Mechanical Ventilation

Part 1

1) Pressure Regulated Volume Control (PRVC) is:

A) Volume controlled mode
B) Pressure controlled mode
C) Dual controlled mode

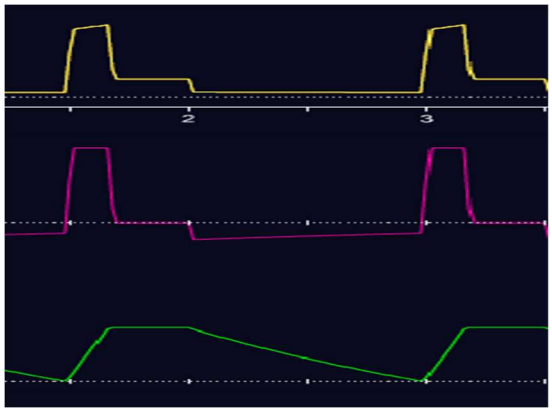
2) Adaptive Support Ventilation (ASV) can deliver breaths in all below modes except:

A) Pressure controlled mode
B) Pressure support mode
C) Pressure controlled, intermittent mandatory ventilation
D) Volume controlled mode, intermittent mandatory ventilation

3) All are true about Prone position ventilation except:

A) Improved mortality in severe ARDS
B) Improves ventilation-perfusion matching in dependent lung regions
C) Patient must be chemically paralyzed
D) Endotracheal tube dislodgment rates are similar to supine ventilation

4) Questions 4-7
A 20 year old man with severe asthma is on mechanical ventilation. Figure below (yellow: pressure-time curve, pink: flow-time curve, green: volume-time curve)



What mode is the patient on:

A) Pressure controlled ventilation
B) Pressure Support ventilation
C) Pressure regulated volume control
D) Volume controlled ventilation

5) Looking at the figure above. Peak inspiratory pressure is 55 cmH2O, Plateau pressure 15 cmH2O, PEEP of 5 cmH2O, Peak inspiratory flow of 60 lit/min, tidal volume 600 ml, respiratory rate of 30. Patients' main problem is:

A) High resistance
B) Low compliance
C) Combined high resistance and low compliance
D) Both normal

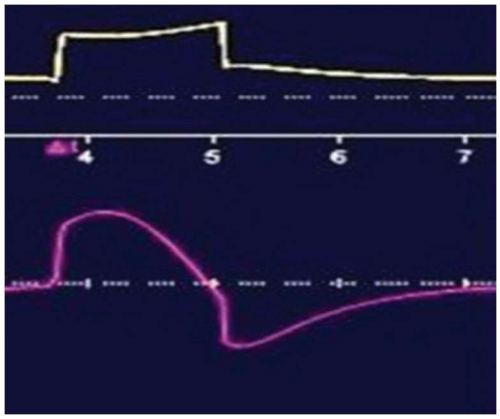
6) Patient is now in respiratory distress and hypotension. Why?

A) Septic shock
B) Pain
C) Auto-PEEP
D) Dislodged endotracheal tube

7) All of the below maneuvers would improve his condition except:

A) Reduce the tidal volume
B) Reduce respiratory rate
C) Decrease flow rate
D) Bronchodilators
E) Increase PEEP

8) A patient is recovering from pneumonia, now placed on pressure support ventilation for a spontaneous breathing mode. After 30 minutes of SBT (figure below) his heart rate is 95 compared to 80, his rapid shallow breathing index RSBI is 30, airway occlusion pressure at 100 msec (P0.1) is – 8 cmH2O, work of breathing is calculated at 2.6 Joules. This patient is likely to



A) Be extubated successfully
B) Get re-intubated if extubated

9) Pressure controlled mode with decelerating inspiratory flow wave form compared to volume controlled mode with the square inspiratory flow waveform is likely to except:

A) Improve patient comfort
B) Improved oxygenation
C) Decrease peak inspiratory pressure
D) Decrease asynchrony
E) Improved mortality

10) All the statements about Airway pressure release ventilation are correct except:

A) Is a pressure controlled intermittent mandatory mode
B) Patient can have their own spontaneous breaths at any time
C) T low should be adjusted to avoid auto-PEEP
D) Have shown mortality benefits in ARDS