2 year outcomes of patients attending Rapid Access Chest Pain Clinic at St. John's Hospital

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Introduction

- Rapid access chest pain (RACP) clinics were initially established to identify chest pain of cardiac origin (more specifically due to acute coronary syndrome) who would benefit from early intervention with anti-platelet treatment and heparin, and later; from revascularisation.
- Mainstay of assessment included clinical history and examination, identification of risk factors, Electrocardiography and exercise testing.
- Treatment could be initiated at clinic and patients could be referred for angiography.
- More recently other tools such as computerised tomography (CT) coronary angiography have been proposed as an alternative first-line investigation for patients presenting with suspected angina and coronary artery disease (CAD).
- This audit set out to evaluate the coronary outcomes of patients attending the RACP clinic at St Johns Hospital at 6, and 24 months, as well as re-attendance to hospital with chest pain.

Methods

- Retrospective data were collected from 100 patients attending the RACP clinic between November 2018 and March 2019.
- The primary outcomes were coronary intervention (angioplasty or surgery), or event (MI, unstable angina or hospital admission for refractory angina) at 6 and then 24 months
- Secondary outcomes were re-referral to cardiology or re-attendance to hospital with chest pain

Results

Number of patients	Total=100 (100%)	Male= 47 (47%)	Female= 53 (53%)
Average age (Range 38-83)	63	63	59
Smoking history	44 (44%)	20 (46%)	24 (40%)
Diabetes history	8 (8%)	3 (4%)	5 (8%)
Hypertension	48 (48%)	22 (34%)	26 (44%)
High cholesterol	45 (45%)	20 (31%)	25 (42%)
Number of modifiable risk factors			
1	23 (23%)	12 (19%)	11 (19%)
2	30 (30%)	15 (23%)	18 (30%)
3	16 (16%)	8 (13%)	8 (14%)
4	3 (3%)	1 (2%)	2 (3%)
0	28 (28%)	11(17%)	17 (29%)
Number of patients with previous history of coronary disease	14 (14%)	8 (13%)	6 (10%)

Table 1. Baseline characteristics of RACP Clinic patients showing distribution of risk factors. Interestingly, just over a quarter of the patients had no risk factors for coronary disease. Of these 28 patients with no risk factors for coronary disease 7 were thought to have angina

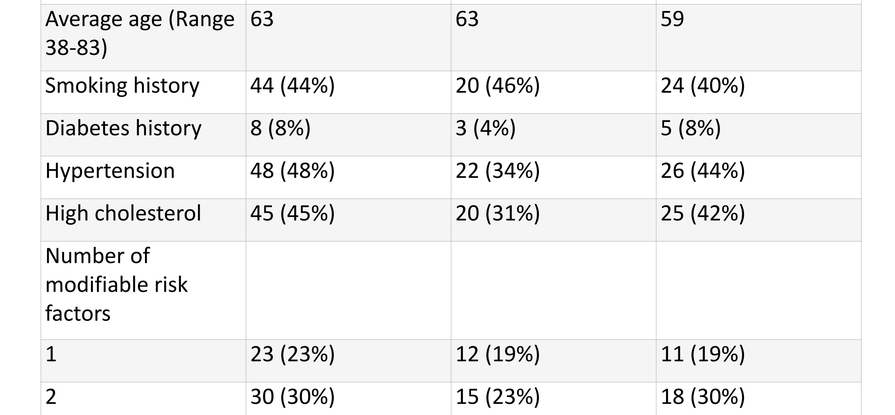

Figure1. Diagnosis at Rapid Access Chest Pain Clinic

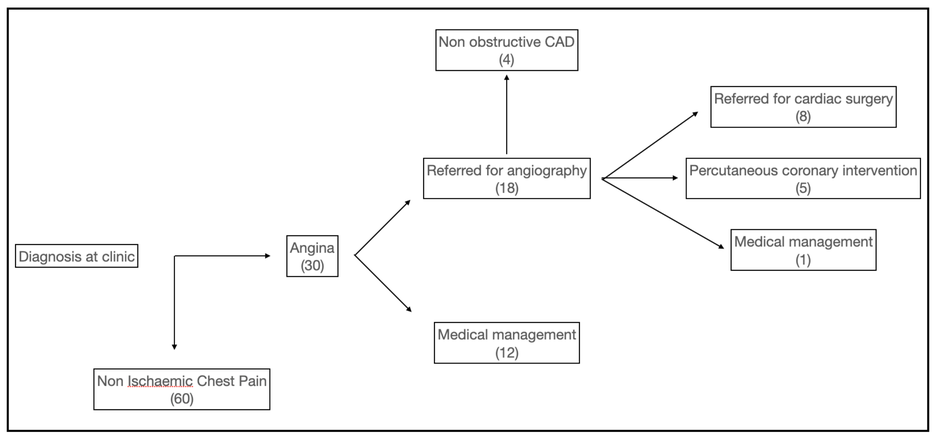

Figure 2. Outcomes of those patients diagnosed with angina at clinic. Referrals for further coronary diagnostic tests and the results

Investigations at RACPC	Total	Abnormal	Normal
ECG	100	32 (32%)	68 (68%)
Exercise tolerance testing	67 (67%)	25 (37%)	42 (63%)
CT Coronary angiography	9 (9%)	3 (33%)	6 (66%)
Echocardiography	18 (18%)	7 (38%)	11 (62%)
Angiography	20 (20%)	16 (80%)	4 (20%)

Table 2. Further investigations arranged by RACPC.

Exercise tolerance testing	Negative test	Developed symptoms	ECG changes during test or in recovery	Symptoms with ECG changes
67(%)	42 (63%)	33 (49%)	15 (22%)	11(16%)

Table 3. RACPC Exercise tolerance testing results. Of those patient with a negative exercise test only one patient was readmitted and referred for coronary arteriography, which showed coronary artery calcification but no significant coronary stenosis. A negative exercise test remains a reliable predictor of a good outcome.

- Not a single patient who attended the clinic had died at 24 months.
- Two patients with a diagnosis of angina underwent unplanned angiography within 6 months of the clinic, one of whom required intervention. At 24 months no more patients required angiography, or suffered a coronary event
- Two patients diagnosed with Non ischaemic chest pain (NICP) underwent angiography within 6 months of attending clinic. Neither had obstructive CAD. At 24 months no more patients required angiography, or suffered a coronary event.
- Re-attendance to hospital with chest pain was similar in those diagnosed with angina (43%) and NICP (40%)

Conclusion

- The RACP clinic at St. Johns Hospital was good at identifying patients with clinically significant coronary artery disease and referring for timely intervention.
- This audit shows that attendance at RACP clinic is associated with low morbidity and mortality at 2 years in the groups diagnosed with, and without angina. This may be contrary to the perception of those referring patients to the clinic.
- Exercise testing should be used carefully. While it may be less sensitive than other methods for diagnosing the presence of coronary artery disease, it gives the clinician (and patient) important feedback about the prognosis and functional significance of obstructive coronary lesions.
- This audit also highlights a change in the population of people attending RACP Clinic. A considerable number did not have angina, though the majority (72%) had at least one risk factor for developing CAD.
- Re-attendance rates amongst patients with and without angina remain high. This could be an area for future audit and quality improvement projects.

Acknowledgements

Dr. J. Lappin (Clinical Fellow), Dr. A. Flapan (Consultant Cardiologist), Katie Fairlie (Cardiology Team Lead), the Cardiology Advanced Nurse Practitioners, and the Cardiac Physiology team at St. John's Hospital