

- Some units varied the discharge home depending on area of STEMI or LV function or Doctor Preference.

**Conclusion** There is little evidence to support the current timing of care of the patient post PPCI and the subsequent bench marking exercise demonstrated that set criteria was being applied to this patient group based on tradition or experience. There is little evidence that practices have changes with the advances in the outcomes post PPCI. With this variation nationally there is a need for further exploration in this area to provide a more concise, evidence based standards which would improve that patient pathway and make better use of the resources available.

## Acute Coronary Syndromes

### 102 EARLY ANGIOGRAPHY AND CORONARY INTERVENTION IN COMATOSE SURVIVORS OF OUT OF HOSPITAL CARDIAC: CAN THE 12-LEAD ECG BE GATEKEEPER?

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**Background** Emergency coronary angiography in comatose survivors of out of hospital cardiac arrest (OHCA), in the absence of STEMI criteria on a post-resuscitation ECG, is controversial. High mortality and the implications on resource use, without robust criteria for the selection of appropriate candidates, has prevented clear guidance from the national societies. Our institution has adopted early involvement of a specialist team, consisting of an interventional cardiologist, emergency care physician and intensive-care anaesthetist, to initiate early assessment of patients. All survivors of OHCA, without an obvious non-cardiac aetiology, are transferred to the cardiac catheterisation laboratory for emergent angiography and intervention, if indicated, irrespective of presenting ECG, before admission to intensive care. We report the outcomes of this pathway with particular emphasis on the predictive value of the post-resuscitation ECG.

**Methods** We retrospectively reviewed the clinic data, ECG characteristics and angiographic images of all survivors of OHCA admitted to our institution between 1 October 2012 and 31 July 2015.

**Results** We obtained data for 192 patients (80% male, average age 62 years). 24% patients were transferred from neighbouring hospitals. The median time interval from admission to the emergency department and transfer to the catheter laboratory was 76 min for local patients compared to 176 min for transferred patients. The prevalence of significant coronary artery disease (>70% stenosis in at least one coronary artery) was 77% in our patient cohort. 69 (36%) patients had an acute coronary occlusion whereas 55 (29%) cases were chronic total occlusions. Immediate PCI was undertaken in 109 (57%) cases and of these 46 (42%) did not have ST elevation on the post-resuscitation ECG. Our overall rate of survival to discharge was 58%, with higher rates of survival observed in those undergoing PCI (63% v 52% in conservatively managed patients (non-significant  $p = 0.1$ )).

**Conclusion** Clinical criteria and electrocardiographic data are poor predictors of significant coronary artery disease and acute coronary occlusion. In our experience early involvement of a specialist team to facilitate prompt assessment and

immediate coronary angiography is associated with a favourable outcome in this unselected population of comatose survivors of out of hospital cardiac arrest.

### 103 IS IT SAFE TO USE A HIGH SENSITIVITY TROPONIN T ASSAY FOR EARLY "RULE OUT" IN PATIENTS WITH SUSPECTED ACUTE CORONARY SYNDROME?

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The European Cardiac Society have recommended high-sensitivity cardiac troponin testing can be used as part of a "rule-out" strategy for patients with suspected acute coronary syndrome. NICE have recommended the use of 2 assays in clinical practice – Abbott high-sensitivity cardiac troponin I assay and the Roche high-sensitivity cardiac troponin T assay. NHS Fife has introduced the Roche high-sensitivity cardiac troponin T assay.

We wanted to determine if introducing a "rule out" pathway for "low risk" patients with suspected acute coronary syndrome would be safe.

**Study** Is it safe to use a high sensitivity Troponin T assay for early "rule out" in patients with suspected Acute Coronary Syndrome?

**Methods** We carried out a retrospective study looking at all patients who had high-sensitivity cardiac troponin measured who were admitted to our Cardiac Care UNit, Emergency Department and Admissions Unit over a 10 month period. This was regardless of symptoms or time of onset.

