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Titel des Beitrags:
Randomized trial of rapamycin- and paclitaxel-eluting stents with identical biodegradable polymeric coating and design.

Abstract:
Aims: This prospective, randomized study sought to directly compare the performance of paclitaxel and rapamycin on an otherwise identical, polymer-coated drug-eluting stent (DES) platform. METHODS AND RESULTS: Stents with identical design and biodegradable polymeric coating that elute either rapamycin or paclitaxel over a 2 months time period were utilized. In this pilot trial that included 91 patients, both stent platforms proved safe with no case of death, Q-wave myocardial infarction or stent thrombosis within a 9 months follow-up period. Late-lumen loss was markedly greater in the paclitaxel-eluting stent group compared with the rapamycin-eluting stent group (0.96 +/- 0.75 vs. 0.33 +/- 0.46 mm, P< 0.0001). Likewise, the rate of angiographic restenosis was higher in the paclitaxel-eluting stent group compared with the rapamycin-eluting stent group [39.0 vs. 12.2%; relative risk (RR) 3.20 (95% confidence interval, 1.29-7.92), P = 0.005]. Concomitantly, the need for target lesion revascularization was higher in the paclitaxel-eluting stent group compared with the rapamycin-eluting stent group [26.7 vs. 8.7%; RR 3.07 (1.07-8.80), P = 0.02]. CONCLUSION: The results of this clinical trial that is the first to directly compare the performance of paclitaxel and rapamycin on a DES platform otherwise identical in design and polymeric coating imply that rapamycin is more effective for the
prevention of coronary restenosis on a DES platform with mid-term drug release and less dependent on release kinetics than paclitaxel. Thus, to ensure efficacy, drug release from a paclitaxel-coating stent platform must be prolonged and well controlled to achieve results that are comparable with the FDA-approved paclitaxel-eluting stent platform.