C1-4: Oropharyngeal Secretion Removal in Intubated Patients

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**Abstract:**

**Introduction:** The purpose of this study was to quantify the volume and weight of secretions suctioned from the oropharynx of intubated critically ill patients. Data were collected to determine an interval for oropharyngeal suction (OPS) for a clinical trial. OPS is part of the routine care of intubated patients, and is done “as needed.” Secretions in the oropharynx often migrate and accumulate above the endotracheal tube (ETT) cuff, increasing the risk for aspiration and ventilator-associated pneumonia. The recommended frequency for OPS is unknown.

**Method(s):** A prospective, repeated measure, one-group design was used. Data were collected from 28 subjects who had an ETT inserted orally for < 4 days. Sample size was based on a large effect. The IRB approved waiver of consent. With the backrest elevated to 30°, subjects were suctioned at baseline using a deep suction catheter (short version of a traditional suction catheter) to clear all secretions. Volume of secretions was measured in mL, and weight was recorded on a gram scale. Duration of suction and number of suction passes were also recorded. The procedure was repeated in 2 hours, and again 4 hours later. Data were analyzed using paired-sample t-test (baseline data not used in analysis).

**Results:** Subjects’ average age was 49 (±15) years; duration of intubation was 2 (±1) days. Most (61%) had a special ETT for continuous suction of secretions that accumulate above the ETT cuff. At the 2-hour interval, a mean of 7.3 mL (6.7 g) was retrieved compared to 8.2 mL (7.8 g) at 4 hours (p> .05). Although not statistically different, the volume of secretions was nearly 2 mL greater in those with the specialized ETT. The median number of suction attempts was 3 passes, and suction duration averaged 48 seconds. Some subjects (20%) became more responsive during the procedure.

**Discussion & Conclusions:** Findings support the need for OPS to reduce the potential aspirate load, regardless of ETT type. Findings guided us to recommend an OPS intervention every 4 hours in a clinical trial. Additional research is needed to determine if frequent OPS stimulates saliva production, and to assess the volume of secretions in different patient populations (e.g., sedation or chemical paralysis) who may need more frequent OPS.

**Abstract History:**  
This abstract has not been presented or accepted for presentation in whole or in part at the SNRS or other scientific meeting.

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