Dokumenttyp: journal article

Autor(en) des Beitrags:
Adriaenssens, T; Byrne, RA; Dibra, A; Iijima, R; Mehilli, J; Bruskina, O; Schömig, A; Kastrati, A

Titel des Beitrags:
Culotte stenting technique in coronary bifurcation disease: angiographic follow-up using dedicated quantitative coronary angiographic analysis and 12-month clinical outcomes.

Abstract:
AIMS: Percutaneous treatment of coronary bifurcation disease remains challenging. In patient subsets in which a two-stent strategy is necessary, the culotte technique is a widely used method. We sought to examine the clinical and angiographic outcomes of patients treated in this manner at our institution. As quantitative coronary angiographic analysis using standard measurement programmes is problematic, we used a dedicated bifurcation analysis system. METHODS AND RESULTS: We prospectively enrolled patients undergoing culotte stenting with drug-eluting stents (Cypher, Endeavor, polymer-free rapamycin-eluting, Taxus) in two German centres. Lesions were classified according to the Medina classification. Angiographic follow-up was scheduled between 6 and 12 months post-index procedure. Clinical follow-up was available up to 12 months. Culotte technique was used in 134 lesions in 132 patients. Of these, 124 (92.5%) represented 'true bifurcation' lesion morphology. Kissing balloon inflation was used in 62% of patients. Procedural angiographic success was achieved in all lesions. Follow-up coronary angiography was performed in 108 (81.8%) patients. Median (IQR) late lumen loss was 0.10 (-0.04-0.38) mm in the proximal main vessel, 0.34 (0.03-0.66) mm in the distal main branch, and 0.30
(-0.01-0.72) mm in the side branch. The incidence of binary angiographic restenosis was 22% for the whole bifurcation lesion, 0% in the proximal main vessel, 9.1% in the distal main branch, and 16% in the side branch. At 12 months, 28 of 132 (21%) patients had undergone target lesion revascularization. The incidence of stent thrombosis (at 1 year) was 1.5%. Predictors of angiographic restenosis were older age, increasing bifurcation angle, more severe distal main branch stenosis, and smaller side branch reference diameter; kissing balloon post-dilatation tended to have a protective effect. CONCLUSION: The culotte stenting technique is associated with high procedural success and a relatively low risk of angiographic restenosis. Safety results in our cohort were favourable in terms of a low risk of stent thrombosis.