

Impact of a Redesigned Cardiac Chest Pain Pathway on Hospital Admissions

Katharine Hopping, Michael Stewart
 Royal Preston Hospital, Lancashire Teaching Hospitals NHS Trust, Preston, UK

Background and Objectives

- We previously used RATPAC criteria¹ to assess patients with suspected cardiac chest pain. Low risk patients had a 90-minute rule-out using a triple cardiac biomarker panel. High risk patients were admitted for serial Troponin testing.
- Pathway revised in 2014 to use the HEART score² for risk stratification and high sensitivity Troponin T (hsTnT) for rule out of myocardial infarction in all patients (figure 1).
- Aimed to increase safety without causing a large increase in acute admissions.

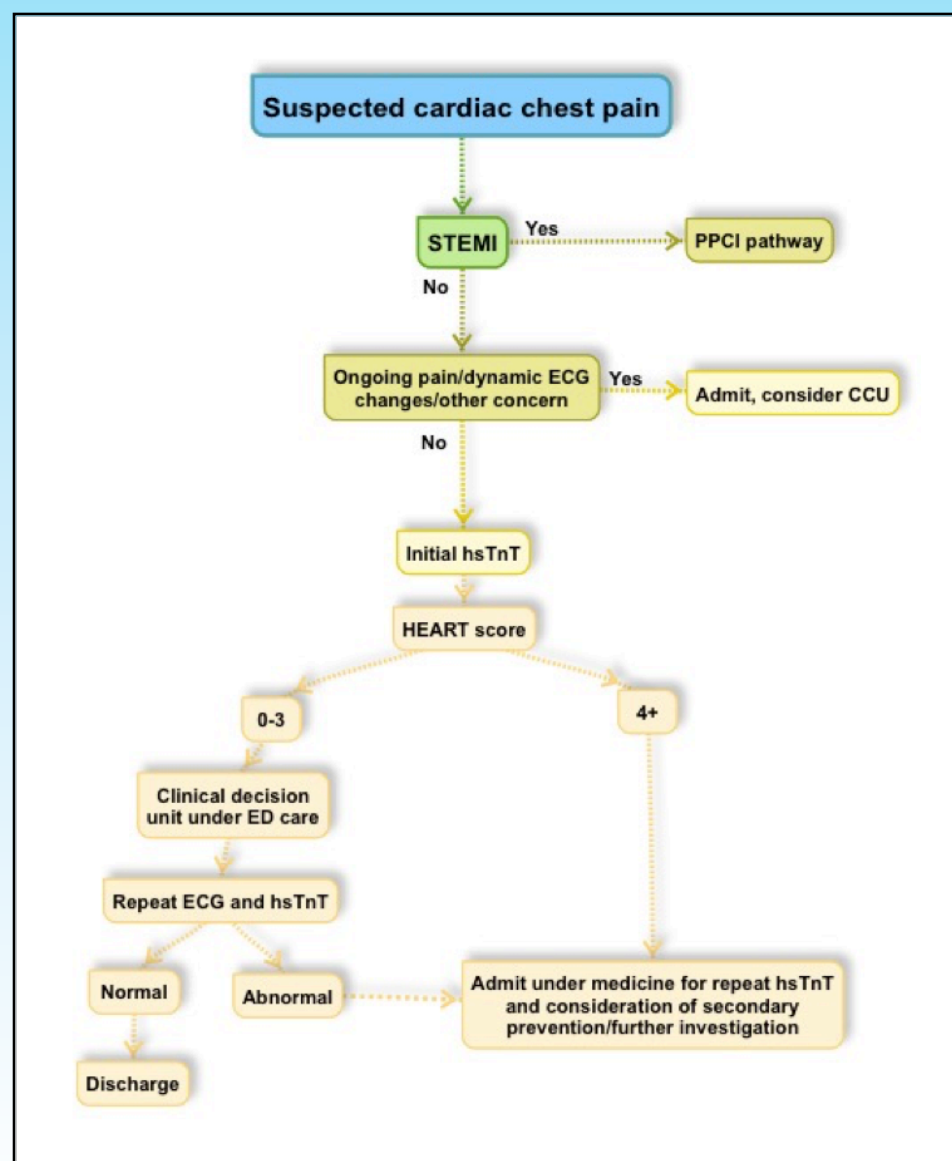


Figure 1: Updated pathway for patients with suspected cardiac chest pain

Method

- Search of electronic patient record (Quadramed QCPR) for patients triaged as 'chest pain' between 1st and 31st January 2014 (previous pathway in use) and between 21st September and 21st October 2014 (new pathway in use)
- Manual review of patient notes to identify those investigated for suspected ischaemic heart disease as a cause of their chest pain
- Extraction of data and analysis using Excel

Results

- During the initial audit month when the previous pathway was in use 173 patients presented to the ED and were investigated for cardiac chest pain. 62% were admitted and 12% of all investigated patients had a final diagnosis of acute coronary syndrome.
- In the second audit period after introduction of the new pathway, 159 patients were investigated for cardiac chest pain. 56% were admitted and 10% had a final diagnosis of acute coronary syndrome.
- Acute Coronary Syndrome was the discharge diagnosis in 17% of those admitted to hospital in both groups.

