25 THIRTY DAY READMISSION RATES FOR PATIENTS UNDERGOING PERCUTANEOUS CORONARY INTERVENTION

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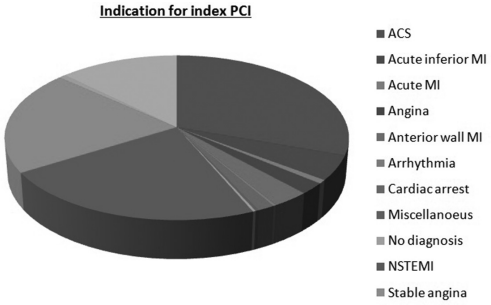
Introduction Readmission following a percutaneous coronary intervention (PCI) procedure is undesirable, being associated with patient morbidity and financial penalties. US data suggest 30 day readmission rates of approximately 10%, however little data is available within the UK. Reductions in the length of stay following PCI potentially increase the likelihood of early readmission. This study reviewed readmission's following PCI undertaken in a non-surgical PCI centre in the UK.

Methods Hospital admission databases were reviewed for all patients who had undergone a PCI at the centre. All patients who were readmitted to the Trust within 30 days of their PCI were identified, and a retrospective analysis was then undertaken of their hospital records.

Results The data set comprised of 3754 patients who had all undergone at least one PCI procedure over the past 6 years. Of these, 409 patients (10.9%) were readmitted within 30 days. A significantly greater proportion of readmission's within 30 days had an index PCI for acute coronary syndrome (ACS, 63.8% vs. 49.6%, p<0.01). Index PCI procedural success was high and comparable between the group of patients who were readmitted and those who were not.



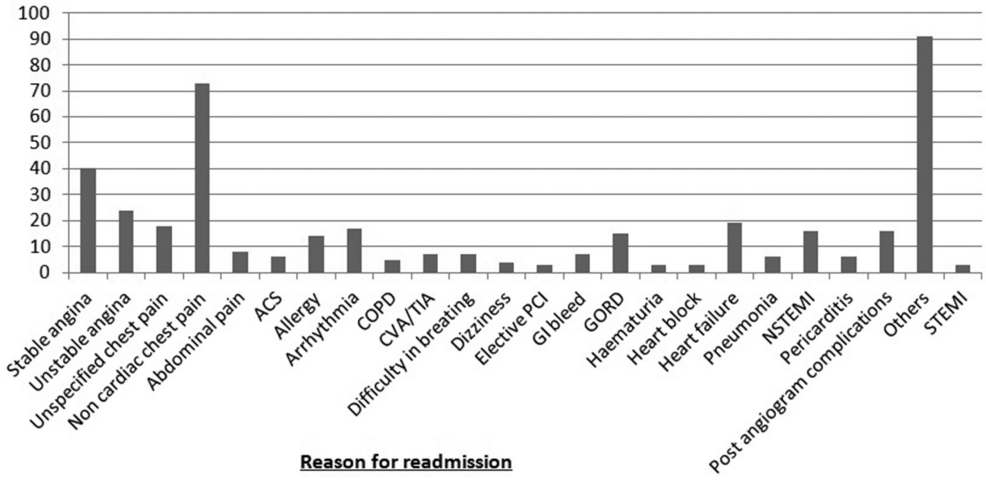
Abstract 25 Figure 1

The average duration of time between the index PCI and readmission was 11.6 days, with a trend towards earlier presentation in those patients representing with a cardiac diagnosis (10.8 days vs. 12.2 days, p=0.09). Non-cardiac diagnoses were the greatest contributing diagnosis for all readmission's, with non-cardiac chest pain, gastrointestinal reflux disease and bony injuries (as others) the commonest final diagnosis.

Cardiac readmission's accounted for 41.4% of all cases with angina and ACS the final diagnosis in 65.4% of patients. 61 patients (14.4%) had a repeat angiogram, with 31 leading to no change in treatment. 18 patients underwent an admission which led to a non-target vessel revascularisation, and 12 patients a target vessel revascularisation. The commonest treatments were no change in medication (41.4%), changes to non-cardiac medication (11.4%) and changes to anti-anginal medication (11.2%). Cardiac readmission's had a greater rate of mortality at twelve months (2.9% vs. 0.8%, p=0.29).

Abstract 25 Table 1

Variable	Total population	Readmitted<30 days	No readmission	P value
Age, mean (SD)	64.4 (11.7)	65.2 (12.6)	64.3 (11.6)	0.15
Male, n (%)	2604/3754 (69.4)	272/409 (66.5)	2332/3345 (69.7)	0.18
Hyperlipidaemia (%)	2247/3529 (63.7)	275/409 (67.2)	1972/3120 (63.2)	0.11
Hypertension (%)	1977/3529 (56.0)	250/409 (61.1)	1727/3120 (55.4)	0.03
Diabetes (%)	849/3520 (24.1)	101/409 (24.7)	748/3120 (24.0)	0.75
Drug eluting stent use	2840/3735 (76.0)	320/409 (78.2)	2520/3326 (75.8)	0.27
Radial access	3437/3754 (91.6)	383/409 (93.6)	3054/3345 (91.3)	0.70
Procedural success	3549/3754 (94.5)	388/409 (94.9)	3161/3345 (94.5)	0.55
Same day discharge	1157/3500 (33.1)	70/387 (17.1)	1087/3113 (34.9)	<0.01



Abstract 25 Figure 2

Abstract 25 Table 2

Variable	Total population	Cardiac	Non-cardiac	p value
Days between PCI and readmission average in days (SD days)	11.6 (8.1)	10.8 (8.1)	12.2 (8.1)	0.09
Length of stay average in days (SD days)	5.3 (12.4)	4.0 (6.7)	6.4 (15.9)	0.08
Angiogram (%)	61 (14.4)	54 (31.8)	7 (2.9)	<0.01
Echocardiogram (%)	28 (6.6)	20 (11.8)	8 (3.3)	<0.01
Cardiologist review (%)	167 (39.3)	127 (74.7)	40 (16.6)	<0.01
Cardiac diagnosis (%)	170 (41.4)			
Discharged home (%)	392 (92.2)	159 (93.5)	233 (96.7)	0.27
Died at twelve months (%)	7 (1.7)	5 (2.9)	2 (0.8)	0.29

Conclusion Cardiac readmission's continue to occur after 10% of percutaneous coronary intervention procedures. Whilst the prognosis is good, measures to reduce these rates are required.

