Abstract 10 Figure 2 Boxplot showing A wave velocities by LA scar burden in quartiles

velocities ($r=0.26$, $p=0.11$) or E:A ratio ($r=-0.02$, $p=0.91$) (figure 2). A significant correlation between A wave velocity and CHADS₂VASc was observed ($r=0.49$, $p=0.001$).

Conclusion Our study demonstrates no relationship between degree of LA scarring and reduced LA function on TTE as assessed by the A wave. It has been established that structural remodeling in AF (such as atrial dilatation) may occur independently of the electrical remodelling. A potential explanation for our findings is that the electrical scarring in AF, which results in alterations in refractory periods, precedes the negative remodeling which ultimately results in reduced atrial function. This hypothesis would need to be further evaluated in larger studies.

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TEN-YEAR CLINICAL OUTCOMES FROM A RANDOMIZED TRIAL OF POLYMER-FREE VERSUS DURABLE POLYMER DRUG-ELUTING STENTS TEN-YEAR RESULTS OF THE INTRACORONARY STENTING AND ANGIOGRAPHIC RESULTS: TEST EFFICACY OF SIROLIMUS- AND PROBUCOL- AND ZOTAROLIMUS- ELUTING STENTS (ISAR-TEST 5) TRIAL

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Background Outcome data after extended long-term follow-up of patients with coronary artery disease treated with drug-eluting stents (DES) in randomized clinical trials is scant.

Objective Performance differences between devices may be expected to emerge over time depending on whether stenting is done with polymer-free or durable polymer DES. We assessed the 10-year outcomes of patients enrolled in the ISAR-TEST 5 trial.

Methods 3002 patients were randomized to treatment with either polymer-free sirolimus- and probucol-eluting stents (PF-SES) (n=2002) or durable polymer zotarolimus-eluting stents (DP-ZES) (n=1000). The primary endpoint was the composite of cardiac death, target vessel-related myocardial infarction or target lesion revascularisation (a device-oriented composite endpoint, DOCE). Additional endpoints of interest were the

patient-oriented composite endpoint (POCE), including all-cause death, any myocardial infarction or any revascularisation, individual components of the composite endpoints, and definite or probable stent thrombosis.

Results The median age of the patients at randomization was 67.8 years. At 10-years, 63.9% of patients were alive. The rates of DOCE and POCE were high in both groups with no difference in the incidence between PF-SES and DP-ZES, (DOCE: 43.8% versus 43.0%, respectively, hazard ratio = 1.01, 95% CI, 0.89–1.14; $P=0.90$), (POCE: 66.2% versus 67.7%, respectively, hazard ratio = 0.94, 95%CI, 0.86–1.04; $P=0.22$). The rates of the individual components of the composite endpoints were comparable in both groups. The incidence of definite/probable stent thrombosis over 10 years was low and comparable in both groups (1.6% vs. 1.9%; hazard ratio = 0.85 [95% CI, 0.46–1.54], $P=0.58$).

Conclusion At 10 years there were no measurable differences in outcomes between patients treated with polymer-free versus durable polymer DES. The incidence of stent thrombosis was low and comparable in both groups. High overall adverse clinical event rates were observed during extended follow-up.

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ELECTROCARDIOGRAPHY PREDICTORS FOR PACEMAKER INSERTION POST TAVR

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Introduction The development of Transcatheter Aortic Valve Replacement (TAVR) has provided an alternative to surgical valve replacement in high-risk population. Post-procedural length of stay is one of the main cost components after TAVR and is significantly influenced by prolonged monitoring for new conduction disturbances. Occurrence of advanced conduction delays, if left untreated, can be responsible for sudden cardiac death after discharge.

Objective We aimed to determine the electrocardiographic predictors of advanced conduction disturbance that required a permanent pacemaker implantation (PPM) after TAVR.

Methods All consecutive patients who underwent TAVR between January 2016 to July 2019 were identified from by a retrospective review of TAVR database at this centre.

Results A total of 77 patients underwent TAVR within the study period and 7 patients were excluded as they had a pre-existing pacemaker/implanted cardiac defibrillator and 2 patients were excluded due to insufficient data. 36 of the patients were males (52%) with an average age of 82.1 years. The average BMI was 26.8 and 62 patients (91.1%) were symptomatic with New York Heart Association class 3 or above.

All 68 patients had self-expanding Medtronic CoreValveTM. 10 (14.7%) patients required a PPM within an average of 5.3 days for an indication of either complete heart block or intermittent complete heart block. Of the 10 patients who had a PPM inserted, 3 patients had a Right Bundle Branch Block (RBBB) at baseline. These patients were all pacing-dependent (>80% pacing when lower rate was programmed at 60 beats/min) at 6 weeks post-implantation follow-up. 4 out of 7 patients (57%) who had a non-RBBB pattern (i.e. LBBB or normal QRS complex) at baseline had an average pacing requirement of <2% at 6 weeks post implant follow-

up. In the non-PPM group, 3 patients had a RBBB pattern and 15 had a LBBB pattern at baseline. Patients who had a baseline RBBB were more likely to require a PPM post TAVI (p -value = 0.02).

