Clinical and Angiographic Follow-Up after Long versus Short Stenting in Unselected Chronic Coronary Occlusions

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Summary

Background: Few data are available on the efficacy of long stenting for lesions in unselected chronic total occlusion (CTO).

Hypothesis: The study was undertaken to evaluate the angiographic restenosis and long-term clinical outcomes after long stent implantation in patients with CTO.

Methods: Our retrospective analysis includes a consecutive series of stent implantation in 220 patients with CTO. We compared angiographic restenosis, target lesion revascularization, and long-term clinical outcomes of short stenting (< 20 mm, Group 1, n = 113) with a concurrent series of long stenting (≥ 20 mm, Group 2, n = 107).

Results: Angiographic follow-up was obtained in 174 patients (79.5% of those eligible), and the rates of angiographic restenosis were 19.3% in Group 1 and 33.7% in Group 2 (p < 0.05). In multivariate analysis, the postinterventional minimal lumen diameter was the only independent predictor of restenosis (odds ratio = 0.20, 95% confidence interval 0.08–0.49, p < 0.01). The angiographic restenosis rate was significantly lower in Group 1 than in Group 2 in patients with final minimal lumen diameter < 3.0 mm (28.9 vs. 55.9%, respectively, p < 0.05). However, the angiographic restenosis rate was not significantly different between the two groups in patients with final minimal lumen diameter ≥ 3 mm (12.0 vs. 19.2%, respectively, p = NS). During the follow-up (29.1 ± 10.8 months), there was no difference between the two groups in death, nonfatal myocardial infarction, and target lesion revascularization.

Conclusions: The use of long (≥ 20 mm) versus short (< 20 mm) stents in patients with CTO is associated with a higher angiographic restenosis rate, but there is an equivalent risk of restenosis in selected patients with relatively large-sized vessels.

Key words: chronic total occlusion, restenosis, stent

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