Acute coronary syndrome
Paramedic case studies #2

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Past history

You are attending a frail 70 year old man who is had angina for many years, a previous AMI and hypertension. He has been c/o breathlessness with exertion in recent weeks. More recently he this has been worsening at night forcing him to sleep on a couple of pillows.

Today

He went to bed at 2100 hours but awoke again just after midnight c/o increased difficulty breathing and mild chest pains like his past angina. He lives alone and called for ambulance help. On ambulance arrival, his front door is open and he is lying semi reclined in his bed again. He calls from his room for you to come in.

On examination

CNS GCS=15 but anxious
CVS pale cool clammy P=120 BP=210/110
Resp 28 c/o breathless feeling, increased breathing effort, looks 'puffy', on ausc chest clear L=R
Chest c/o mild substernal pain like past angina
GIT c/o nausea, nil vomiting, nil epigastric pain
ECG sinus tachy, ST depression leads I
Pulse oximetry 94%

Working assessment

Acute coronary syndrome, unstable angina with possible underlying LVF

Management

Discuss reasons for default payoff to cardiac until proven otherwise. Revisit the case study to explore what presentation changes would be required to make this breathlessness not cardiac such as clearly infective or COPD as well as difficulty differentiating in these cases. Emphasise rule out rather than rule in cardiac diagnosis.
Oxygen – related to pulse oximetry so not required (discuss breathless/SOB versus dyspnoea)
Aspirin – reasons why? When not to? What if already on daily maintenance dose?
Nitrates – reasons why? When not to? Modification for hypotension, rhythms, inferior MI with right ventricular involvement (not applicable here)
Opioids – what risks are there? Resp and conscious state depression. When is it needed? i.e. is pain severe enough
12 lead ECG – prehospital role in early notification

Patient deterioration – new presentation

CNS altered conscious, eyes open to pain (2) nil verbal (1) localises to pain (5) GCS=8
CVS pale cool clammy P=120 BP=210/110
Resp 32 greatly increased breathing effort, retractive, prolonged expiratory phase, on ausc chest upper wheezing, widespread crackles lower L=R
ECG sinus tachy, ST depression leads I
Pulse oximetry 78%

New management

Position – upright. Discuss reasons why? Decreased venous return, pulmonary drainage

Oxygen – related to pulse oximetry, now requires high concentration. What options?

Nitrates – reasons why now? Focus on LVF reasons. Is conscious state a problem? What route of administration (S/L tablet and transiderm)

12 lead ECG – prehospital role in early notification

CPAP – if available. Discuss CPAP indications versus need to administer assisted positive pressure ventilation including conscious state variable. How does CPAP work (increase alveolar opening and recruitment, decrease work of breathing)

Salbutamol – is there a role? If so, what is it? Why can it be a problem? Bronchodilation releases trapped alveolar air releasing pressure encouraging fluid shifting and worsening problem. Can also increase heart rate.

Scene time – important to support posture and oxygenation and not compromise the patient. Need to not exert patient

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