HEAT AND MOISTURE EXCHANGER (HME)

PURPOSE: To provide sufficient heat and humidity to patients receiving mechanical ventilation without the use of heated humidifiers.

INDICATIONS:
1. Recent experience and advances in HME technology suggest that HME may be used for extended periods of time on patients that do not have contraindications as described below.

PRECAUTIONS:
1. Patients who produce large volume of secretions or froth may be adversely effected due to increased resistance or HME occlusion. HME’s should not be used on patients with copious or frothy secretions.
2. Heated humidity systems (rather than HME) will be used on any patient with prevalent infiltrates on Chest X-Ray or with evidence or suspicion of retained secretions.
3. HME is contraindicated in patients with a large air leak distal to the HME (such as a large bronchopleural fistula).
4. HME is contraindicated in patients with a minute volume > 10 L/min.
5. Difficult to wean patients may require removal of HME. (Replace with heated humidity system).
6. Due to the inherent nature of burn injuries to produce large amounts of secretions and pulmonary fluids, HME shall not be used on burn patients.
7. At this time, HME will not be used on PICU patients.
8. HME must be removed during medicated aerosol therapy.
9. HME products are single patient use items and will be replaced every 24 hours.

PROCEDURE:
1. Select candidate for HME per listed indications.
2. Attach inspiratory limb of patient circuit to mainflow outlet of ventilator. Bypass conventional humidifier system and remove all accessories that will not be used from ventilator.
3. Place HME between patient circuit and artificial airway device.
4. Monitor every frequently to prevent HME from becoming filled with secretions.
5. Monitor patient frequently to insure patency of airway (i.e. mucus plugging).
6. Remove HME during medicated aerosol therapy.
7. Remove HME if patient is to be lavaged and placed back on ventilator prior to suctioning.
8. Change HME every 24 hours and PRN for saturation with fluids or secretions.
9. Replace HME with heated humidity system if any of the above contraindications occur.
10. Aseptic technique must be maintained at all times when handling HME to prevent contamination. When removing HME from circuit, place HME in sterile packaging of suction catheter kit or on a sterile towel.

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