



Abstract 117 Figure 1 Line graph to show the fall in LVEF over time. This patient was started on ramipril

- Therefore, in conclusion it is necessary to formalise a pathway for reviewing echos and acting on findings. This should be through formal echo MDT meetings. There should also be a Review of echo protocol to include LV and RV detailed serial measurement.

Conflict of Interest None

Stable IHD/Prevention/Hypertension/Lipids

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INTERVENTIONAL CORONARY DIAGNOSTIC PROCEDURES WITHOUT PLANNED CORONARY STENTING: SAFETY AND RADIATION EXPOSURE

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Background Interventional coronary diagnostic procedures (ICDP) allow lesion-specific management of coronary artery disease. These include pressure wire-derived fractional flow reserve (FFR) and intracoronary imaging such as optical coherence tomography (OCT) and intravascular ultrasound (IVUS). Coronary instrumentation during these procedures may increase the risk of complications, however, there is a lack of data regarding their safety and associated radiation exposure when performed alone without planned coronary stenting in routine cardiac practice.

Purpose To evaluate the safety of ICDP techniques when performed without planned coronary intervention.

Methods Consecutive patients undergoing ICDP (FFR, IVUS or OCT without planned coronary intervention) at the University Hospital Birmingham between January 2015 and December 2018 were retrospectively identified. Demographic, clinical, procedural and outcome data were collected.

Results A total of 515 patients underwent ICDP. Amongst these patients, 78% underwent FFR alone, 17% IVUS/OCT and 5% both FFR and IVUS/OCT. Patients were predominantly male (67%) with a mean age of 66 years. The

indication for investigation was stable angina (53%) and acute coronary syndrome (47%). Ninety-four percent of the procedures were performed via radial access. There were two wire related coronary dissections (one requiring coronary stent and one treated with a drug-coated balloon). However, there was no periprocedural death, stroke or myocardial infarction.

Mean fluoroscopy time for all ICDP procedures was 8.0 mins and mean total effective dose 6.29mSv. The addition of IVUS or OCT to FFR assessment increased the mean screening time (11.2 +/- 7 mins vs 8.1 +/- 6 mins, P = 0.0118) but did not significantly alter the mean effective dose (9.1 +/- 8 mSv vs 6.5 +/- 8 mSv, p = 0.1260).

Conclusion

- Interventional coronary diagnostic procedures carry a low but definite risk, over and above that associated with a diagnostic only angiogram but lower than that of coronary intervention.
- Radiation exposure is higher than expected from computed tomography-FFR (3mSv) which in the future may reduce the need for ICDP.

Conflict of Interest None

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ROLE OF MARITAL STATUS IN CONJUNCTION WITH TRADITIONAL RISK FACTORS IN THE DEVELOPMENT OF ACUTE CORONARY SYNDROME: A LONGITUDINAL FOLLOW-UP STUDY

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Background The impact of marital status on long term mortality following diagnoses of cardiovascular disease has been recently established and is being studied widely. Married patients with Acute Coronary Syndrome (ACS) have significantly improved mortality compared to single patients while the worst outcomes are seen among divorcees. However, the role of marital status alongside other traditional risk factors in the development of ACS has not been well studied. We addressed this gap by studying patients with Type 2 Diabetes Mellitus (T2DM), Hyperlipidaemia and Hypertension along

with their marital status and investigated their respective risks of ACS over time.

Methods Anonymous information on patients with T2DM, Hyperlipidaemia and Hypertension including comorbidities and marital status was obtained from UK hospitals between 1st January 2000 and 31st July 2014. This data was amalgamated according to the Algorithm for Comorbidities, Associations, Length of stay and Mortality (ACALM) study protocol using ICD-10 and OPCS-4 coding. These patients were longitudinally followed-up for development of a new diagnosis of Acute Coronary Syndrome and analysis was performed using logistic regression adjusting for demographics, comorbidities/ Charlson Comorbidity Index and t-tests.

Results Overall 198,528 patients were followed up for a mean period of 5.5 years (S.D 3.9 years). Of these 65,349 had T2DM, 45,847 had Hyperlipidaemia and 152,005 had Hypertension. All patients were analysed according to their marital status at the start of the follow-up period. 3,582 patients had new ACS over the study period. Mean time to event was 6.2 years (S.D 4.0 years) and events were more common in males (62.5%). 37.5% of patients who had ACS had T2DM; 32.7% had Hyperlipidaemia and 73.2% had Hypertension. In the ACS group, 9.5% of patients were single; 54.4% married; 17.1% were divorced; 17.6% were widowed and 1.3% were co-habiting. Table 1 shows that breakdown of ACS according to marital status, comorbidities and time to event. The mean time to event was longer in married patients compared to single, divorced and widowed patients. Logistic regression analyses accounting for variations in age, gender, T2DM, Hypertension, Hyperlipidaemia and Charlson Co-morbidity Index showed that the prediction of new ACS was significantly lower in married patients compared to single, widowed and co-habiting patients.

