technique most post CABG patients will require additional coronary artery catheterization in their lifetimes. Radio-opaque markers for SVGs are safe and easy to implant during the CABG operation. The markers were found to have no impact on long-term graft patency. However, these markers should make repeat coronary angiography and graft studies easier and allow these procedures to be performed with less contrast thereby reducing the risk of contrast induced nephropathy.

Methods We systematically reviewed consecutive diagnostic coronary angiograms of all patients with previous CABG at a single large Canadian interventional centre. Basic demographic and clinical data, access site, number of grafts, operator, and amount of contrast used were recorded for analysis. Predictors of amount of contrast used were identified using multiple regression analysis with stepwise elimination of factors utilizing SPSS software.

Results Between Jan 2016 and May 2019, 746 diagnostic coronary angiograms and graft studies were performed. 328 cases were excluded because the patients had additional procedures done in the same setting. Mean age of patients was 71 (9) years, 12 % were female. 41% of patients had a clip inserted at the time of their bypass surgery. 15% of patients had a single vein graft used at the time of surgery; 43% had two vein grafts and 42% of patients three or more grafts. 56 % of the procedures were performed via the femoral route.

Independent predictors of contrast volume used were access site (187 (64) ml for radial vs 170 (60) ml for femoral), number of grafts used (+ 24 ml per additional graft) and use of radio-opaque markers during CV surgery (166 (54) ml with surgical clips versus 186 (66) ml without clips). Age, gender and operator were not predictive of the amount of contrast used.

Conclusions Positioning graft markers at the time of CV surgery can significantly reduce the contrast requirement for subsequent cardiac catheterisation. Even in a high volume radial centre further reductions of contrast use can be achieved by using femoral rather than radial access.

Conflict of Interest None

41 USE OF SIROLIMUS-COATED BALLOON IN DE NOVO SMALL VESSEL CORONARY LESIONS; MID-TERM FOLLOW-UP FROM A TWO-CENTRE REGISTRY

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Introduction Drug coated balloons (DCB) in Europe is mainly used in restenotic lesions and this is endorsed by the European Society of Cardiology which gives class IA recommendations. However, some of the recent data suggest, it can also be considered in subset of denovo lesions especially small vessels (<3.0 cm). Most DCBs used elute Paclitaxel, but there is no data on Limus eluting DCB, which is the drug of choice in currently available drug eluting stents. In this study, we report outcomes from the use of Limus eluting DCB (MagicTouch, Concept Medical, India) in de novo small vessel coronary lesions.

Methods and Results We included all patients treated with MagicTouch DCB between March 2018 and June 2019. The results are reported as cardiac death, target vessel myocardial infarction, target lesion revascularisation (TLR) and MACE (combination of cardiac death, target vessel MI and TLR).

During the study period, 219-patients (with 243-lesions) with de novo lesions were treated with MagicTouch DCB. The mean age of patients were 66 +/- 10.7 years, 209 (77%) were male, 34% (n=75) had diabetes, 16% (n=34) had chronic kidney disease and 54% were in the setting of acute coronary syndrome (n=118). Predilatation was performed in 92% (222-lesions). Bailout stenting (with DES) was required in 13% lesions (n=32) and of which 18 were due to dissections and 14 were due to recoil >30% following DCB use. The mean diameter and length of DCBs were 2.29 mm and 24 mm respectively.

During a median follow-up of 313-days (10-months) cardiac death was reported in 3 patients (1.4%). Target vessel MI was in 1.4% (n=2), TLR per lesion was 6.5% (n=16) and the MACE rate was 5.5% (n=12). There were no documented cases of acute vessel closure.

Conclusion The mid-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, repeat rates of revascularisation and MACE rates despite complex group of patients (50% ACS, 34% diabetics and 14% CKD) and lesion subsets (small vessel and diffuse disease). We need longer follow-up which is ongoing and we will be able to report the outcomes from even longer follow-up during the BCS.

Conflict of Interest None

42 AN OBSERVATION OF THE PREDICTORS OF PATIENT ADHERENCE AND PERFORMANCE IN A MULTIDISCIPLINARY REGIONAL CARDIAC REHABILITATION PROGRAMME

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Introduction Cardiac Rehabilitation (CR) comprises physical, psychological and medical interventions which together aim to reduce and reverse underlying cardiac disease, improve symptoms of cardiac disease and enhance functional status of participants. It is recommended internationally after acute coronary syndromes and reperfusion therapies as well as for patients with stable coronary artery disease. Despite clear evidence in favour of CR, participation remains low. We retrospectively analysed 7 years of demographic data from a regional multidisciplinary exercise-based CR programme in South Wales between 2011 and 2018. Factors that may predict compliance and improvement with CR were investigated.

Methods Standard UK criteria were used to recruit patients to the CR programme. Patients’ perceived fitness level, resting heart rate (HR), resting blood pressure and walking distance were recorded before and after CR. Exercise prescription was based on functional capacity test findings (performed prior to commencing CR). British Association for Cardiovascular Prevention and Rehabilitation risk stratification and functional ability. Patients worked at a moderate intensity, determined by observing their HR (40-70% HR reserve) and their rate of perceived exertion (12-14 on the Borg 6-20 scale). Aerobic
exercise time was increased, and active recovery time reduced, as patients progressed through the CR programme.

Results 1288 patients were included in the analysis.

91.7% of the study population (n=1181) started the CR programme. Males were more likely to engage with the CR programme than females (p=0.02) although the proportion of patients starting CR was high in both groups (93% male, 88% female). Patients with atrial fibrillation (AF) were less likely to engage with CR (p=0.001). Of those that started CR, 67.3% completed the exercise programme (n=795). Younger patients were less likely to complete the CR programme than older patients (p=0.001).

Linear regression modelling found that increasing age (p<0.001) and the presence of AF (p=0.05) reduced the improvement in walking distance. The presence of severely impaired left ventricular (LV) function did not influence the improvement in walking distance at the 0.05 significance level.

Conclusions Fewer females were referred and started CR than males in our programme. Although this discrepancy could represent a true gender difference in CR requirement, it may also represent under-referral of females to CR or indicate barriers to uptake of CR for females. Targeted work to encourage female participation in CR is clearly required to address this gender gap.

Younger patients were more likely to drop-out of our CR programme than older patients. Retention of younger patients needs to be encouraged in future CR programmes as these patients have been shown to benefit from CR over a wide range of areas (1).

Increasing age and presence AF, but not presence of severely impaired LV function, predicted poorer performance in CR.

REFERENCES

Conflict of Interest Nil