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Incidence and outcomes of bailout stenting following use of drug coated balloon

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Background: The incidence of bailout stenting post-drug coated balloon use (DCB) in the literature has been more than 10%; ranging up-to 21% in Bello trial and this variation could be due to the different criteria used to consider bailout stenting and may also reflect aggressive pre-dilatation. Our eyes are trained to expect stent like result and anything less is considered sub-optimal and this could be one of the reasons for high incidence of bailout stenting. The current recommendation is to use drug eluting stent (DES) for bailout stenting and hence raising in the possibility of drug toxicity or maybe even synergistic effect from combination of Paclitaxel (DCB) and limus (DES).

Aim: We have evaluated the incidence and outcomes of patients needing bailout stenting in our centre.

Methods and results: We evaluated all patients who were treated with DCB between January 2016-August 2017. Bailout stenting per lesion were identified and studied for endpoints which included cardiac death, target vessel MI, stent thrombosis, target lesion revascularization and target vessel revascularisation.

Between the study period; 468 lesions (in 364 patients) were treated with paclitaxel DCB (Sequent Please, B Braun, Germany). Bailout stenting was required in 23 lesions (4.9%) and of which 12 (52%) was for flow limiting dissections (type C or more) and the remaining 11 was for recoil of more than 50%. Majority of the lesions were de novo (18; 78%). All bailout stenting was performed with third generation limus eluting stents. During a median follow-up of 18.14 months; range; 7–33 months, there was no cardiac death and target vessel MI occurred in 1 patient (4.3%), TLR and TVR were in 3 lesions (13%). MACE rate (combination of cardiac death, target vessel MI and TVR) was 13%. There were no cases of stent thrombosis as per the ARC definition.

Conclusion: One of the highlighting features of our study is very low-rates of bailout stenting. This may be due to our criteria of not stenting mild dissections (unless they are flow limiting) and also to accepting recoil of up-to 50% post-DCB use. The outcome in bailout stenting group is acceptable especially with hard endpoints (cardiac death, target vessel MI and stent thrombosis) although TLR and TVR rates were higher indicating synergistic effect of paclitaxel and limus may not offer additional benefits.