Conclusion Marital status seems to have an impact on the time to ACS similar to traditional risk factors such as

T2DM, Hypertension and Hyperlipidaemia. Married patients with risk factors seem to have longer time to ACS compared to single, widowed and co-habiting patients. Our study shows that marital status, in addition to its previously known impact on the long term mortality after development of cardiovascular disease, seems to impact the development and natural history of ACS in patients with cardiovascular risk factors.

Conflict of Interest None

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CORONARY COMPUTED TOMOGRAPHY VERSUS STRESS ECHOCARDIOGRAPHY-GUIDED MANAGEMENT OF STABLE CHEST PAIN PATIENTS: A PROPENSITY-MATCHED ANALYSIS

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Introduction Recent recommendations by national and international societies advocate the use of coronary computed tomography (CCT) as the first-line test for the assessment of low-risk patients with suspected stable angina. However limited real-life data exist regarding its relative clinical value versus stress echocardiography (SE)-guided management.

We aimed to assess in a real-life setting the clinical value of stress echocardiography (SE)-guided versus CCT-guided management in patients presenting with stable chest pain and no prior history of coronary artery disease (CAD).

Methods We compared the relative feasibility, efficacy and the proportion of patients undergoing downstream testing including revascularisation and their impact on outcome (mortality and myocardial infarction) when CCT versus SE were used as the first line test for the assessment of stable chest pain.

Of the patients who underwent CCT (N=2192) or SE (N=2081) between October 2013 and October 2014 only those with suspected stable angina and without previous CAD were selected. The population was propensity-matched (total 1980 patients-990 patients each group) to account for differences in the baseline cardiovascular risk factors (Figure 1).

Results The baseline characteristics of the propensity-matched population are shown in Table 1. The mean age of the population was 59±13.2 years and 949 (47.9%) patients were male. Inconclusive tests were 6% versus 3% (p<0.005) in CCT versus SE. Severe (>70%) luminal stenosis on CCT and inducible ischemia on SE detected obstructive CAD by invasive coronary angiography in 63% versus 57% patients (p=0.33). Over the entire follow-up period (median 717 (IQR 93-1069) days) significantly more patients underwent invasive coronary angiography (21.5% versus 7.3%, p<0.005) and revascularisation (33.5% versus 3.5%, p<0.005) respectively in the CCT versus the SE group (Table 2). Following their initial assessment 336 (33.9%) patients in the CCT and 86 (8.7%) in the SE group underwent further functional testing (SE, stress cardiac MRI, exercise electrocardiography) (p<0.005). There

Abstract 119 Table 1 Characteristics of new ACS patients and time to event to ACS according to risk factors and marital status

Marital Status	Single	Married	Divorced	Widowed	Co-habiting
Mean age, years (S.D)	61.8 (14.9)	66.9 (11.1)	66.4 (12.4)	78.0 (9.0)	60.7 (11.2)
Male%	72.9	71.7	60.6	30.2	66.7
Hypertension%	73.8	72.3	71.4	77.4	70.8
T2DM%	40.0	39.8	30.6	34.8	50.0
Hyperlipidaemia%	37.1	34.0	42.6	16.9	27.1
Charlson Co-morbidity Index (S.D)	2.37 (1.36)	2.49 (1.45)	2.11 (1.27)	2.64 (1.45)	2.69 (1.24)
Time to event, days (S.D)	2251 (1467)**	2394 (1457)	2165 (1364)**	2036 (1457)**	2415 (1390)
Odd Ratio for ACS* (95% C.I)	1.14 (1.04 - 1.24) **	1	1.09 (0.99 - 1.20)	1.21 (1.09 - 1.33) **	1.34 (1.11 - 1.57) **

* Logistic regression analysis accounting for age, gender, T2DM, Hypertension, Hyperlipidaemia, Charlson Co-morbidity Index; All other marital status compared with Married (1).

** p < 0.05. (Differences shown only for Time to event and Odd ratio in table)