Cardiac Chest Pain

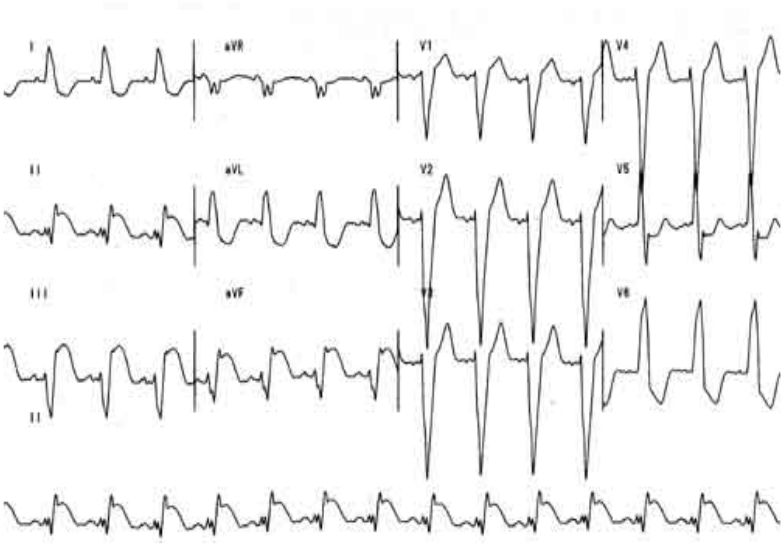
Background.

Suspected cardiac chest pain accounts for 2-4% attendances at the Emergency Department. Approximately 18% of these patients will be having a myocardial infarction. Around 11% of these patients will die, over half of them within the first twelve hours after symptom onset. With appropriate early treatment, many deaths can be prevented.

The management of acute coronary syndromes is supported by high level evidence. Treatments such as thrombolysis, primary angioplasty, aspirin, beta-blockers, heparin and clopidogrel have been shown to reduce mortality and complications. The Myocardial Infarction National Audit Project (MINAP) is in place to continuously audit the standards of care delivered to patients with acute myocardial infarction.

This audit is designed to evaluate the standards of care provided to the wider group of patients with undifferentiated chest pain that is suspected to be cardiac in origin. The following factors are of paramount importance in this high-risk group of patients:

- **Appropriate diagnostic techniques should be employed to minimise, in particular, the risk of false negative diagnoses. Troponins form the gold standard biochemical markers of acute myocardial infarction but many departments employ early rule out strategies incorporating other markers. Departmental protocols should be adhered to.**
- **Patients should be risk stratified to ensure appropriate early treatment for high-risk patients and to enable potential early discharge of those at low risk.**
- **Eligible patients should receive appropriate treatment as soon as possible after hospital presentation.**



- 30-60% of patients with suspected cardiac chest pain are admitted, accounting for one in five acute medical admissions.
- Despite this, 2-7% of patients with prognostically significant myocardial damage are inadvertently discharged from the Emergency Department
- These patients have a mortality rate 2-4 times as high as those who are admitted

Methods

Retrospective audit

Sample: 50 consecutive Emergency Department patient records

Criteria

Inclusions: Patients over 25 years old coded as Cardiac chest pain (Including Angina, unstable angina, NSTEMI, ACS.)

Exclusions: STEMIs are excluded

Please ensure you register the audit with your Trust Clinical Audit Department

Notes can be obtained by computer search of the ED database. The coding system on the back of the ED cards should be searched using the terms:

The search should extend over a sufficient period to include the 50 most recent obtainable events as a minimum. Contact the ED information manager to obtain a list of case notes matching these criteria.

Cards may only be physically kept in the department for a couple of weeks and then sent for scanning and archiving electronically. This can take up to 4 weeks.

Once you have the cards for the relevant patients then you need to record the data in an accessible way. This should be entered into the excel spreadsheet that contains all the relevant cells and formulae. For some of the items on the spreadsheet you may want to include a number of options. To maintain a consistency between rolling audits we ask that you stick to the approved list of criteria.

Work plan

Week 1-2, background reading and ordering case notes

Week 3-4, accessing records and entering data onto spreadsheet

Week 5-6, preparing the Powerpoint presentation of your findings

Presentation of findings

The data should be collated and then presented using the associated Powerpoint presentation with the new data entered.

Data **MUST** then be uploaded onto www.stemlyns.org.uk/admin as instructed. Please obtain the username and password from your audit lead.

Further Information contact:

How to upload the audit data

- www.stemlyns.org/admin
- Username and Password
- Select Appropriate Audit Title
- Select EDIT RESULTS next to appropriate date
- Enter results and CONTINUE
- FINISH
- LOG OUT

Traffic lights within 5% of target within 6-15% within 16%+

Criteria	Standard (%)	Standard achieved Locally (%)	Standard Achived Regionally (%)	Standard Met?	Status
ECG performed within 10 minutes of arrival in ED	100				
ECG review documented did not miss significant ST or T wave abnormalities	100				
Aspirin either given in ED or documented evidence of being taken prior to attendance.	100				
Risk stratification performed according to local guidelines	100				
(Anti-thrombin or LMWH) given in to high risk patients (according to local guidance) unless contraindicated	100				
Low risk CCP patients undergo a structured rule out protocol (in accordance with local policy)	100				

Rationale for standards:

1. Reperfusion interventions for STEMI are time critical. It is therefore crucial to make the diagnosis, which is ECG dependent, as early as possible to ensure timely PCI (or Thrombolysis).

2. ECG interpretation is crucial to the appropriate risk stratification of chest pain, particularly the presence/ absence of significant ST-T wave changes. 10 minutes from arrival by EMSAG consensus.

3. Evidence suggests Aspirin given in the first 24h reduces mortality, therefore given before/in ED is an appropriate ED standard.

4-6. NICE guidance suggests risk stratification into high and low risk chest pain should guide further treatment

Guidance for auditors:

1. If 12 lead ECG is performed in ambulance and a review of ECG is documented in ED notes, this is sufficient for an ECG within 10 minutes of arrival

2. ECG interpretation should be reviewed post hoc by an ED doctor with sufficient experience (Equivalent to ST4 or above)

3. If aspirin taken prior to ED attendance and this is documented in the ED notes this is sufficient for Aspirin given in ED.

4. If no local guidance exists this should be made clear and no results returned to EMSAG for this metric

5. If no local guidance exists this should be made clear and no results returned to EMSAG for this metric

6. Structured rule out includes admission for Troponin at 12 hours. If no local guidance exists this should be made clear and no results returned to EMSAG for this

References:

NICE clinical guideline 94: unstable angina and NSTEMI.

http://www.nice.org.uk/nicemedia/live/12949/47921/47921.pdf