Percutaneus coronary intervention without stents - our experience with drug-coated balloons

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KEYWORDS: drug-coated balloon, complex lesions, preparation.

CITATION: Cardiol Croat. 2024;19(11-12):606. | https://doi.org/10.15836/ccar2024.606

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Invasive and interventional cardiology has significantly advanced with the emergence of innovative technologies aimed at improving patient outcomes. One such advancement is the use of drug-coated balloons (DCBs), which integrate balloon angioplasty with localized pharmacological therapy. These balloons play a crucial role in the treatment of coronary artery disease, particularly in complex lesions and in patients at high risk of restenosis. Preparation of lesions prior to intervention is fundamental for optimizing results. The characteristics of lesions, including morphology and the degree and type of calcification in the coronary artery, significantly influence the choice of treatment strategy. The specificity of treatment with this method is localized drug delivery, which minimizes systemic side effects and maximizes drug concentration at the target area, contributing to better outcomes. The efficacy of DCBs is not solely based on immediate procedural success but also on long-term results. Studies show that patients treated with DCBs have improved clinical outcomes, including reduced rates of restenosis. Furthermore, the incorporation of drug delivery technology via balloons into clinical practice requires a comprehensive understanding of the optimal pharmacological agents used in conjunction with DCBs. Immunomodulatory agents, including sirolimus and paclitaxel, have been utilized with demonstrated effectiveness in reducing restenosis rates. The selection of appropriate pharmacological agents is crucial for achieving the desired therapeutic outcomes and should be tailored to individual patient needs.[1] The use of drug-coated balloons represents a significant advancement in the field of interventional cardiology. As clinical experience with DCBs continues to grow, they are likely to become an integral part of strategies aimed at improving long-term outcomes in patients with coronary artery disease.

RECEIVED:
October 12, 2024
ACCEPTED:
October 31, 2024

LITERATURE

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