

CARDIAC CHEST PAIN

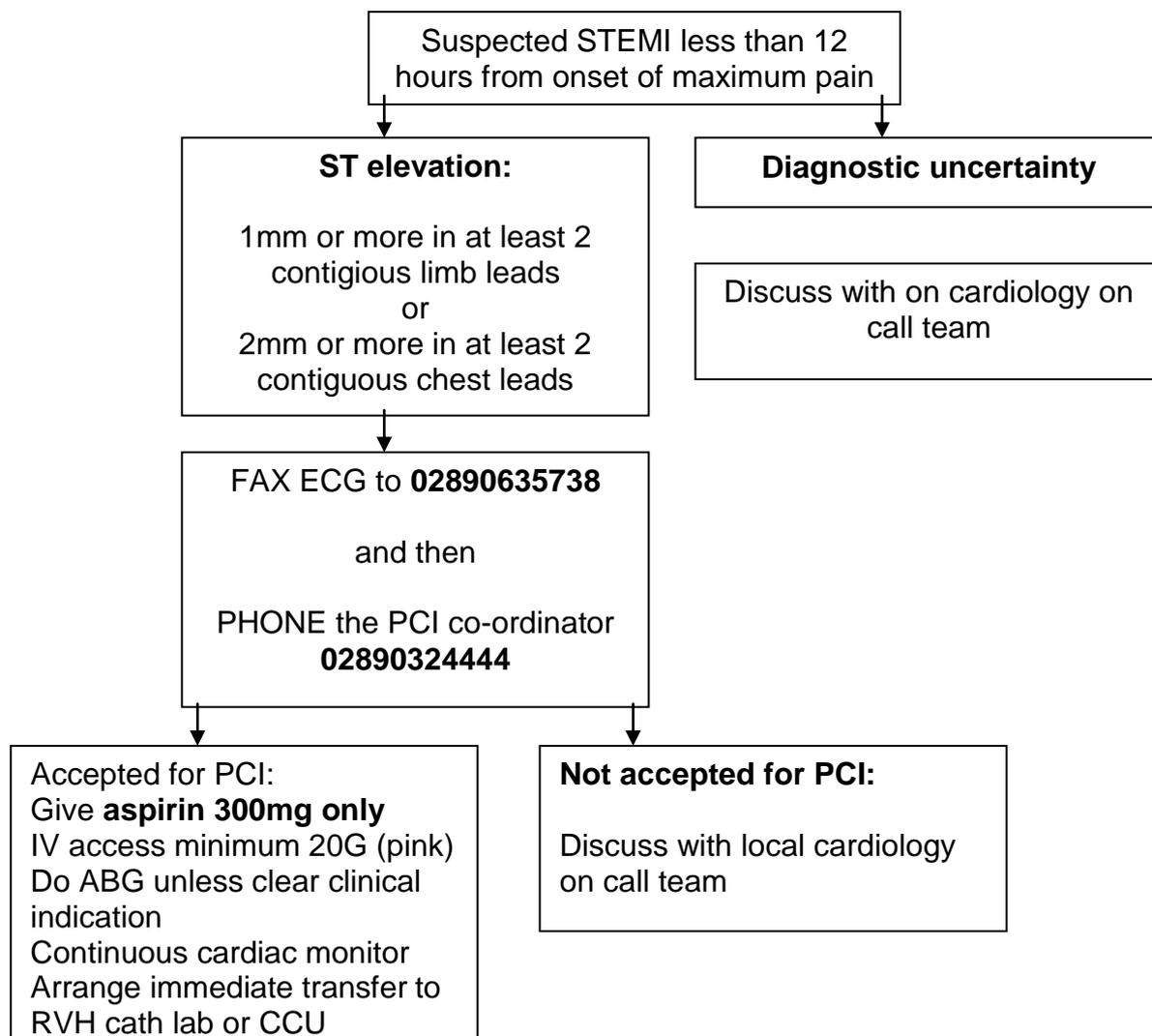
ACUTE ST ELEVATION MYOCARDIAL INFARCTION* and ACUTE CORONARY SYNDROME (ACS) are caused by instability/rupture of atheromatous plaques in the coronary circulation. Identifying ST Elevation MI rapidly is the first goal so that definitive treatment can be achieved as early as possible to limit myocardial damage.

