MONA Goes LISA
Changing the Fine Art of STEMI Management

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What’s the problem with MONA?
Hi, I'm MONA and I like to welcome you to our ICU!

**M**orphine
**O**xymetazoline
**N**itroglycerin
**A**spirin

Mona is welcoming a recent non-ST-Segment Elevation Acute Coronary Syndrome Patient!
Morphine
Oxygen Therapy in Suspected Acute Myocardial Infarction

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and Leif Svensson, M.D., Ph.D., for the DETO2X–SWEDEHEART Investigators*

CONCLUSIONS Routine use of supplemental oxygen in patients with suspected myocardial infarction who did not have hypoxemia was not found to reduce 1-year all-cause mortality.
Effect of supplemental oxygen exposure on myocardial injury in ST-elevation myocardial infarction

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Abstract

Objective Supplemental oxygen therapy may increase myocardial injury following ST-elevation myocardial infarction (STEMI). In this study, we aimed to evaluate the effect of the dose and duration of oxygen exposure on myocardial injury after STEMI.
Results of the AVOID Trial

- Every 100 L increase in oxygen exposure in the first 12 h was associated with a 1.4% (95% CI 0.6% to 2.2%, p<0.001) and 1.2% (95% CI 0.7% to 1.8%, p<0.001) increase in the mean peak cTnI and CK, respectively.

- The median supplemental oxygen exposure of 1746 L would result in a 21% (95% CI 3% to 37%) increase in infarct size according to the cTnI profile.

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• The median supplemental oxygen exposure of 1746 L would result in a 21% (95% CI 3% to 37%) increase in infarct size according to the cTnI profile.

CONCLUSIONS Supplemental oxygen exposure in the first 12 h after STEMI was associated with a clinically significant increase in cTnI and CK release.

A word about nitroglycerin
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Coronary Care

Outcome of Myocardial Infarction in Patients Treated with Aspirin Is Enhanced by Pre-Hospital Administration

Barbash I.M.\textsuperscript{a} · Freimark D.\textsuperscript{a} · Gottlieb S.\textsuperscript{a} · Hod H.\textsuperscript{a} · Hasin Y.\textsuperscript{a} · Battler A.\textsuperscript{b} · Crystal E.\textsuperscript{a} · Matetzky S.\textsuperscript{a} · Boyko V.\textsuperscript{a} · Mandelzweig L.\textsuperscript{a} · Behar S.\textsuperscript{a} · Leor J.\textsuperscript{a}
Pre-Hospital Aspirin

- Independent determinant of survival
- 7 day survival (OR 0.43; 95% CI 0.18–0.92)
- 30 day survival (OR 0.60; 95% CI 0.32–1.08).
- Benefit even if NOT treated with reperfusion

Aspirin in acute STEMI saves lives. Give it.

Barbash IM et al. Cardiology 2002; 98(3):141-7
Scene Coordination
Transport Logistics
Efficient Data Acquisition
Manage Airway
Interventional

Position 1 (P1) Interventional Paramedic
Always on patient’s right
- IV access
- ASA
- NTG
- Fentanyl only if indicated
- Fluid and vasopressor management

Position 2 (P2) Efficient Data Acquisition
Always on patient’s left
- Vital signs
- Applies 4 lead cables
- Enters patient demographics into monitor/defibrillator
- Obtains 12-Lead ECG
- Applies defibrillation pads ANT-POST

Position 3 (P3) Manage Airway
- Applies capnography
- Applies O2 ONLY if indicated
- Airway management as indicated by clinical presentation of patient

Position 4 (P4) Scene Coordination
Always outside ACS “triangle”
- Monitors time intervals of interventions and time from first medical contact
- Avoids direct patient care to maintain supervisory duties if greater than four rescuers throughout
- Directs “staging” of personnel beyond six rescuers away from immediate treatment area to prevent crowding
- Assumes duties of P5/P6 if limited to four rescuers throughout (if paramedic) and positions self in P4 or P8 position

Position 5 (P5) Transport Logistics
Always outside ACS “triangle”
- Ingress/Egress formation
- Assists in equipment management

Position 6 (P6) Treatment Implementation Paramedic
Always outside ACS “triangle” at lower 1/3 of patient
- Physical and verbal assessment of patient
- Gathers concise history from patient/family/bystanders
- Maintains overall awareness of ACS dynamics, implements treatment plan based on clinical presentation
- Reviews 12-Lead ECG, determines presence of diagnostic quality and confirms STEMI criteria
- Transmits diagnostic 12-Lead ECG to receiving facility
- Determines appropriate destination of ACS patient
  - STEMI alert via telephone contact via recorded line to receiving facility

All protocols and education videos at okctulomd.com
LISA

L let ED/cardiology/cath know early
  -> 12-lead ECG telemetry/cath activation

I interventional destination (cath lab)

S scene coordination to save time
  -> defined roles (ala cardiac arrest style)

A aspirin