



Case Series

Prone ventilation: A case series

Ramanathan Kannan Suppiah*

Anaesthetist- Intensivist, Kauvery Hospital, Tennur, Trichy

*Correspondence

1. Case presentation

1.1. Case 1

A 30- years- aged male with Diabetes, Alcohol addiction, and chronic pancreatitis was admitted unconscious, intubated at the hospital of the National Lignite Corporation (NLC.)

ER interventions

GCS - 2T, HR - 171, Sat - 84

Unstable Atrial Fibrillation, received DC shock ×2

He had Cardiac Arrest, × 2, received CPR

Then given Noradrenaline 20 ml/hr, Vasopressin 2u/hr, and Adrenaline 5 ml/hr.

Diagnosis

Severe LV dysfunction, B/L lower lobe consolidation and hepatification

Pulmonary Function status

Day 0: Fio2 - 100, sedation, paralysis, Sat - 100%.

Day 1: Fio2 - 40, Peep - 8, Sat - 99%, High dose noradrenaline, vasopressin, no resolution of consolidation. Proned 24 hr

Day 2: Decrease in consolidation, turned supine. Decrease in noradrenaline, vasopressin dose.

Day 3: Decreasing supports

Day 4: Off supports, extubated.

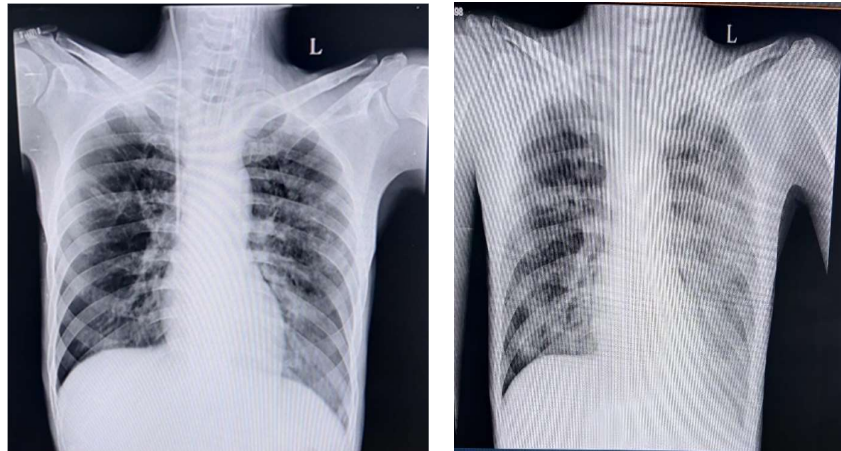
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1.2. Case 2

A 25 year aged male with severe diarrhoea, 36 pints of IV fluids outside, AKI, and severe dyspnea on NIV, brought to ER.

On examination

Day 0: Fio₂ - 100, Sat - 100, RR - 46, Bicarbonate - 9, on diuretics - FiO₂ decreased to 60%

Day 1: Output decreases, HR - 170, RR - 50, Sat - 74 on Fio₂ - 100, intubated and ventilated. SpO₂ - 84% on Fio₂ - 100.

Diagnosis

Severe LV dysfunction, extensive B lines with lower lobe collapse- consolidation

Management

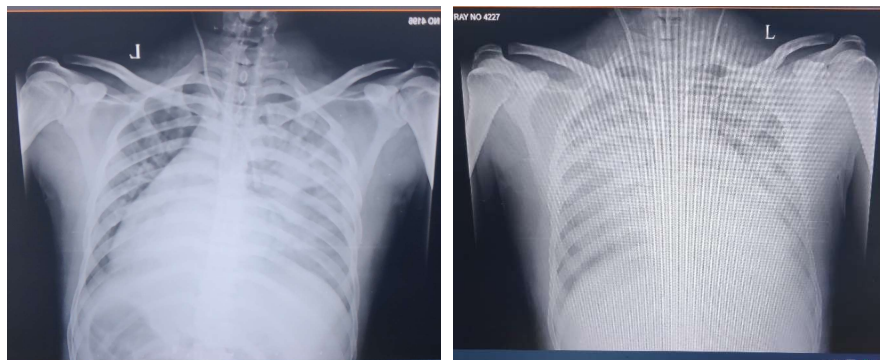
Hemo Dialysis done but Sat - 80 on Fio₂ - 100, PEEP - 10

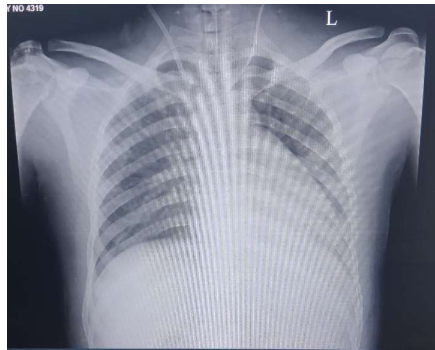
D1 night - Prone. Sat - 92% after 2 hr prone, 2nd HD done.

Day 2: Continues in Prone

Day 3: Turned supine after 36 hours - Fio₂ - 40, PEEP - 10, Sat - 100

Day 7: After improvement in sensorium, extubated.





