveness of the sirolimus-eluting stent (SES) in treating single de novo long lesions in small native coronary arteries compared to an identical bare metal stent (BMS). BACKGROUND: The SES was previously demonstrated to reduce restenosis significantly. However, patients with long lesions in small vessels have not been well studied and may define a group at very high risk. METHODS: The Canadian Study of the Sirolimus-Eluting Stent in the Treatment of Patients With Long De Novo Lesions in Small Native Coronary Arteries (C-SIRIUS) was a multicenter, randomized, double-blind trial comparing SES versus identical BMS. The primary end point was in-stent minimal lumen diameter (MLD) at eight months. Secondary end points included angiographic restenosis at 8 months, target lesion revascularization (TLR), and major adverse cardiac events (MACE) at 270 days. RESULTS: A total of 100 patients were enrolled at eight Canadian sites. The in-stent MLD at eight months was 2.46 +/- 0.37 mm in the SES compared with 1.49 +/- 0.75 mm in the BMS (a 65% increase, p < 0.001). Angiographic restenosis occurred in 1 of 44

SES patients (2.3%, with no in-stent restenosis) and in 23 of 44 BMS patients (52.3%, p < 0.001). At 270 days, there were two clinically driven TLRs in the SES (4%) and nine in the BMS (18%, p = 0.05). The Kaplan-Meier estimate of freedom from MACE at 270 days was 96.0% for SES patients and 81.7% for BMS patients (p = 0.029). CONCLUSIONS: Patients with long lesions in small vessels are at very high risk of restenosis. In these patients, the SES dramatically reduces the risk of restenosis at eight months, translating into an excellent clinical outcome at nine months. http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&dopt=Citation&list_uids=15028375