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Autor(en) des Beitrags: Byrne, Robert A; Joner, Michael; Alfonso, Fernando; Kastrati, Adnan

Titel des Beitrags: Drug-coated balloon therapy in coronary and peripheral artery disease.

Abstract: Nonstent-based local drug delivery during percutaneous intervention offers potential for sustained antirestenotic efficacy without the limitations of permanent vascular implants. Preclinical studies have shown that effective local tissue concentrations of drugs can be achieved using drug-coated balloon (DCB) catheters. Matrix coatings consisting of a mixture of lipophilic paclitaxel and hydrophilic spacer (excipient) are most effective. Clinical applications most suited to DCB therapy are those for which stent implantation is not desirable or less effective, such as in-stent restenosis, bifurcation lesions, or peripheral artery stenoses. Randomized trials have shown superiority of DCBs over plain-balloon angioplasty for both bare-metal and drug-eluting coronary in-stent restenosis, and similar efficacy as repeat stenting with a drug-eluting stent (DES). By contrast, randomized trials of DCBs in de novo coronary stenosis have, to date, not shown similar efficacy to standard-of-care DES therapy. In peripheral artery disease, DCB therapy has proven superior to plain-balloon angioplasty for treatment of de novo femoropopliteal and below-the-knee disease, and shown promising results for in-stent restenosis. Overall, however, despite many years of clinical experience with DCBs, the number of large, high-quality, randomized clinical trials is low, and further data are urgently needed across the spectrum of clinical