Abstract 160 Figure 1

160 THE NEED FOR TAILORED THERAPY IN PATIENTS WITH ATRIAL FIBRILLATION UNDERGOING PCI

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Introduction The combination of single antiplatelet and oral anticoagulation therapy demonstrated similar ischaemic efficacy when compared to triple therapy in patients with atrial fibrillation (AF) undergoing percutaneous coronary intervention (PCI).^{1,2} Importantly, a significant proportion of the included patients had bare-metal stents, up to one third, in these trials.^{1,2} This may question the applicability of the reported data when tackling complex PCI in the real-world patients. We sought to investigate the incidence of ischaemic events in patients with AF undergoing PCI according to the complexity of PCI procedure and the used antithrombotic treatment.

Methods 1895 consecutive patients undergoing PCI with bioabsorbable polymer drug eluting stent were screened for eligibility. Major adverse cardiovascular events (MACE) were defined as composite of death, myocardial infarction, stroke, and unplanned revascularization. Complex PCI was defined as two stents bifurcation strategy, 3 treated vessels, or > 3 stents implanted in the same procedure as previously described.³ Four groups were compared accordingly: Group 1 (dual treatment and complex PCI), Group 2 (dual treatment and non-complex PCI), Group 3 (triple therapy and complex PCI), and Group 4 (triple therapy and non-complex PCI).

Results 256 (13.5%) patients had indication for oral anticoagulation, with 33 excluded patients been commenced on 1–3 months DAPT followed by oral anticoagulation. Mean age was 75 ± 9 and 77% male. 40.2% patients had stable angina presentation. Average CHA₂DS₂-VASc and HAS-BLED scores were 3.7 ± 1.3 and 1.7 ± 0.7 , respectively. In the whole group, one year ischaemic events was 9.4%. There were no differences among four groups in gender, hypertension, smoking history, ejection fraction, the nature of presentation (stable versus acute), CHA₂DS₂-VASc or HAS-BLED scores. On the other hand, there were significant variations among four groups in

terms of age (78 ± 7 , 76 ± 9 , 72 ± 10 , 72 ± 10 , $P = 0.008$) and diabetes status (9%, 35%, 29%, 22%, $P = 0.036$), respectively.

There was a significant difference in the incidence of MACE among four groups, with dual treated-patients and complex anatomy having the highest rate of MACE (26%, 9%, 13%, 4%, Log rank $P = 0.012$) (figure). The difference was mainly driven from more frequent unplanned revascularisations (13%, 4%, 4%, 0%, $P = 0.033$) with no difference in death, myocardial infarction or stroke.

Patients with complex anatomy receiving dual treatments had at least 7 times more likelihood of sustaining MACE within the first year following PCI [hazard ratio (HR) 7.36, 95% CI 1.84 to 29.5, $P = 0.005$]. This risk stayed significant even after adjusting to other variables including age and diabetes status (HR 5.87, 95% CI 1.41 to 24.46, $P = 0.015$).

Conclusion Despite a remarkable low incidence of ischaemic events in patients with AF undergoing PCI using bioabsorbable polymer DES, there is a marked heterogeneity in their future cardiovascular risk. Coronary anatomy and complexity of PCI procedure may play a role in risk stratifying patients with AF to tailor antithrombotic treatment to reduce their risk.

Conflict of Interest None

161 THE ASSOCIATION OF NON-INVASIVE CARDIOVASCULAR PARAMETERS ON ADVERSE OUTCOMES IN OLDER PATIENTS FOLLOWING NON-ST ELEVATION ACUTE CORONARY SYNDROME UNDERGOING INVASIVE CARE

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Introduction Ischaemic heart disease (IHD) leads to poor outcomes in those aged 75 years. Non-invasive assessment of cardiovascular status is associated with adverse events in younger patients but this has not been evaluated in older patients. The aim of the study is to investigate whether non-invasive assessments of cardiovascular status could be used as predictors of

poor outcomes in older patients with non-ST-elevation acute coronary syndrome (NSTEMACS) undergoing invasive care.

METHOD Older patients undergoing invasive management for NSTEMACS were recruited. Cardiovascular status was assessed through evaluation of carotid intima media thickness (CIMT) via B-mode ultrasound (Vivid-I, GE Healthcare), vascular stiffness was assessed through carotid-femoral pulse wave velocity (PWV) (Vicorder device, Skidmore Medical Limited, Bristol, UK), and peripheral arterial endothelial function (EndoPAT 2000 device; Itamar Medical, Caesarea, Israel). Primary outcome consisted of composite of death, myocardial infarction (MI), unplanned revascularisation, stroke and significant bleeding at 1 year.

