“Everything Should be Made as Simple as Possible but Not Simpler”

Todo debe hacerse tan simple como sea posible, pero no más simple

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-A. Einstein

Coronary bifurcation disease is a frequent occurrence accounting for 20% to 30% of all coronary lesions treated by angioplasty. It is not surprising, therefore, that bifurcations are often encountered on the path of chronic total coronary occlusions (CTO), mostly at the entry or exit point of the occluded vessel. In addition to the well-known technical issues associated with bifurcation treatment, the presence of a CTO considerably increases procedural complexity. Ojeda et al.1 should, therefore, be commended for addressing these difficulties in their recent article published in Revista Española de Cardiología in a multicenter study involving almost 1000 patients who underwent successful CTO treatment in 4 internationally-renowned centers.

In the absence of CTOs, the bifurcation treatment strategy recommended by the European Bifurcation Club2-5 is main branch (MB) stenting with provisional side branch (SB) stenting when technically feasible and dual stenting (eg, double kissing crush, culotte, T-stenting) in instances when access to the SB proves difficult.

The first interesting point was the incidence of bifurcation lesions in CTO all-comers. In this study, almost one-third of patients had a coronary bifurcation with ≥2 mm SB. We observed a similar rate of 33% in our prospective CTO database of 1726 patients. A 47% incidence was reported in the study by Chen et al.1 and an even higher rate of more than 50% in the study by Baystrukov et al.7 This frequent problem further complicates the approach to CTO treatment. Moreover, access to the SB proved impossible in more than 10% of cases (20% in the study by Baystrukov et al.). This, however, implies that a nonnegligible, albeit partial, recanalization CTO success was achieved; it also underlines the importance of clearly redefining CTO treatment success in the presence of bifurcations, as well as of developing technical strategies enabling access to the lost branches before stent implantation in the recanalized branch (eg, parallel wire technique, double

Reference:
1. Ojeda et al.1

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this was driven solely by the target vessel revascularization rate (26 vs 11%; \( P = .019 \)), probably resulting from the systematic angiographic follow-up of the study patients.

As stated above, Ojeda et al.\(^1\) should be praised for allowing us to better comprehend the problems posed by bifurcations in the setting of CTO. Indeed, coronary bifurcations are a frequent occurrence involving 1 in 3 CTO patients. The general principles of bifurcation treatment can be applied to the setting of CTO with bifurcations. The main issue is access to the SB, which is much more difficult than in simple bifurcations, especially when the bifurcation originates inside the body of the CTO. The bifurcation treatment failure rate is around 10% to 20% with nonnegligible short- and mid-term clinical consequences. Appropriate technical strategies should be implemented to successfully access the SB as early as possible and to protect the SB using a wire. In instances when access to the SB proves difficult, the SB should be stented first (culotte or double kissing crush with systematic final kissing inflation). In other less difficult cases, provisional SB stenting should be the standard strategy, using a limited number of stents while respecting the vessel size and the functional anatomy of the bifurcation.

CONFLICTS OF INTEREST

None declared.

REFERENCES