References

- Goodacre S, Bradburn M, Cross E, et al.; RATPAC Research Team. The Randomised Assessment of Treatment using Panel Assay of Cardiac Markers (RATPAC) trial: a randomised controlled trial of point-of-care cardiac markers in the emergency department. *Heart* 2011;97:190-6.
- Six AJ, Cullen L, Backus BE, Greenslade J, Parsonage W, Aldous S, Doevendans PA, Than M. (2013) The HEART score for the assessment of patients with chest pain in the Emergency Department: A multi-national validation study. *Critical Pathw. Cardiol.* 12:121-126

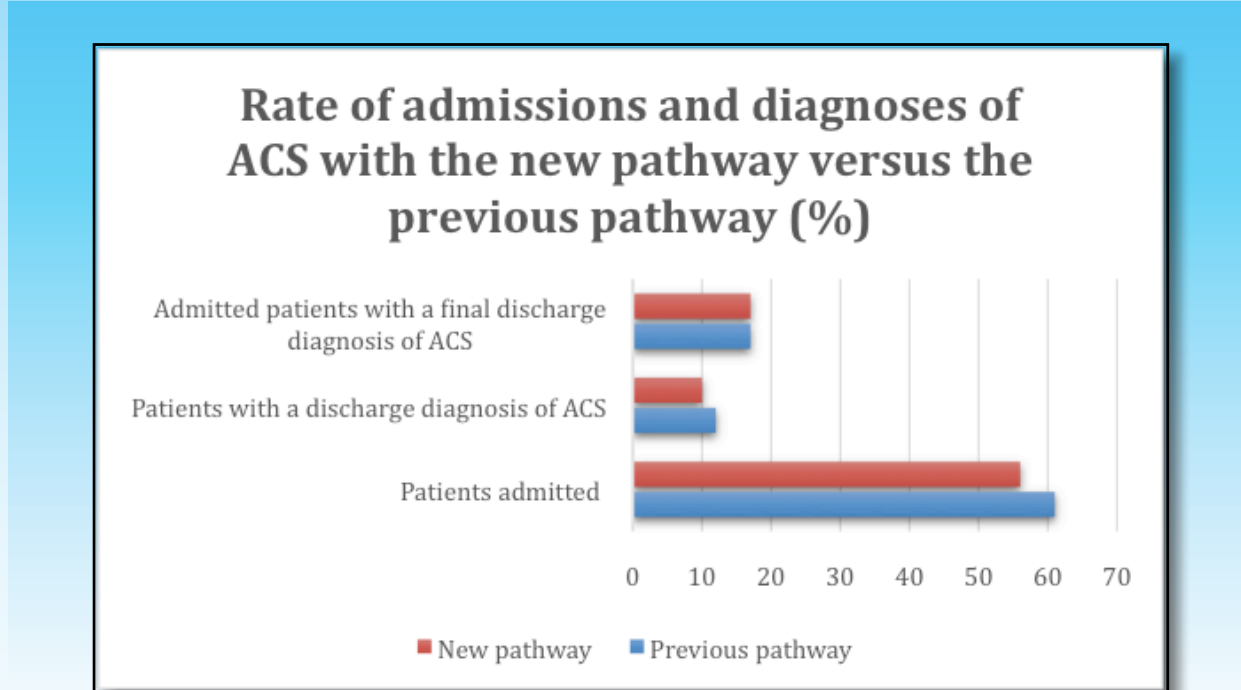


Figure 2: Results

Conclusion

- We have been able to redesign our cardiac chest pain pathway to improve safety by using a validated risk assessment score (HEART) and high-sensitivity Troponin testing in all patients
- Despite removing the 90-minute triple cardiac marker pathway, we achieved a slight reduction in admissions to acute medical beds.
- Given the need to be risk-averse with chest pain presentations, a relatively high rate of negative investigations is to be expected.

k.hopping@doctors.org.uk