**Primary Endpoint:** Those patients with initial high-sensitivity cardiac troponin levels under the diagnostic threshold of 14ng/L who went on to have a significant rise in their peak sample. An absolute delta rise >10 ng/L is used to determine if a rise is significant.<sup>1</sup>

**Secondary Endpoint:** 30 day mortality rates and rate of myocardial infarction in those patients with an initial high-sensitivity cardiac troponin of <5 ng/L.

#### Results

- Total patients who had high sensitivity cardiac troponin tested 4521
- Patients who had only one sample taken 2539 - excluded
- Patients who had serial samples taken 1982 - included
- Patients with initial sample >14 ng/L 1045
- Patients with initial sample <14 ng/L 937 (M 476/F 461)

#### Primary Outcomes

- 444 (48%) of 937 patients had an initial sample <5 ng/L
- 5 patients (1.1%) went on to have a peak sample >10 ng/L
- This gave a negative predictive value (NPV) of 98.7% of a significant rise if initial sample is <5 ng/L.

**Secondary Outcomes** 30 day mortality was zero and 30 day myocardial infarction rate was 2 patients.

**Discussion** Only 2 of the 5 patients who went on to have a rise in their peak sample >10 ng/L had a type 1 Myocardial Infarction. The other 3 had atrial fibrillation, chronic pulmonary hypertension with recent normal coronary angiography and another was a known arteriopathy who had non obstructive coronary disease on angiography and did not have revascularisation.

**Conclusions** We have shown it is safe to use the Roche high-sensitivity cardiac troponin T assay in clinical practice as part of an early rule-out strategy for patients with suspected acute coronary syndrome.

Cardiac Troponin results should be interpreted in the context of the clinical presentation.

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104 RISK STRATIFICATION IN ACUTE CORONARY SYNDROME: DO WE NEED TO MOVE BEYOND GRACE?

