Letter by Y-Hassan Regarding Article, “Simple or Complex Stenting for Bifurcation Coronary Lesions: A Patient-Level Pooled Analysis of the Nordic Bifurcation Study and the British Bifurcation Coronary Study”

To the Editor:

The combined Nordic and the British Bifurcation Coronary (NBBC) Study, published by Behan et al,1 showed that the provisional single-stent approach is superior to the systematic 2-stent approach in terms of safety and efficacy. Surprisingly, the incidence of the combined end point of all-cause death, myocardial infarction, and target vessel revascularization was significantly greater in bifurcation lesions with a side branch diameter of ≥2.75 mm and lesion length of ≥5 mm treated by the complex 2-stent approach compared with the single-stent approach. However, critical review of the NBBC study discloses several flaws in methodology that render the results of that study unjustifiable.

In the NBBC study, the included lesions were supposed to be true bifurcation lesions. As many as 28% of the bifurcation lesions were really non–true bifurcation lesions.1 There is a general agreement that the simple 1-stent approach should be the default procedure for non–true bifurcation lesions.2 Consequently, in more than one-fourth of the patients in the 2-stent group of the NBBC study, the side branch was stented unnecessarily and this encumbered (disfavored) the 2-stent group and favored the 1-stent group.

The crush technique, which was used in 59.6% of patients in the 2-stent approach of the NBBC study, leaves a high density of stent metal at the side-branch ostium and carina region. The performance of final kissing balloon inflation (FKBI) is a crucial final step in the 2-stent strategy. In the NBBC study, only FKBI was used in the 2-stent approach without preceding consequential balloon inflation.

Interestingly, in the DKCRUSH-II study, which included only true bifurcation lesions and probably used a better quality of FKBI in all patients having the 2-stent approach, the DK crush technique compared with provisional stenting was associated with a significant reduction of target lesion and vessel revascularization.4 Thus, the NBBC study was biased against the 2-stent strategy through inclusion of inappropriate bifurcation lesions in more than one-fourth of cases, by using a stenting technique that left a high density of unattended metal at the side branch ostium and carina region in one-quarter of patients and probably by using an inadequate FKBI in the remainder.

Disclosures

None.

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