Acute coronary syndrome SOP

QPI

Great North Air Ambulance Service

Further reading

https://theresusroom.co.uk/cardiac-arrest-centres/
NICE STEMI overview 2018
ESC guidelines 2017/2020
JRCALC 2016

Related SOPs

Post cardiac arrest SOP

Primary percutaneous coronary intervention (PPCI) is the key intervention for patients suffering from ST elevation MI, posterior MI or symptomatic new onset LBBB. Depending on the exact location of the incident, 'time to balloon' can occasionally be improved by the deployment of an aircraft.

Tasking

Consider HEMS deployment where:

Confirmed STEMI (>1mm elevation in adjacent limb leads or >2mm in adjacent chest leads)

or

Confirmed posterior MI (>2mm depression in V1-V3)

or

Confirmed symptomatic new-onset LBBB

and...

Tasking/loading/transit/unloading patient will reduce 'time to balloon'

Also consider HEMS deployment where:

Severe cardiac-sounding chest pain in extremely remote environment

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For review May 2024

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Initial treatment

No unnecessary delays

Titrated O_2 - Sats 94-99%

IV access (ideally left side, aiming to leave the right arm free for potential PPCI)

GTN sublingual if SBP >100 mmHg.

Aspirin 300mg

Ondansetron if required

Pain relief with morphine sulphate as required

12-lead ECG

Full monitoring and defib pads applied

Measure blood glucose

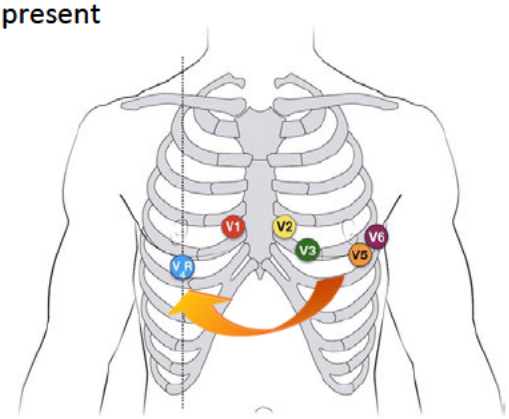
Treat arrhythmias as per ALS guidelines

For transfer, keep LUCAS immediately available in aircraft/ambulance

Special circumstances

Right ventricular infarction should be considered in all cases of inferior STEMI. It is suggested by the presence of ST elevation in V1, or if ST elevation in lead III>lead II.

ST elevation in V4R will be present



For RV involvement with low blood pressure, treatment should be directed at **increasing preload:**

- Avoid nitrates
- 250ml boluses of 0.9% NaCl and reassess

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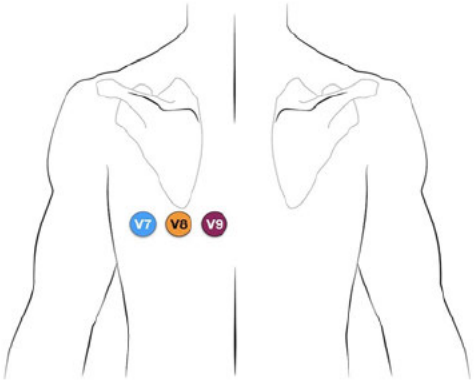
Posterior infarction should be considered where there is horizontal ST depression in leads V1-V3.

Posterior leads may help with the diagnosis. Only 0.5mm of ST elevation in posterior leads V7-V9 is required for the diagnosis.



Hospital Triage

STEMI

All patients with ECG evidence of STEMI/posterior MI/new LBBB should be triaged to a hospital that can offer 24/7 PPCI. Usually, this will be a direct admission to the cath lab rather than through an Emergency Department, even in patients who are intubated and ventilated.

However, there may be situations where the ED is a more appropriate initial destination (eg. unusual history/diagnostic uncertainty such as possible SAH). Agreement should be reached with the receiving team on a case by case basis. **Where the GNAAS crew are unhappy with the advice received from the PPCI line, consider discussing directly with the on-call cardiology consultant.**

NSTEMI

Recent evidence has cast doubt on the benefit of early PPCI in post-ROSC patients without ST elevation. In most cases, this group should be transferred to the nearest emergency department, because non-cardiac causes are common. **Where there is strong clinical suspicion of a cardiac cause, consider discussing directly with the cardiology team from the scene to agree on the most appropriate destination.**

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