conservative 20%, balloon inflation with heparin reversal 12%, coronary coils 12%, heparin reversal 4.5%, emergency surgery 3%, coil and covered stent 1.5%. Overall mortality within the total perforation cohort was 14%. Emergency pericardiocentesis was required in 13 patients; in this group mortality was 46%.The difference in trends is illustrated in the table 1.

Conclusion The data demonstrates increased incidence of CAP and mortality in the second half of the decade. This may be explained by an increase in CTO, rotablation and IVUS use (surrogates for complex PCI) and an older population with more comorbidities. Cardiac tamponade was associated with a higher mortality in those with CAP.

Conflict of Interest none

55 LONG TERM CLINICAL OUTCOMES FROM USE OF SIROLIMUS COATED BALLOON IN CORONARY INTERVENTION; DATA FROM A REAL-WORLD POPULATION

Bhagya Harindi Loku Waduge, Harkaran Kalkat, Ameenathul Mazaya Fawzy, Abdullah Saif, Sampath Athukorala, Gurbir Bhatia, Nitin Kumar, Bethan Freestone, Jerome Ment, Kaeng Lee, Michael Pitt, George Pulikal, Sandeep Basavarajaiah Sandeep Basavarajaiah. *Birmingham Heartlands Hospital, Birmingham, UK*

10.1136/heartjnl-2021-BCS.55

Background The use of drug coated balloons (DCBs) in coronary intervention is escalating. There are two drugs of choice for coating either DCBs or drug eluting stents: Paclitaxel or Sirolimus. Most available DCBs are coated with Paclitaxcel, due to pre-existing, extensive data that support good clinical outcomes. With drug eluting stents both the literature and hence clinical practice favour Sirolimus over Paclitaxcel. This is due the cytostatic properties and wide therapeutic window of Sirolimus. However, there is very limited data on Sirolimus coated balloons (SCBs). We report a long-term follow-up with this relatively new technology from our centre.

Methods A retrospective analysis was conducted on all patients treated with an SCB between March 2018 and October 2020. Follow-up was achieved with clinic visits, telephone calls and admission records. The outcomes measured include cardiac death, target-vessel myocardial-infarction, target lesion revascularisation and MACE (combination of cardiac death, target-vessel MI and TLR).

Results 533 patients (690-lesions) with a mean age of 65.4 (range; 37-90) were treated with an SCB. 79% (n=419) were male, 314 (59%) were in the setting of acute coronary syndrome, 40% (n=211) had diabetes and 60% (n=414) had DCB in de-novo lesions. Small vessels accounted for 59% of cases (n=406). Pre-dilatation was performed in 97% (n=670) of cases. Bailout stenting (with a drug eluting stent) was required in 6.5% lesions (n=45), of which 11 were due to dissections and 34 were due to >50% recoil following DCB use. The mean diameter and length of DCBs were 2.8 mm and 26.3 mm respectively. During a median follow-up of 572 days (IQR: 381 - 868); cardiac death occurred in 15 patients (3%). Target vessel MI was in 4%; n=21, TLR per lesion and per patient were 10% (n=72 and n=55 respectively). The overall MACE rate was 12%. There were no documented cases of acute vessel closure.

Conclusions The results from long term follow-up with this relatively new technology DCB are encouraging with low rates of hard endpoints and acceptable rates of TLR and MACE despite complex group of patients (59% ACS and 40% diabetics) and lesion subsets (40% restenotic lesions and 59% small vessels). This suggests that SCBs can be used in both restenotic and de novo small vessel lesions with acceptable clinical outcomes. However, in order to further inform clinical practice, more longer-term data on SCBs compared with Paclitaxel coated balloons is needed.

Conflict of Interest None to declare

56 USE OF SIROLIMUS COATED BALLOON IN DE NOVO SMALL VESSEL CORONARY LESIONS; LONG-TERM FOLLOW-UP FROM A SINGLE CENTRE REGISTRY

Bhagya Harindi Loku Waduge, Harkaran Kalkat, Ameenathul Mazaya Fawzy, Abdullah Saif, Sampath Athukorala, Gurbir Bhatia, Nitin Kumar, Bethan Freestone, Jerome Ment, Kaeng Lee, Michael Pitt, George Pulikal, Sandeep Basavarajaiah Sandeep Basavarajaiah. *Birmingham Heartlands Hospital, Birmingham, UK*

10.1136/heartjnl-2021-BCS.56

Background Drug coated balloons (DCBs) in Europe are mainly used in restenotic lesions as endorsed by the European Society of Cardiology, with a class IA recommendation. However, some of the recent data suggest, it can also be considered in a subset of denovo lesions, especially in small vessels. Most DCBs used are coated with Paclitaxcel. There is no data on the efficacy of Sirolimus in DCBs, the drug of choice in drug eluting stents. In this study, we report outcomes from the use of a Sirolimus coated balloon (SCB) in de novo small-vessel coronary lesions, from a single high yield centre.

Methods A retrospective analysis was conducted on all patients treated with an SCB between March 2018 and October 2020. Follow-up was achieved with clinic visits, telephone calls and admission records. The outcomes measured include cardiac death, target-vessel myocardial-infarction, target lesion revascularisation and MACE (combination of cardiac death, target-vessel MI and TLR).

Results During the study period, 279-patients (with 332-lesions) with de novo lesions were treated with an SCB. The mean age of patients was 65 ± 12 years, 219 (79%) were male, 36% (n=100) had diabetes, 16% (n=45) had chronic kidney disease and 61% were in the setting of acute coronary syndrome (n=169). Predilatation was performed in 96% (320-lesions). Bailout stenting (with DES) was required in 5% lesions (n=18) and of which 16 were due to dissections and 2 were due to recoil >30% following DCB use. The mean diameter and length of DCBs were 2.35 mm and 26 mm respectively. During a median follow-up of 584-days (19-months) cardiac death was reported in 8 patients (3%). Target vessel MI was in 3% (n=9), TLR per lesion was 8% (n=26) and the MACE rate was 11% (n=31). There were no documented cases of acute vessel closure.

Conclusion The long-term outcome from the first ever study on sirolimus eluting balloon in de novo small vessel lesions appears promising with low rates of hard endpoints, and acceptable repeat rates of TLR despite a complex group of patients (50% ACS, 36% diabetics and 19% CKD) and lesion subsets (small vessel and diffuse disease). Implanting stents in these subsets renders them vulnerable to restenosis, making it difficult to treat, making treatment challenging and resulting in high rates of recurrence.

Conflict of Interest None to declare