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# COMPARISON OF SIDE EFFECTS IN TWO METHODS OF ENDOTRACHEAL SUCTIONING (OPEN AND CLOSED) IN PREMATURE INFANTS UNDER MECHANICAL VENTILATION

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**Background and aims:** Endo tracheal suctioning is a common neonatal intensive care procedure that is performed to clear trachea bronchial airways of secretions and maintain patency of the endotracheal tube in intubated infants, which may lead to complications. Two systems are available to perform ES: open suction system and closed suction system. Since bacterial airway colonization, nosocomial pneumonia, and septicemia are important issues in neonatal care, recent study aims to compare side effects in two methods of endotracheal suctioning (open and closed) in premature infants under mechanical ventilation.

**Methods:** In current clinical trial study, 90 preterm infants of (27–34 weeks of GA) hospitalized in NICUs of Alzahra and Taleghani Teaching hospitals, (2014), elected and randomly assigned to two groups. One group was suctioned by open suctioning method and the other by closed suctioning method. However frequency of suctioning and side effects as pulmonary hemorrhage, IVH, pneumothorax, pneumonia and septicemia until extubation and duration of hospitalization were investigated and compared. Data analysis was performed using SPSS (ver. 21) and descriptive and analytic statistical methods such as  $\chi^2$  and independent T test analysis.

**Results:** Overall, there was no significant statistical difference on frequency of suctioning and side effects as pulmonary hemorrhage, IVH, pneumothorax, pneumonia and septicemia until extubation and duration of hospitalization. But all side effects and mortality rate were higher in open suction.

**Conclusion:** Evidence indicates that, there was no significant statistical difference on frequency of suctioning, side effects and duration of hospitalization. Considering clinical significance with regard to Evidence-Based Clinical Decision Making, it is recommended that a comprehensive study over a greater population of premature infants should be carried out.