Acute Respiratory Distress Syndrome (ARDS) Interventions

PLAY PICMONIC

Interventions

Closely Monitor Patient
Monitor Close to Patient
Patients with ARDS are at an increased risk for developing renal failure and stress ulcers. Close monitoring of patients for these conditions is essential. Hemodynamic monitoring should also be an important component of care, as these patients may experience hypotension, hypoxemia, and hypercapnia, which can cause negative consequences if left untreated.

ABG's (Arterial Blood Gases)
AirBaG
Arterial blood gases should be checked frequently to monitor the patient’s gas exchange and his/her response to oxygen therapy. In patients with ARDS, PaO2 should be kept at or above 60 mmHg.

Oxygen
O2-tank
The goal of oxygen therapy is to correct hypoxemia and achieve a PaO2 of 60 mmHg or higher. Patients should be treated with the lowest concentration of oxygen possible to stay within the desired parameters.

Assess for O2 Toxicity
Assess-man O2-tank in Toxic-green-glow
Administration of oxygen with an FiO2 greater than 60 percent for 2 days or more increases a patient’s risk of developing oxygen toxicity. Signs and symptoms of oxygen toxicity include change in vision, ringing in the ears, nausea, twitching, and irritability.

Mechanical Ventilation
Machine Vent ventilating
Patients with ARDS need to be mechanically ventilated in order to maintain adequate levels of oxygenation. Long-term ventilation increases a patient’s risk of developing pneumonia. Frequent mouth care and rigid infection control measures should be implemented to decrease the risk of this complication.

PEEP
Peep-marshmallow
Positive end expiratory pressure (PEEP) is applied, using a ventilator, to prevent alveolar collapse upon expiration.

Assess for Pneumothorax
Assess-man and Nude-Thor-axe
Due to decreased lung compliance and high peak airway pressures, barotrauma or trauma to the lung(s) is common in ventilated patients with ARDS. To reduce the risk of injuring the lung, smaller tidal volumes should be used with these patients.

Permissive Hypercapnia

Permitted Hiker-cape

Smaller tidal volumes are recommended when ventilating these patients. This intervention causes a rise in PaCO2. Permissive hypercapnia is allowed in this situation and is usually tolerated well.

Considerations

High Mortality Rate

Up-arrow Death

The mortality rate for patients with ARDS is about 50 percent; however, prone positioning has shown to increase positive outcomes in some patients. When a patient is supine, fluid will pool in the dependent areas of the lungs, damaging alveoli, and interfering with gas exchange. Placing the patient in prone position will allow previously dependent areas of the lungs to continue to receive the greatest blood flow, and alveoli will be allowed to reopen, due to the shifting of fluid to the anterior surface of the lungs.