



Mechanical Ventilation

Part 2

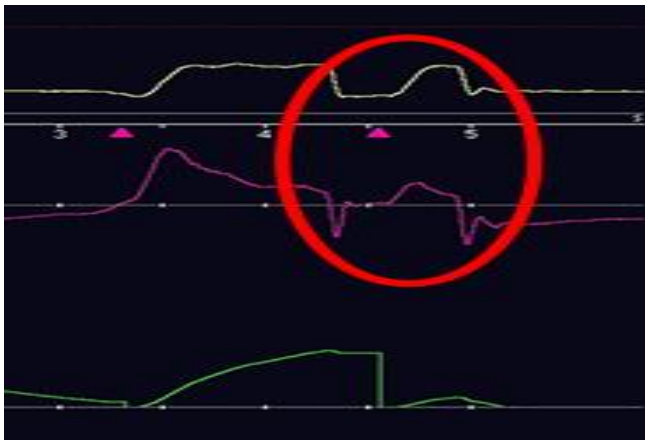
1) A patient with ARDS with difficult oxygenation on pressure-controlled ventilation with inspiratory pressure 22, PEEP 17, Respiratory rate 25, FiO₂ 80%. ABG with PaO₂ 62 mmhg, O₂ sat 90%, PaCO₂ 70 and PH 7.23. Best next step is:

- A) Increase FiO₂ to 100%
- B) Increase PEEP to 20
- C) Place patient in prone position
- D) Increase respiratory rate to 30

2) Patient with ARDS, placed on APRV for difficult oxygenation, setting P High 25 cmH₂O, P Low 12 cmH₂O, T High 1.5 second, T Low 1 second. Patient has spontaneous breaths of 35. Tidal volume during release is 240 ml and during spontaneous breaths 800 ml. ABG with PH 7.52, PaCO₂ 30mmhg, PaO₂ 80 mmhg, FiO₂ 94%. Best action is:

- A) Do nothing as oxygenation is ok
- B) Decrease P High to reduce minute ventilation
- C) Increase P High
- D) Decrease T High
- E) Start paralytic agent for increased respiratory rate

3) A patient on spontaneous breathing trial with pressure-support ventilation 5/5, Tidal volume 180 ml and you notice the below figure. What is the diagnosis?

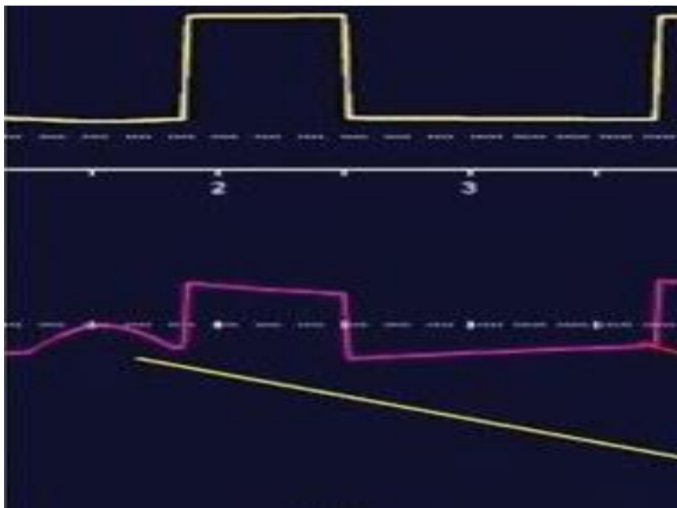


- A) Double triggering
- B) Auto triggering
- C) Early cycling

4) How to fix this problem?

- A) Increase pressure support
- B) Increase expiratory sensitivity to 50% from 25%
- C) Increase inspiratory trigger from 3 to 6
- D) Extubate patient
- E) Increase sedation

5) Patient with COPD on pressure-controlled ventilation, you notice the below figure. What is the yellow line pointing to the flow?

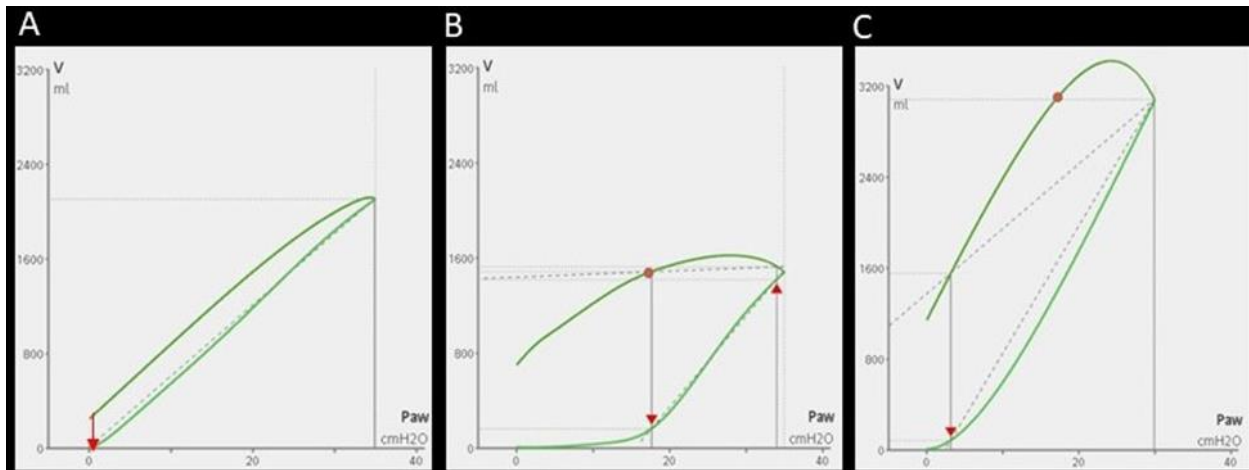


- A) Hiccup
- B) Missed trigger
- C) Not an issue
- D) Condensation in expiratory limb

6) How to fix this problem?

- A) Suction the patient
- B) Change the ventilator circuit
- C) Increase respiratory rate and inspiratory pressure
- D) Decrease respiratory rate and inspiratory pressure

7) Pressure-Volume curves of 3 patients displayed below. Which statement is correct?



- A) A: Normal, B: COPD, C: ARDS
- B) A: ARDS, B: Normal, C: ARDS
- C) A: COPD, B: ARDS, C: Normal
- D) A: Normal, B: ARDS, C: COPD

8) You were called to assess a patient on mechanical ventilation with pressure-controlled mode because of worsening hypoxia, low tidal volume alarm. Patient undergone a bronchoscopy with a biopsy 2 hours earlier for endobronchial mass. You should:

- A) Switch to volume-controlled mode to improve tidal volume
- B) Continue pressure-controlled ventilation but increase PEEP from 5 to 10
- C) Give bronchodilators with DuoNeb's
- D) Obtain stat chest Xray

9) A patient with respiratory failure secondary to severe right sided PNA with low oxygen saturation. Best position for this patient is:

- A) Turn patient to Left side down
- B) Turn patient to Right side down
- C) Sit patient up
- D) Place patient flat on the back

10) Patient is intubated 2ry to traumatic brain injury and hemorrhage, his CXR is clear and good oxygenation, settings: SIMV volume-controlled, tidal volume 750 cc, PEEP 0 mmhg, respiratory rate of 15, and 40% Fio₂. Next day, patient is becoming hypoxic requiring 100% fio₂, mild fevers and CXR showing bibasilar worsening lung infiltrates. What is the most likely diagnosis?

- A) Ventilator associated pneumonia
- B) Aspiration pneumonia
- C) Lung contusions
- D) Ventilator induced lung injury