The ACS spectrum ranges from unstable angina (USA) to non-ST elevation myocardial infarction (NSTEMI). ACS is extremely common amongst ED patients and it is associated with high risk of cardiac arrest, peri-arrest arrhythmias, acute ST elevation myocardial infarction and acute LVF.

**Rarely acute MI may be caused by another cause such as cocaine abuse*

1. ST Elevation MI

All patients with a STEMI should be referred to RVH for consideration of primary PCI. NIAS have a bypass protocol so most patients that they attend who have a STEMI will go directly to RVH.



2. Non- ST Elevation MI and other Acute Coronary Syndromes

History:

Cardiac sounding chest pain
 Atypical pain – especially females and diabetic
 Cardiac risk factors
 Previous MI / IHD

Examination:

CVS and RS examination
 BP in both arms and peripheral pulses if possibility of dissection
 thoracic aorta

Ischaemic ECG changes: (repeat ECG in 30 mins if suggestive history but normal initial ECG)

1. LBBB = assume anterior myocardial infarction if new
2. Profound ST depression V1-3 +/- Tall R-wave in V1 = posterior myocardial infarction
3. Tall peaked T-waves with early slurring of ST segment= ?hyperacute ischaemic ECG: GET ADVICE
4. Any other ST segment depression(“NSSTTW”) = assume Acute Coronary Syndrome unless present on old ECGs

Management:

All patients with suspected ACS should receive the following treatment (unless contra-indicated e.g. on warfarin).

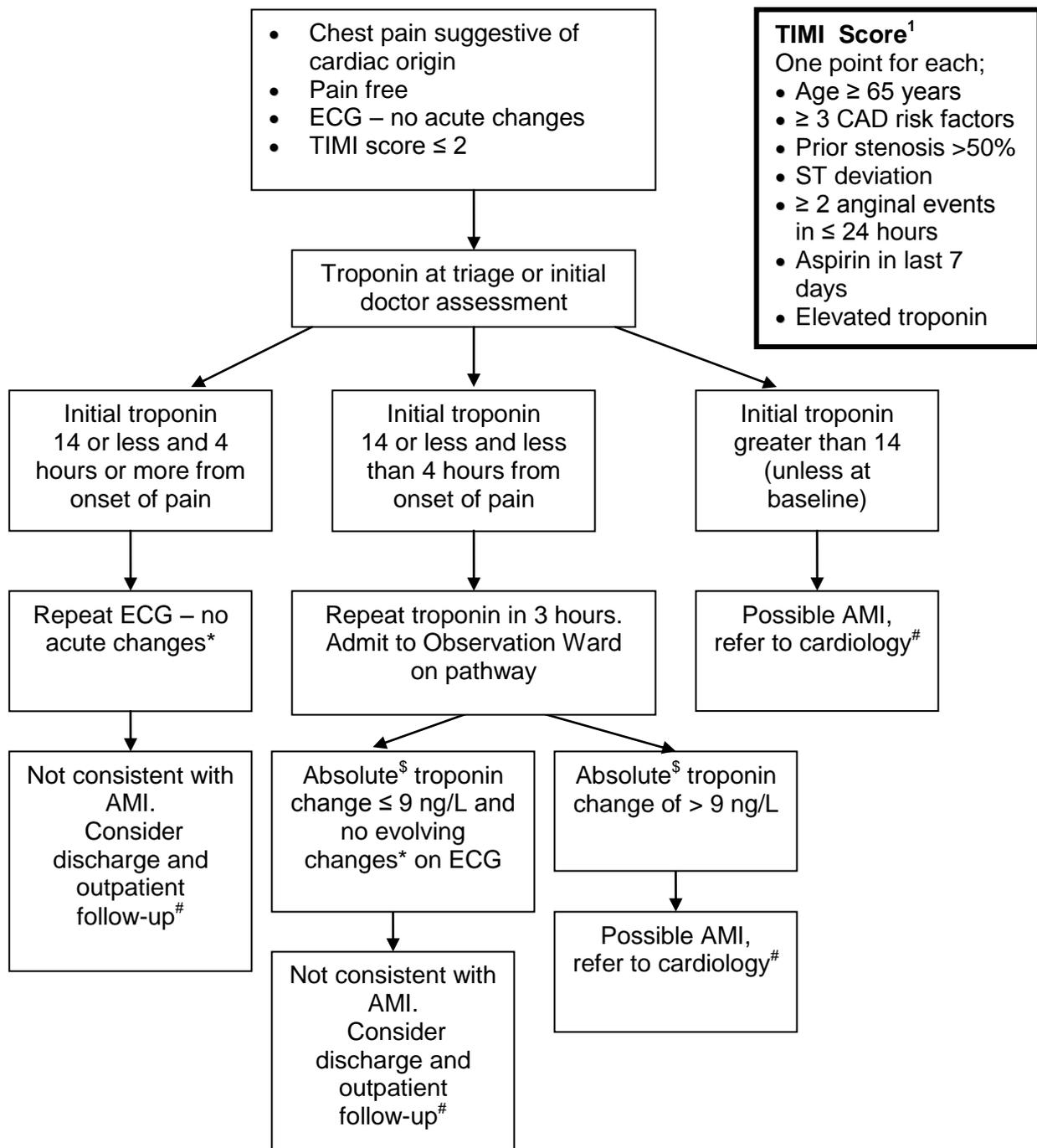
- 100 % oxygen NRRM
- Continuous ECG monitor, SaO₂, NIBP
- GTN spray
- Pain relief as required e.g. diamorphine +/- metoclopramide
- Chewable Aspirin 300 mgs orally
- Enoxaparin (Clexane) 1mg/kg subcutaneously bd.
- Admit under cardiology