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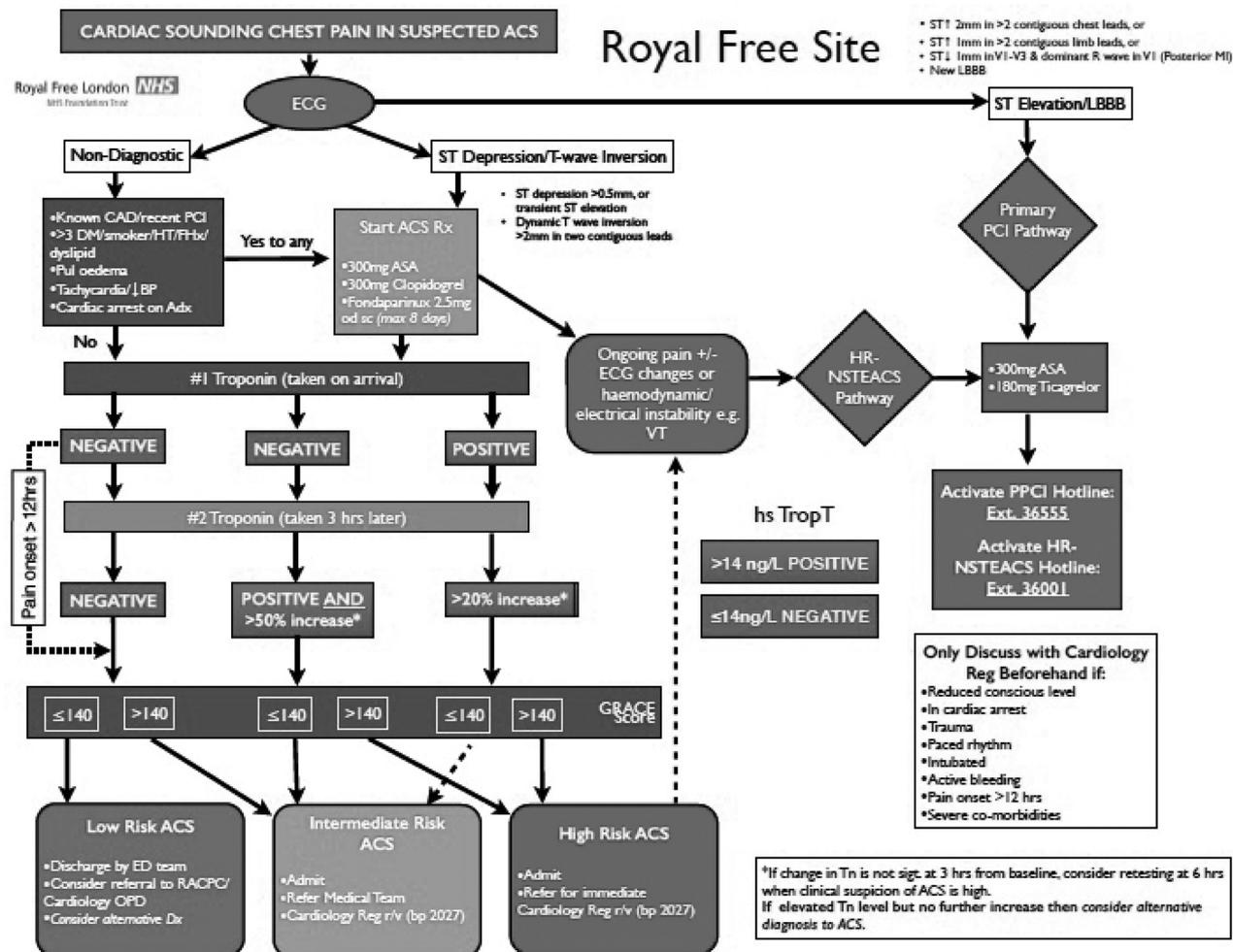
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**Introduction** The GRACE score predicts in-hospital mortality and is a key tool in the risk stratification of patients with non ST-elevation acute coronary syndrome (ACS). This then determines treatment and the timing of any intervention such as PCI (1). We developed an ACS pathway based on these guidelines incorporating the GRACE score, serial troponin, ECG changes and presenting symptoms in order to categorise patients into high, intermediate and low risk (Figure 1). **Methods** Based on discharge summary coding all NSTEMI-ACS patients were selected who presented between Aug 2014 and Jan 2015 at Barnet Hospital, a (non-PCI) district general. Notes were reviewed and GRACE score and risk stratification

re-calculated retrospectively using the new pathway. Patient demographics, time to intervention, length of stay and outcome were also collected. Only patients with type 1 ACS were included in the analysis. Data presented as mean +/- SD.

**Results** 113 ACS patients were admitted during this period. 41(36%) were deemed to be high risk, 43(38%) intermediate risk and 8(7%) low risk. The remaining individuals had insufficient data. In the high risk group, 18(43.9%) were managed conservatively, 17(41.5%) transferred for early invasive management with view for PCI and 6(14.6%) underwent diagnostic angiogram on site. Of those high-risk patients managed invasively, only 4(23.5%) received treatment within <24 h as recommended by the guidelines; 7(29.1%) waited >72 h. In the intermediate risk group 33(76.7%) were managed invasively, including 17(39.5%) <24 h; no patients in this group were managed conservatively. In the high-risk group age 81 ± 11 vs. 64 ± 13 year in the intermediate group (p < 0.001). There was no differences in age between the intermediate and low-risk groups. Creatinine and length of stay were higher in the high risk group compared to the low and intermediate risk groups combined p < 0.05 and p < 0.02 respectively (Table 1/Figure 2).

**Conclusions** The GRACE score is used to determine timing of PCI in the latest ACS management guidelines. Age of the patient weighs heavily in calculating the score. We found that in a real-world ACS population patients classified as high-risk



Abstract 104 Figure 1 Royal Free NHS foundation trust ACS protocol from Lockie et al.