1.3. Case 3

A 42-year aged female had a fever for 45 days

On examination

GCS - 11, HR - 154, RR - 28, Tem - 100°F, Sat - 51, BP - 100/60.

Diagnosis

Right popliteal DVT, Moderate LV dysfunction, extensive B lines with consolidation

Management

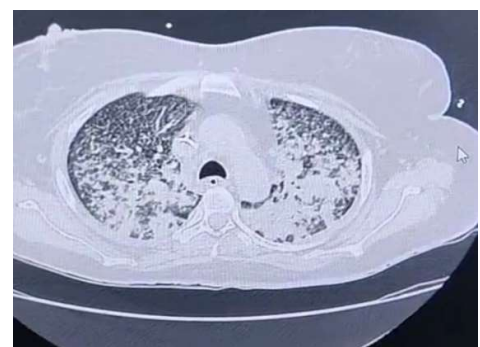
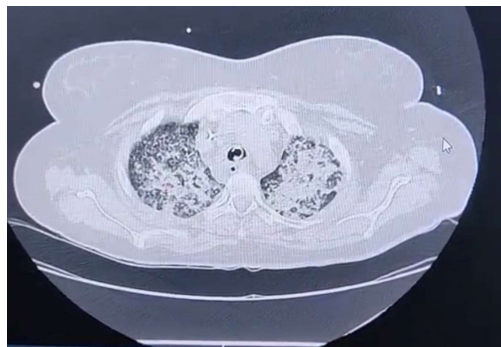
Intubated, Sat - 96 with Fio2 - 50, noradrenaline 14 ml/hr.

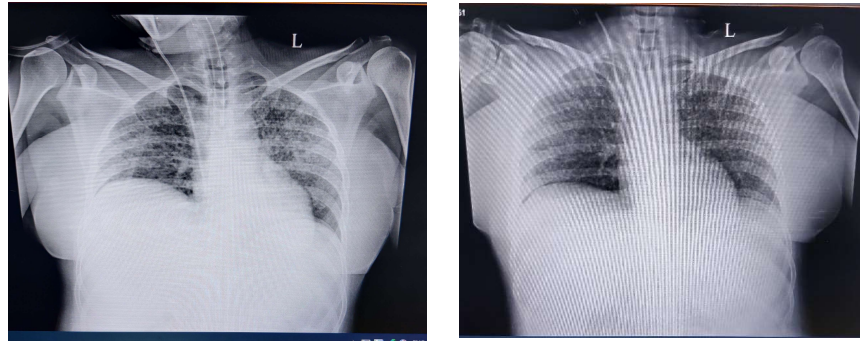
Urine output maintains only if fluids are given, poor output with diuretics alone. 4.6 L in, 2.4 L out.

Day 1: Fio2 - 100, Peep 10, Sat - 92%, noradrenaline - 12 ml/h. PRONED on day 1 night

Day 2: Turned supine after 12 hr. Fio2 - 45, PEEP 7, Sat - 98, improvement in collapse consolidation, but persistent B lines

LRTI/TB/UGIB/Altered sensorium - but off supports and on Fio2 - 40 - tracheostomy done, discharged AMA.

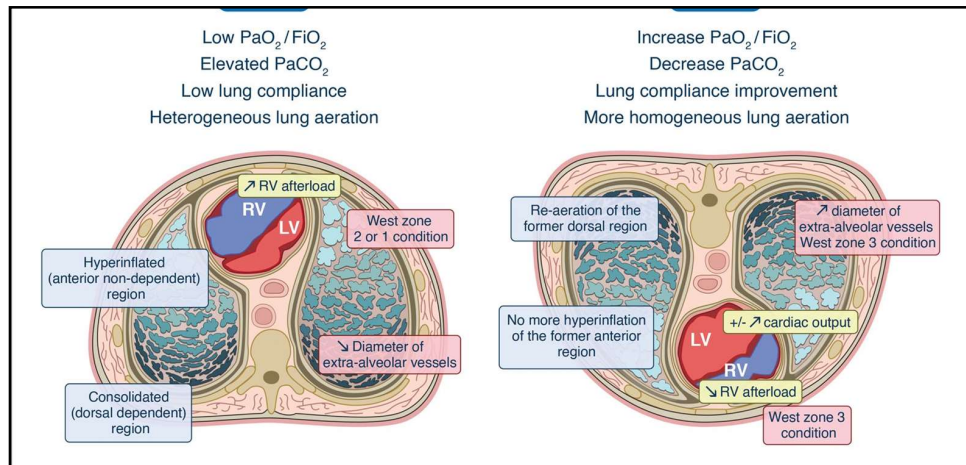




Consequences of ARDS

- Ventilation-perfusion mismatch leading to hypoxia
- Increased pulmonary vascular resistance leading to RV dysfunction
- High peep requirements worsen venous return to the right heart and lead to hemodynamic instability.
- High peep increases mechanical power of ventilation and leads to Ventilator-induced lung injury.

What happens when you prone the lung?



Complications of Prone



How long to prone

- PROSEVA trial - 17 hr
- Extended proning - 24, 36, 48 hr
- When to stop? - Clinical improvement
- When to stop? - Fixed time.