Abstract: P951

The factors influencing total ischaemic time in patients presenting with STEMI in an Irish tertiary referral centre

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Background
Despite highly functioning primary percutaneous coronary intervention (PPCI) programmes, STEMI is still associated with significant morbidity and mortality. The European Society of Cardiology STEMI guidelines in 2017 introduced a novel metric relating to STEMI patients: ‘total ischaemic time’. This time-period starts at the onset of chest pain and ends at wire cross, and it is thought to accurately reflect burden of myocardial destruction.

Aims
To assess the total ischaemic time of patients presenting with STEMI in an Irish tertiary referral centre and the factors influencing delays in presentation and treatment.

Methods
Prospective cohort analysis was conducted on all patients presenting with STEMI from October 2017 to January 2019. Patients were included if they had a culprit lesion that was successfully revascularized. All information was recorded at time of presentation. Bayesian statistics were employed to conduct the analysis.

Results
158 patients were recruited. Mean age was 61(range29-96). Male:female ratio 5:1 in this cohort. Average total ischaemic time was 409.4mins ±501.4. The average time from chest pain to ‘call for help’ (i.e. patient delay) was 208.3mins ±397.8, which represented 50.89% of the total ischaemic time (See Figure 1). The average time from ‘call for help’ to first medical contact (FMC) was 18.4mins ±30.07. Average time from FMC to ECG was 44.9mins ±151.16, and was dependent upon type of FMC (Primary care 127mins vs paramedic 25mins p=0.030932). After FMC, 48.7% of patients had an ECG performed in under 10mins as per guidelines. After ECG was performed, 46.4% of patients had ECG to ‘wire cross’ time under 90mins as per guidelines; 65.8% were within 120 mins and 91.4% were within 180mins. Those presenting to their general practitioner as FMC were significantly less likely to have both an ECG <10mins (NNH 2.84 95%CI 1.79-6.91) and ECG to wire time of <90mins (NNH 6.13 95%CI 2.88-48.70).

As age increased, so too did total ischaemic time (Pearson R=0.164, p=0.043), which was dependent on increasing patient delay with age (Pearson R=0.2181, p=0.0066). Women had a higher total ischaemic time than men (546 vs 382mins p= 0.0233). This was determined to be as a result of: a numerically higher patient delay (220 vs 206 mins, p= 0.214) and women having a longer time from FMC to ECG (104mins vs 34mins, p=0.0021).

Conclusion
Over 50% of the total ischaemic time was due to patient delay, suggesting a role for cardiovascular awareness...
programmes. Increasing age was associated with longer patient delay, indicating a need for directed awareness in this demographic. Women had a higher total ischaemic time, and waited a significantly longer time for ECG following FMC; highlighting the need for awareness amongst healthcare professionals of atypical clinical features associated with STEMI in women. Patients who attended their GP waited longer for an ECG and, once performed, were less likely to be revascularised within 90mins.