Acute Coronary Syndrome - Summary Clinical Guideline

Reference No:CG-CARDIO/2023/004

The term acute coronary syndrome is used as a diagnosis for all patients presenting with acute prolonged chest pain due to myocardial ischaemia or infarction. Patients are classified, and management planned, according to changes on ECG and cardiac enzymes (Biomarkers).

Myocardial infarction and ischaemia are currently classified as follows:

a. ST Elevation Myocardial Infarction (STEMI)

b. Non-ST Elevation Myocardial Infarction (NSTEMI)

c. Unstable Angina

Initial assessment of all patients with Acute Coronary Syndrome:

1. Clinical history
2. Clinical Examination
3. ECG
4. Cardiac Enzymes (biochemical markers)
5. Chest X-ray

INITIAL ASSESSMENT OF SUSPECTED ACUTE CORONARY SYNDROME WITHOUT ST ELEVATION/NEW LBBB

Principles:

- Seek senior advice if unsure.
- Review patient, repeat ECG after 15 mins if first was abnormal.
- ECG if further pain, after 3 hours and pre-discharge.

SUSPECTED CARDIAC PAIN
of > 20 minutes duration in adults

Review ambulance / previous ECG
ECG (within 10 minutes)
Bloods ('AED cardiac')
GTN if pain and Aspirin
GRACE score

GRACE score - link on PCs or google it

If ongoing ischaemia / clinical instability, D/W Cardiology
? Emergency PCI

If any of:
ST depression >0.5mm
New T wave inversion >1mm
Ongoing cardiac CP
Haemodynamic instability
hsTnT > 14 (if known)

Y

Consider ACS treatment (see chart 2)
Repeat hsTnT and CK 6 hours after sample 1

Any of:
ST depression >1mm
Initial hsTnT ≥ 100 and abnormal ECG
Ongoing pain and abnormal ECG
Haemodynamic instability
Pulmonary oedema

N

>6 hours from last pain
And hsTnT (>6 hours post pain) < 14
And no new ECG changes

N

GRACE <140 and suitable for ambulatory care

N

Refer to MAU/Cardiac Outreach

Y

Refer to CDU if open or MAU

Repeat hsTnT 3 hours after sample 1
Trop T < 14 and no new ECG changes

Y

Discharge from cardiac aspect - consider differentials
Advice and GP letter
Cardiac Outreach referral for OP ETT or non-invasive imaging if cardiac cause still considered:
Bleep 8am - 8pm
Red box 8pm - 8am

N

Refer to MAU
Consider ACS diagnosis and treatment (see Chart 2)
Consider Cardiology or Cardiac Outreach referral (see admission criteria and Chart 2)

N

Y

Treat and Refer to CCU:
Referral must be discussed with:
Consultant Cardiologist (8am-10pm via switch)
Medical Registrar (10pm - 9am)
Cardiac Outreach can assist

FURTHER ASSESSMENT OF SUSPECTED ACUTE CORONARY SYNDROME WITHOUT ST ELEVATION/NEW LBBB

SUSPECTED CARDIAC PAIN
of > 20 minutes duration in adults
With Cardiac ischaemia on ECG or hsTnT > 14

hsTnT rise > 6ng/L over at least 2 hours or new ischaemia ECG changes.

N

Low risk of ACS

Discharge from cardiac aspect - consider differentials.

Advice and GP letter, refer to Cardiac Outreach Team - RACPC
(Telephone:- 07825055637 8AM - 4PM)

Y

ECG normal and GRACE <140 | ECG abnormal or GRACE >140

Other causes of Troponin elevation

PE
Arrhythmia - tachycardic / bradycardic
Pulmonary oedema / CCF
Sepsis
Myo/pericarditis
Renal failure - acute / severe
Tako-tsubo cardiomyopathy
Subarachnoid haemorrhage / CVA
Trauma / cardiac intervention
Aortic dissection
Drug toxicity
Infiltration e.g. amyloid

51% of patients > 70 years without MI have a baseline TnT of >14!

CHECK CLINICAL CONTEXT

Consider alternative causes.

Any TnT ≥ 100
Or >100% rise to >50

N

Y

If no other causes
Intermediate risk ACS

High risk ACS

Aspirin 300mg stat + 75mg daily
Fondaparinux 2.5mg OD (stat and then 5pm next day. Prasugrel 60mg stat + 10mg x OD (if age <75 years and body weight >60kg) otherwise Clopidogrel 600mg stat + 75mg daily.
Betablocker/nitrates (consider IV)
Refer to Cardiology if suitable for invasive management.
(Ticagrelor 180mg stat + 90mg BD can also be considered if contraindication to above)
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Betablocker/nitrates (Consider IV)
Refer to Cardiology if suitable for invasive management.
(Ticagrelor 180mg stat + 90mg BD can also be considered for contraindication to above).
If suitable for PCI:
d/w Cardiology if ST depression or T wave inversion + Tn>100 and ongoing pain
? urgent PCI or tirofiban

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Development of Guideline: Dr T. Azeem, Dr J. Baron, Dr K. Chitkara, Dr D. J. Kelly, Dr M Bhandari, Dr N. Ahmed, Dr M. Elamin **Job Title:** Cardiology Consultants, Cardiology Lead Pharmacist, MAU consultant.				
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