

MARCH 5, 2020

VENTILATOR MANAGEMENT OF THE MORBIDLY OBESE PATIENT



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Today, obesity is considered an epidemic. In the adult, obesity is defined as greater than a body mass index (BMI) of 30 kg/m². The United States is one of the most affected countries by this epidemic. In the US, 40% of adults are considered obese, 20% of adolescents and 14% of children. Obesity has some very negative effects on the individual; diabetes, heart disease, and various metabolic issues are caused by obesity. In reference to this presentation, obesity can have a profound effect of ventilatory function. Because of the increased mass on the chest wall, atelectasis and premature airway closure are common. Normally, the lung is maintained open as a result of a positive end expiratory transpulmonary pressure (alveolar pressure minus pleural pressure). In obesity, pleural pressure is increased sometime as high a positive 20 cmH₂O. As a result, at end expiration the transpulmonary pressure is negative causing alveolar collapse. In obese patients in hypoxemic respiratory failure, very high PEEP levels are required to stabilize the lung and avoid collapse, sometimes exceeding 25 cmH₂O. It should also be remembered the obese lung is no larger than the normal sized lung. As a result, tidal volumes should be set at 4 to 8 ml/kg, similar to someone of lean body mass. These and other topics will be discussed in detail during the Webinar.



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Thursday, March 5, 2020

9 a.m. – 10 a.m. PST
12 p.m. – 1 p.m. EST

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Learning Objectives

Upon completion of this Webinar the attendee will be able to:

1. Discuss the effect of obesity on ventilatory function.
2. Discuss the concept of transpulmonary pressure and how it is used to set PEEP.
3. Discuss ventilator setting in general in the obese patient and the use of Lung recruitment maneuver and high PEEP to stabilize the lung of the acutely ill obese patient.

Accreditation

This webcast is approved by the American Association for Respiratory Care (AARC) for one contact hour of CRCE credit.



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