

Implementation of a remote rapid access chest pain service during the COVID-19 pandemic

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Background: Rapid Access Chest Pain Clinic (RACPC) is a vital service in many hospitals in the UK, providing early specialist input for patients with suspected coronary artery disease referred via the Emergency Department (ED) or primary care (1). When the COVID-19 pandemic forced hospitals to refine their outpatient systems (2), our Trust continued the RACPC service remotely via telephone consultations.

Purpose: To examine the long-term viability of this service, we designed a study to compare the outcomes of patients seen remotely during the pandemic to patients seen face to face.

Methods: We performed a retrospective cohort study. The remote group (n=217) were patients seen over 4 weeks in April 2020, all having telephone consultations. The control group (n=368) were patients assessed face to face in the same 4-week period in 2019. Outcomes being analysed included: mode of investigation; interventions performed; and a 12 month combined safety endpoint of ED attendance with chest pain, re-referral to cardiology and hospitalisation for cardiac issue. Subgroup analysis was performed based on typicality of symptoms defined by NICE (3).

Results: Baseline characteristics were similar between groups. In both 2019 and 2020, the largest subgroup of patients were those with non-anginal chest pain (64%, 71%). There were significant differences in investigation and management between the two cohorts (Figure 1). In 2020, a higher proportion of patients were discharged with no investigation (57% vs

23%, p<0.0001). This was driven primarily by changes in management of patients with non-anginal chest pain. There were significantly higher rates of investigation of this subgroup in 2019 by either CT Coronary Angiography (25% versus 4.5%, p<0.001) or functional testing (25% versus 6.5%, p<0.001), with a much higher rate of reassurance and discharge in 2020 (81% versus 36%, p<0.0001). More patients received coronary intervention in 2019 than in 2020 (2.4% vs 0%, p=0.02). In 2020, higher proportions of patients were commenced on medical therapy without further investigation when presenting with atypical (28% versus 1%, p<0.0001) or typical angina (63% versus 11.4%, p<0.0001) (Figure 2). There was no significant difference in the 12 month combined safety endpoint (1.3% in 2019 versus 2.3% in 2020, p=0.39), and no reported cardiac deaths.

Conclusions: During the pandemic, as expected, fewer patients were investigated for coronary artery disease, with the preference being to commence medical therapy initially. This did not have a significant effect on safety endpoints. Importantly, clinicians felt comfortable with assessing and discharging patients with non-anginal chest pain remotely in 2020. This is key to the viability of a remote RACPC model, as this subgroup forms the majority of the referrals. We suggest that RACPC is appropriate for a remote model in the long term, in view of the relatively low-risk population and clear management guidelines.

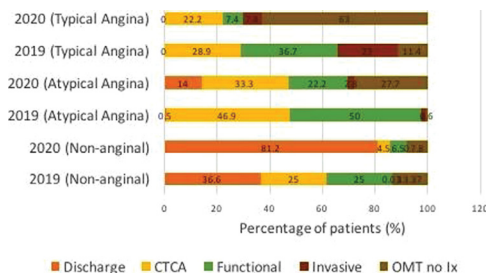


Figure 1. Investigation based on symptoms

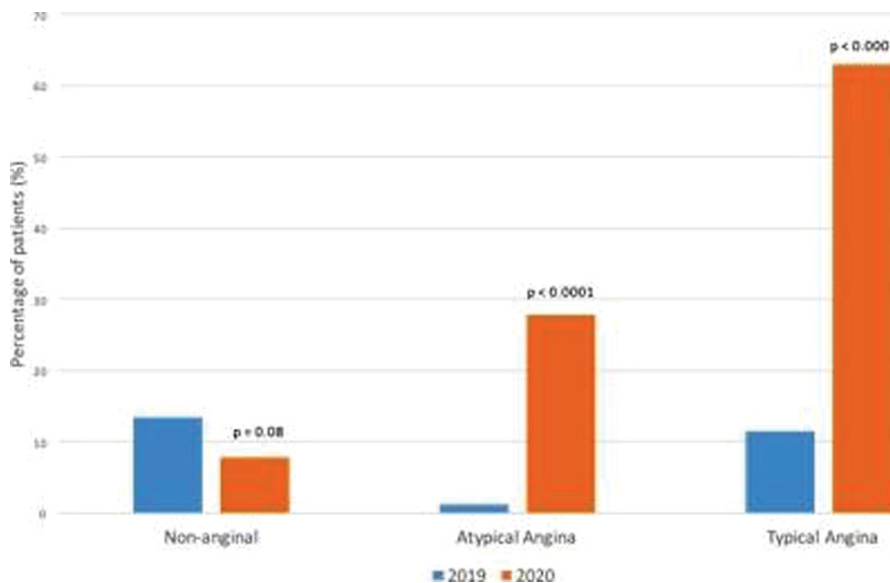


Figure 2. Patient receiving medical therapy only