26 CLINICAL OUTCOMES FOLLOWING PRIMARY PERCUTANEOUS CORONARY INTERVENTION: A COMPARISON OF CLOPIDOGREL, PRASUGREL AND TICAGRELOR

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Introduction The West Yorkshire Primary Percutaneous Coronary Intervention outcomes study was established to identify factors that are associated with clinical outcomes following primary percutaneous coronary intervention (PPCI) for ST-segment elevation myocardial infarction (STEMI). We assessed the association of procedural oral P2Y12-inhibitor with clinical outcomes in a large consecutive patient-series.

Methods Demographic and procedural data for all patients undergoing PPCI between 1-1-2009 and 31-12-2011, and 1-1-2013 and 31-12-2013, in Leeds General Infirmary, were collected prospectively. Minimum 30 day follow-up data were collected for all. Patients with pre-procedural cardiogenic shock and/or cardiac arrest were excluded. Clinical endpoints were 30 day major adverse cardiovascular event (MACE) – defined as all-cause mortality, myocardial infarction (MI) and repeat coronary revascularisation, and 30 day major bleeding (HORIZONS criteria). Multivariable analyses for MACE and major bleeding comparing procedural P2Y12-inhibitors were performed with Cox proportional hazards models, adjusting for major cardiovascular risk factors.

Results 4056 patients underwent PPCI during the study period, 464 of whom were excluded due to pre-procedural cardiogenic shock and/or cardiac arrest. Data for 30 day bleeding and MACE were available for 3381 of 3592 (94.2%) patients. Multivariable analysis showed no significant difference in MACE, mortality or major bleeding between patients pre-treated with clopidogrel (n=1492), prasugrel (n=1152), and ticagrelor (n=737) (Table 1). However, there was a significantly lower probability of 30 day MI with ticagrelor compared to clopidogrel (HR 0.38 (0.17–0.84)). The differences in 30 day MI between prasugrel and clopidogrel (HR 0.59 (0.33–1.04)), and prasugrel and ticagrelor (HR 1.55 (0.67–3.61)), were not statistically significant. There were no statistically significant differences in mortality between clopidogrel and ticagrelor, between prasugrel and ticagrelor, and between ticagrelor and prasugrel following multivariable analysis.

Conclusion This large consecutive real-world series has shown that pre-treatment with ticagrelor was associated with lower probability of 30 day MI compared to clopidogrel, with no overall difference in bleeding, MACE or mortality. There was no significant difference in bleeding, MACE or mortality between ticagrelor and prasugrel, or between prasugrel and clopidogrel.

Abstract 26 Table 1 Comparison of adjusted MACE, mortality, and bleeding at 30 days according to P2Y12-inhibitor.

P2Y12-Inhibitor	MACE n (%) Adjusted HR (95% CI)	Mortality n (%) Adjusted HR (95% CI)	Bleeding n (%) Adjusted HR (95% CI)
Clopidogrel (n=1492)	161 (10.8)	121 (8.1)	114 (7.6)
Ticagrelor (n=737)	70 (9.5) HR 0.84 (0.53–1.32) vs clopidogrel	56 (7.6) HR 1.01 (0.57–1.79) vs clopidogrel	39 (5.3) HR 0.76 (0.41–1.41) vs clopidogrel
Clopidogrel (n=1492)	161 (10.8)	121 (8.1)	114 (7.6)
Prasugrel (n=1152)	61 (5.3) HR 0.82 (0.56–1.20) vs clopidogrel	41 (6.9) HR 0.95 (0.57–1.57) vs clopidogrel	59 (5.1) HR 1.25 (0.83–1.87) vs clopidogrel
Ticagrelor (n=737)	70 (9.5)	56 (7.6)	39 (5.3)
Prasugrel (n=1152)	61 (5.3) HR 0.97 (0.60–1.58) vs ticagrelor	41 (6.9) HR 0.94 (0.50–1.78) vs ticagrelor	59 (5.1) HR 1.64 (0.88–3.05) vs ticagrelor

27 USE OF ROTATIONAL ATHERECTOMY IN PRIMARY PCI FOR ST-ELEVATION MYOCARDIAL INFARCTION- A SINGLE CENTRE 10-YEAR EXPERIENCE

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Introduction Rotational atherectomy (RA) during primary PCI (PPCI) for STEMI is relatively contraindicated because of the perceived increased risk of no-reflow. However, RA PPCI may sometimes be required to restore flow in heavily calcified coronary arteries. Previously only very limited observational data has described the use of RA in PPCI.

Aim We report the clinical and procedural characteristics, and in hospital outcomes, of 21 patients who underwent RA PPCI at our centre between 2006 and 2016,

Methods A retrospective review of the PCI database and medical records.

Results 21 patients (age 78(10) years (mean (SD)), 12 men) underwent RA during PPCI (0.4% of all PPCI). 3 patients had