

My Pharmacy notes from Vent interview

Case 1: Healthy Joe with Pneumonia

Joe's body: Tidal volume of 550 cc is ideal.

Intubate manually or with Glidescope.

3 test breaths: 37, 20, 22/23 where 3rd breath is the most ideal amount of pressure.

PEEP= 5

Total working pressure= 22 water pressure - 5 cm of water pressure PEEP= 17 cm of H₂O to get Tidal volume desired of 550.

PRVC used: **volume -control ventilation.**

RT puts in: Rate, Tidal volume, rate, O₂ conc., PEEP. Good for disease states to maintain alveolar ventilation regardless of PRESSURE.

Case 2: Pharmacy Joe w. Ski /Black diamond accident and flail chest on L. side.

He overcompensates on right while breathing. Not adequately breathing with lungs. Atelectasis. Contusion. Pneumothorax.

PRVC used: **pressure -control ventilation**

RT puts in: set Tidal volume, set rate, set FiO₂ &PEEP will create a set Minute volume. Maximize volume. Pressure is variable.

Minute volume= 12 breaths/ min x 550 cc = 12 x 0.55 = 6.6 L/min (from tidal volume &rate).

Going back to case 1, the peak inspiratory pressure was 22

New peak inspiratory pressure= 29

PEEP= 5, Lowest PEEP =5

29/5

Total working pressure=34

Pressure control: 29 cm to get 550 ml of H₂O. He depends on you for the respiratory rate.

Indication:

Goal to maintain Tidal volume of around 550 cm of H₂O (Tidal volume may vary with disease state though RT not that concerned with this but he doesn't want to over-distend lungs and create more barotrauma).

Other Indications for Pressure- control: SIRS, ARDS, Tumors, severe surgeries, very sick people in winter and have to go up to RR of 30, 35, 38, 40.

Case 3. Flail chest Joe gets 1000% better: CPAP and Pressure-support ventilation (PSV) trial. Spontaneously breathing and still on vent after 1 week. Defatigued intercostal & accessory muscles.

Sedation off. Put on Precedex. Wean him off BZD, Fentanyl, & NMB.

3 days of Spontaneous breathing trial needed (Started on Monday and today is Thursday).

PSV= 6-8, Tidal volume=450, rate=20.

Training wheels = endotracheal tube.

Blood gas & weaning parameters (taking deep breaths) needed to extubate. Extubated now.

Bad sign: if on vent and breathing within 3 min of going from standard settings PSV SIMV to just straight PSV and breathes 28-40 breaths/ mins and not doing anything. Blood pressure shoots up because his body is stressed. Deleterious to keep him on mode. Pain (5th vital sign) might be causing problems. Can use NSAIDS, low-dose Fentanyl.