Conclusion Baseline RBBB ECG pre-TAVR is a significant predictor of delayed advanced AV block. Our study validates previous suggestions that patients with baseline RBBB should not be considered for early discharge and may require prolonged monitoring to detect delayed AV conduction abnormalities. These patients are less likely to recover from their conduction disturbances as suggested by their pacing requirement at 6 week post-implantation follow-up.

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IMPACT OF THE 2019 ESC CHRONIC CORONARY SYNDROME GUIDELINES PUBLICATION, ON REFERRALS FOR CORONARY IMAGING IN A CHEST PAIN SERVICE

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On August 31st 2019 the ESC guidelines for the diagnosis and management of chronic coronary artery syndrome was published. The guidelines give a greater emphasis on the use of CT coronary arteries (CTCA) in the work-up of obstructive coronary artery disease (CAD). In addition, the use of exercise stress testing (EST) in establishing a diagnosis of coronary artery disease was downgraded from Class I recommendation to Class IIb. The guidelines also reduced the pre-test probability (PTP) of obstructive coronary artery disease in symptomatic patients according to age, sex and nature of symptoms. However, currently the additive effects of risk factors and EST is unknown. The aim of this study was to assess whether publication of the ESC 2019 guidelines had an effect on referrals for further coronary imaging in patients that were referred to the chest pain service, without a history of coronary artery disease.

Methods A retrospective review of patients referred to the chest pain service in 2019. Only patients without a prior history of coronary artery disease, with negative troponins and without dynamic ECG changes were included in our analysis. All patients underwent exercise stress testing at baseline. A comparison of referrals for invasive coronary angiogram or CTCA, between the periods of January 1st 2019 – 31st of August, with September 1st – 31st December 2019 post publication of the ESC guidelines was made. PTP was calculated via the 2019 ESC guidelines.

Results The analysis includes 330 patients referred to the chest pain services without a prior history of coronary artery disease. Baseline characteristics; 49.39% male, mean age 55.3 yrs, negative EST 68.8%, baseline PTP 10%. Further coronary imaging was selected in 45.7% ($n = 151$) of patients seen by the chest pain service in 2019, mean PTP 12%.

Prior to publication of the ESC guidelines, further coronary imaging was performed in 41.30% of patients seen by the chest pain services; compared to 57.2% after the publication of the ESC guidelines, p -value 0.02. The increase in imaging referrals reflect the increased use of CTCA post guideline publication, 16.4% vs 29.5%, p -value 0.003. CTCA was performed mainly in patients with low PTP mean 7.5%, non-anginal chest pain 83.8% ($n = 57$) and negative EST 92.6% ($n = 63$).

The incidence of obstructive CAD in our cohort was 9.2% ($n = 14$); mean PTP 18%, 84.6% positive EST. The negative predictive value of a negative or sub-maximal EST was 98.13% in our cohort who had further imaging (95% CI 92.8 – 99.4%).

Discussion The publication of the ESC 2019 guidelines on chronic coronary syndromes, coincided with an increase in CTCA referrals by 180% in the chest pain service. The overall incidence of obstructive coronary artery disease was low, which is likely reflected by the low PTP in this cohort. Our results underline the utility of EST in risk assessing the probability of obstructive CAD in this cohort, however physicians need to understand its diminished role in the diagnosis of coronary artery disease.

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ANTITHROMBOTIC THERAPY WITH OR WITHOUT ASPIRIN AFTER PERCUTANEOUS CORONARY INTERVENTION OR ACUTE CORONARY SYNDROME IN PATIENTS TAKING ORAL ANTICOAGULATION: A META-ANALYSIS AND NETWORK ANALYSIS OF RANDOMISED CONTROLLED TRIALS

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Introduction Trials investigating aspirin-omission in patients taking oral anticoagulation (OAC) after percutaneous coronary intervention (PCI) or acute coronary syndrome (ACS) were not powered to assess rates of major bleeding or ischaemic events.

Methods We performed an updated meta-analysis and network analysis of randomised trials comparing treatment with or without aspirin in patients taking OAC and a P2Y12-inhibitor after PCI or ACS. The primary outcome was TIMI major bleeding.

Results Five trials enrolling 11,542 patients allocated to antithrombotic regimens omitting ($n=5,795$) or including aspirin ($n=5,747$) were included. Aspirin-omission was associated with a lower risk of TIMI major bleeding (RR=0.56, 95%CI [0.44–0.71]; $P<0.001$) but a trend towards a higher risk of MI (RR=1.21, 95%CI [0.99–1.47]; $P=0.06$), which was significantly higher when only non-vitamin K antagonist OAC (NOAC)-based trials were considered ($P_{interaction}=0.02$). The risk of stent thrombosis was comparable with both strategies (RR=1.29, 95%CI [0.87–1.90]; $P=0.20$), with a trend towards a higher risk of ST with aspirin-omission when only NOAC-based trials were considered ($P_{interaction}=0.06$). Risks of stroke and death were similar with both strategies. Network meta-analysis ranked dabigatran (low dose) without aspirin as the best strategy for bleeding reduction (P -score=0.86) and apixaban with aspirin as the best strategy for MI reduction (P -score=0.66). (Figure 1).

Conclusions In patients taking OAC after PCI or ACS, aspirin-omission is associated with a lower risk of TIMI major bleeding, with a possible increased risk of thrombotic events, which is more marked when only NOAC-based trials are considered. This supports individualization of the treatment regimen based on patient risk.