Abstract: P1738

Pre-hospital delay in patients with suspected myocardial infarction: a prospective observational study in the Russian Federation

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Background Russia has one of the highest mortality rates from cardiovascular disease (CVD) in the world. For patients with acute myocardial infarction (AMI), longer pre-hospital delays are associated with increased complications and mortality.

Purpose Identify risk factors for prolonged pre-hospital delay and its components (patient decision time delay and transport time delay) in the Russian Federation for AMI patients.

Methods: A total of 1128 hospitalised patients with suspected AMI were recruited in a prospective observational study with a representative sample of suspected AMI patients from 16 hospitals in 13 regions of Russia. Data were collected from both patient questionnaires and clinical records, 251 patients were excluded due to missing data and/or having MI while already hospitalised (n=6). Pre-hospital delays analysed include total pre-hospital delay >= 2hrs, patient decision time (>= 1 hr) and transport time (>=1). Logistic regression models were used to identify patient (sociodemographic, socioeconomic, previous medical history), symptom and admission related predictors of prolonged delays.

Results The median total pre-hospital delay was 4.83 hrs (IQR 2.64-10.82), decision time 1.25 hrs (IQR 0.38-4.5), and transport time 2.03 hrs (IQR 1.23-4.5). No age or sex differences were found across total, decision or transport delay. The odds of admission within 2 hours from symptom onset (total prehospital delay) significantly decreased with poorer wealth status, indirect route to hospital (first medical contact elsewhere) and symptom onset between 12-6am. Additionally, taking aspirin was associated with lower odds of arriving within 2hrs. Whilst symptom presentation and co-morbidity was not significantly associated with total delay, patients who correctly associated symptoms to a heart problem were more likely to reach the hospital within 2 hours (OR1.65, 95% CI 1.03-2.62). Odds of transport delay >1hr were significantly greater for patients travelling indirectly but also significantly lower for male patients. Odds of decision time >1 hr were significantly greater among patients that did not attribute their symptoms to a heart problem and patients with symptoms starting overnight (12-6am). Sociodemographic, socioeconomic and comorbid status were not significantly associated with decision time.

Conclusion Pre-hospital delay in the Russian Federation is protracted, particularly when patients travel indirectly to their definitive health facility. Symptom characteristics (time of onset and attribution to heart) are important for all components of pre-hospital delay in the Russian Federation. There is initial evidence that male patients experience reduced transport times, but further analyses are required to understand why. Tractable areas for improvement exist; reducing patient decision time and increasing use of EMS.
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