Conclusions There is an association, independent of age and sex, between serum vitamin D and physical health-related quality of life at both presentation and at 1-year follow-up after invasive management of NSTEACS in high-risk older adults. Although vitamin D deficiency has not been shown to predict MACE, it may play a plausible role in the significant morbidity experienced by older adults with cardiovascular disease.

Conflict of Interest None to declare

37 SHOCKWAVE INTRAVASCULAR LITHOTRIPSY IN CALCIFIED CORONARY LESIONS: A RETROSPECTIVE, OBSERVATIONAL, INTERNATIONAL MULTI-CENTRE ANALYSIS

Amir Aiz, Sophia Khattak, Alfonso Lelasi, Fernando Cortese, Luca Testa, Elena Vigano, Rami Mokdad, Michael Pitt, Sandeep Basavarajiah. Good Hope Hospital, University Hospitals Birmingham; Birmingham Heartlands Hospital, University Hospitals Birmingham Trust; Sant’Ambrogio Milan; Clinica San Carlo Milan; Policlínica san donato Milan

Introduction Sub-optimal stent expansion due to coronary calcification augments the risk of restenosis and stent thrombosis. Calcium modification is generally achieved by rotational atherectomy or specialized balloons (scoring and cutting balloons), which carries risk of complications. Intravascular lithotripsy (IVL) appears safe and also aids in cracking deep seated adventitial calcium. Although, there are reported studies on this novel technology, there is a lack of real-world data. In this study, we report the experience from 4 centres that undertake high-volume complex coronary interventions.

Methods We enrolled all patients treated with IVL between September 2018 and October 2019 at 4 centres (1 in UK and 3 in Italy). Procedural success and complication were assessed. The clinical outcomes evaluated were: cardiovascular death, target vessel MI (TVMI), target lesion revascularisation (TLR) and MACE (composite of cardiovascular death, TVMI and TLR).

Results During the study period, 100 lesions (in 94 patients) with a mean age of 71±9.7 years (range: 30 - 88) were treated using IVL. 70% (n=70) were male, 85% (n=80) had hypertension, 51% (n=48) had diabetes and 20% (n=19) had chronic kidney disease. Acute coronary syndromes accounted for 40% of patients (n=38). De-novo lesions accounted for 66% of cases (n=66) and the remaining 34% (n=34) were restenotic lesions. Left anterior descending artery (56%) accounted for most cases followed by right coronary artery (22%), left circumflex artery (21%), left main (17%) and saphenous vein grafts (3%) procedures. Upfront use of IVL occurred in 18% of cases whilst the rest were bail-out procedures due to inadequate pre-dilatation with conventional balloons. Adjunct rotational atherectomy (Rota-trippsy) was used in 10 cases (10%) prior to the use of IVL. The mean diameter of IVL balloon was 3.3 ± 0.5mm. Intravascular imaging (IVUS) was used in 19% of cases. Procedural success was achieved in 100% of cases with a complication rate of 2% (2 cases of coronary perforation and one of them resulted in in-hospital mortality). During the median follow-up of 150 days, there were no clinical events including cardiac death, TVMI and TLR.

Conclusion Initial experience and short-term clinical follow-up from IVL use appears safe and effective PCI strategy for dealing with calcified coronary lesions. A high success rate was observed with low event rates and procedural complications. We are enrolling more patients from other centres as part of a larger multi-centre registry and will be able to report this with higher numbers and longer follow-up at BCS 2020.

Conflict of Interest nil

38 LOCAL EXPERIENCE OF ULTRASOUND ASSISTED CATHETER DIRECTED THROMBOLYSIS IN LONDON NORTHWEST UNIVERSITY HEALTHCARE NHS TRUST FOR SUB-MASSIVE PULMONARY EMBOLISM

Mohsen Chabok, Parul Kalia, Jacob De Wolff, Jaymin Shah. Imperial College Healthcare Foundation NHS Trust; London Northwest University Healthcare NHS Trust

Background and Objective Despite availability of sensitive diagnostic tests, the mortality and morbidity related to pulmonary embolism (PE) continues to cause tremendous economic burden. The objective of this service evaluation was to compare the length of stay and safety profile of newly adopted Ultrasound Assisted Catheter Directed Thrombolysis (UACDT) for patients with sub-PE and right heart strain to a historic control group of patients with a primary discharge diagnosis of PE.

Methods and Results The historic control group was made of patients identified with a primary discharge diagnosis of PE in the calendar year 2016 (131 patients). Of these 75 (57.3%) patients had sub-PE defined as radiologically large thrombus burden and evidence of right heart strain seen on CT pulmonary angiogram (CTPA). Only patients with a length of stay (LOS, defined as date of discharge – date of scan in days) > 2 days were included in the analysis. The final historical control group was made of 68 (51.1% of the total cohort) patients, mean age = 67.5 ± 17.9 years, 28 (36.8%) males, mean pulmonary artery pressure (PAP) on echo = 37.3 ± 17.7 mmHg (echo data available in 74.7% of the cohort).

These patients were compared against the UACDT group. To be eligible for UACDT, patients needed to have sub-massive PE with radiologically large thrombus burden, right heart strain seen on CTPA and echocardiogram and elevated Troponin and or BNP on blood tests. The UACDT group comprised of 25 patients (mean age = 61.2 ± 14.1 years, 19 (76%) male, mean PAP 38.6 ± 22.3 mmHg on echo, all patients had echo data available prior to the procedure) that underwent the procedure at our district general hospital between June 2018 and Sep 2019. Time to procedure was a mean of 1.2 days (median of 1day with min of 0 and Max of 5 days).

There was no death in the UACDT cohort whilst 3 deaths (3.9%) were observed in the historical control group (p = 0.6). Death or readmission occurred in 8 (10.5%) of the historical control group compared to 1 (4%) in the UACDT group (p = 0.4). One (4%) patient had haematemesis post UACDT with new diagnosis of gastric Cancer. There were 3 (12%) patients with new diagnosis of cancer among UACDT group and further 2 with known metastatic cancer. The LOS numerically lower in the UACDT group compared to the historical