SIM NEWS - Issue 2

Acute Pulmonary Oedema

72 year old Basil Crackles has been left breathless as he has an acute worsening of heart failure. His furosemide won't cut it so he needs IV nitrates and NIV!

December 2020

Acute Pulmonary Oedema

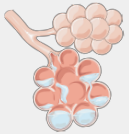
Sometimes known as "flash" pulmonary oedema - rapidly increased fluid in the lung tissue and alveolar air spaces.

Symptoms/signs
- Shortness of breath, cough with white sputum, orthopnoea, agitation.
- Hypoxia, tachypnoea, basal crackles, peripheral oedema, raised JVP

Think about patient positioning - sit them up if they are short of breath!

Management - pulmonary oedema

- Sit patient upright!
- **High flow oxygen** (Sp02 ~ 95%)
- **IV furosemide** (ideally 2-2.5x regular dose if on diuretics - 20-40mg IV if naive)
- **IV nitrates** (nitroglycerine)
  - Comes as 50mg in 50ml
  - Start 0.01-0.02ml/minute
    - ➛ Can go to 0.2ml/min
  - Titrate to BP (SBP >90mmHg)
  - **DO NOT GIVE IF AORTIC STENOSIS**



Non-Invasive Ventilation

- Can size the mask without opening the packaging!
- Consider EARLY - within 1hr improves outcome

PH <7.35	RR>25	SpO2<90%

- CPAP - start PEEP 5-7.5, increase to 10 as able.
- BiPAP appropriate if hypercapnia.

Non-clinical Learning Points

Prioritisation/task allocation - if lots of tasks, be specific in allocating to staff member and indicate priority

Clear communication - ensure all members of the team are aware of situation - escalation plans, DNACPR etc.

RESUS - plan transfer, send member ahead to don, alert resus team of planned transfer
Team patient→ start moving the patient to AGP/amber resus
Team AGP resus→ send one person to don and receive the patient

Resources

RCEM learning
EM Beds - acute heart failure
ESC guidelines