Results Of the 629 patients screened, 300 patients were recruited into the study. 2 patients had other diagnosis post angiography and were excluded, and a further 1 patient lost to follow-up, meaning sample available for analysis was 297. Overall, 276 (93%) had non-invasive cardiovascular status assessed at baseline of which 219 (74%) had CIMT, 276 (93%) had vascular stiffness and 242 (88%) had endothelial function data available for analysis. Mean age was 80.5 ± 4.8 years and 60.5% were male. The primary outcome at 1 year was observed in 75 patients (27.2%). Cumulative event rates for primary end points were significantly higher in patients with CIMT ≥ 0.9 mm when compared with <0.9 mm (48.4% vs. 22.9% Hazard Ratio [HR] 2.39, 95% Confidence Interval [CI]: 1.33–4.31, $P < 0.05$) driven mainly by bleeding events (Odds Ratio [OR] 5.15, CI: 1.80–14.78, $P < 0.01$). Patients with an abnormal CIMT were 3 times more likely to meet the primary end-point (Odds Ratio OR 3.16, 95% CI: 1.45–6.91, $P < 0.01$), with the association remaining after adjusting for age, gender, frailty and previous MI (OR 3.15, 95% CI: 1.41–7.07, $P < 0.01$). Increased vascular stiffness (PWV > 10 m/

s) was associated with a significant reduction in mortality after adjusting for age, gender, frailty and previous MI (OR 0.12, 95% CI: 0.014–0.98, $P < 0.05$). Endothelial dysfunction as hyperaemia index < 0.40 vs. 0.40 showed no significant differences in the event rates of combined primary end points adjusting for age, gender, frailty and previous MI (27.3% vs. 25.0%, HR 0.91, 95% CI: 0.49–1.70, $P = 0.71$).

Conclusion Increased CIMT is associated with adverse outcomes driven by excess bleeding events. Vascular stiffness is associated with reduced mortality in older patients with NSTEMACS, even after traditional risk factors for cardiovascular events have been taken into consideration. Endothelial dysfunction is not associated with adverse events. Figure 1.

Conflict of Interest None

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RECRUITMENT FOR CLINICAL TRIALS FOR ELDERLY PATIENTS – INSIGHTS FROM THE XIMA AND RINCAL TRIALS

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Introduction The XIMA trial was a randomised comparison of BMS or DES in patients undergoing stenting for CAD in patients aged 80 and over. Recruitment of 800 patients across 20 centres proved straightforward and timely with a high uptake rate in suitable patients.

The RINCAL trial randomised patients to a conservative or an invasive approach for the management of NSTEMI in patients aged 80 and above. Recruitment of 250 patients across 10 sites was laboured and recruitment challenging with participation reluctance.

We determined to understand the causes of this enrolment discrepancy.

Methods Review of the RINCAL study screening log over an 18-month period at a single high recruiting site, and reasons tabulated for lack of enrolment.

Results During an 18-month period within the RINCAL study at a single site, 102 out of 136 octogenarians with NSTEMI were eligible for inclusion. Of the 34 excluded patients, 14 were due to cognitive impairment [including dementia, lacking capacity to consent to participation, not understanding the patient information sheet], and 20 had concomitant medical comorbidities restricting invasive management.

Of the 102 eligible patients, 24 [24%] patients participated. 37 [36%] eligible elderly patients declined to participate. The reasons for declining were: 1) patient declined invasive management, 2) patient wanted invasive management. In 41 [40%] eligible patients, the managing cardiologist decided that randomisation was not appropriate in one or other of the treatment arms.

Conclusion Evidence is needed to guide management of acute anginal syndromes in older patients. Studies asking simple binary questions have been able to recruit reasonably well [as in the XIMA trial]. Trials asking more complex questions, including RINCAL, have observed high numbers of octogenarians declining to participate. This needs to be borne in mind when designing studies in the elderly, with a greater focus on supporting patients through the consent process.

Conflict of Interest None

Patients at risk	219	198	181	173	163
CIMT < 0.9mm	188	170	160	154	147
CIMT ≥ 0.9mm	31	28	21	19	16

Abstract 161 Figure 1 Cumulative survival rates for the combined end point at 1 year, according to carotid intima-media thickness ≥ 0.9 mm v < 0.9 mm.

Visualization of cumulative survival rates for the combined end point of death, acute coronary syndrome, unplanned revascularisation, stroke and BARC (Bleeding Academic Research Consortium)-defined bleeding (type 2 or greater) at 1 year, according to carotid intima-media thickness ≥ 0.9 mm vs. < 0.9 mm. Multivariate analysis using Cox proportional hazards regression model, adjusted for age, gender, frailty and previous myocardial infarction (HR 2.19, CI: 1.21 – 3.98, $p < 0.05$)