3. Low Risk Cardiac Chest Pain

Patients with history suggestive of cardiac chest pain but who are low risk (TIMI score 2 or less) who are pain free are suitable for ED / Observation Ward management.

See flow diagram on next page for appropriate management.

Assessment of low risk patients with cardiac sounding chest pain presenting to Antrim ED



References

1. Antman EM, Cohen M, Bernink PM, et al. The TIMI Risk Score for Unstable Angina/Non–ST Elevation MI: A Method for Prognostication and Therapeutic Decision Making. *JAMA*. 2000;284(7):835-842

Notes

* if acute ischaemic changes refer to cardiology

§ Absolute change equates to difference between the original and second troponin results, this may be positive or negative. Absolute change of 9 ng/L is considered clinically significant

it is the responsibility of the discharging doctor to follow-up results and complete discharge letter

4. Rapid Access Chest Pain Clinic

The Rapid Access Chest Pain Clinic is designed to provide a 'one stop' service for patients presenting with a recent onset of chest pain thought to be stable angina or very low risk unstable angina. ED doctors on the advice of the ED consultant can refer patients directly to RACPC.

5. Not all Chest Pain is Cardiac

You will see many other types of chest pain. Common causes of chest pain include:

- Musculoskeletal pain is the commonest – take a good history!--did the patient undertake strenuous activity e.g. gardening?, do certain movements hurt? Is there a tender costo-vertebral junction suggesting an acutely subluxed rib at the back (common and self-limiting) – *but remember that ~15% of patients with acute MI have marked chest wall tenderness!*
- Upper GI – GORD, Acute Cholecystitis, Pancreatitis
- PE (use Canada Score)
- Stress, Hyperventilation
- Chest infection
- Rib fractures e.g. cough fracture
- Herpes zoster (dermatomal)

TRANSIENT LOSS OF CONSCIOUSNESS (TLOC)

Significant causes of TLOC must be excluded before patients can be safely discharged home. The following is a summary of the NICE 2010 Clinical Guidelines for the Management of TLOC in adults and young people.