Mean Airway Pressure

Select MAP 2-3 above CMV (or 11-12 if directly starting on HFOV).

Increase MAP by 0.5 every 2 minutes while aggressively weaning fio2 for goal saturations.

Once goal fiO2 reached (ideally 30%), decrease MAP by 0.5 every two minutes until MAP begins to rise, then set MAP to be 1 above the current level.

Note 1: If MAP is 8-10 above starting MAP, obtain CXR to check expansion (ideally ~9-10 ribs)

Note 2: Use caution with this strategy with air leak syndromes

Note 3: Cycle Blood Pressure every 2 minutes and note HR and perfusion while employing this strategy

Frequency

RDS (↓Compliance)

<30 weeks: 15Hz

>30 weeks: 12-15Hz

Meconium Aspiration Syndrome

Early (↑Resistance): 6-8Hz

Late (↓Compliance): 12-15Hz

Chronic Lung Disease (↑Resistance, ↓Compliance)

12-15Hz

Pneumothorax/Severe PIE

6Hz (maximize expiratory time)

Atelectasis/PNA

12-15Hz

CDH

10-15Hz (start higher)

Depends on underlying pathophysiology. Think about Time Constants.

Time Constant = Resistance x Compliance. Shorter Time Constants equal higher Hz.

i-Time

Set to 33% under the vast majority of conditions

Set at 30% for air-leak syndromes (pneumothorax, PIE, etc)

Increase to 50% as a last resort (first optimize Power, Hz, ETT size, exhaust other modes of ventilation)

Caution: high risk of air-trapping, which may happen very quickly

Titration

Oxygenation

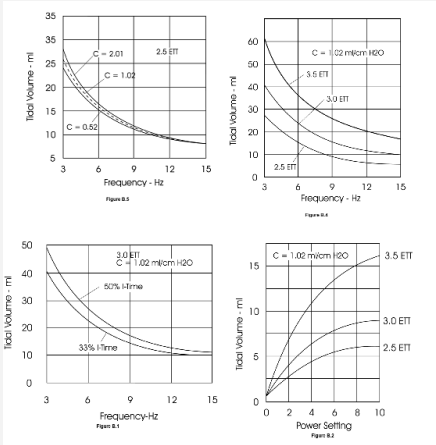
MAP, FiO2

Ventilation

Power (AMP), Hz, i-time

Note: may need to increase MAP to open up collapsed lungs prior to adequate ventilation

Effect on Ventilation



Hz Transmission