

## **Anatomic study of the nasopharyngeal catheter insertion procedure for oxygen therapy**

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Oxygen therapy is the management of oxygen for a patient in order to correct hypoxemia, decrease respiratory efforts and reduce the myocardial work. To manage the oxygen, it is necessary to insert a specific catheter that is a disposable fine tube with 6 to 8 openings in its distal end and approximately 45,7 cm long. For nasal insertion of this catheter, the majority of nursing procedure books describes a measurement technique as the distance between the patient's highest point of the nose and the earlobe. Subsequently, the catheter is inserted in the nose until the obtained mark. The purpose of this paper was to verify this measurement technique in cadavers by direct observation of the distal end of the catheter in the superior respiratory tract. For this paper, we used ten adult cadaver hemiheads from the Laboratory of Topographic and Descriptive Anatomy of the Federal University of São Paulo - UNIFESP-EPM in which we inserted a disposable catheter according to the measurement technique obtained by the distance between the patient's highest point of the nose and the earlobe. Subsequently, we measured the distance between the distal end of the catheter and the epiglottis and all specimens were photographed. As a result, we observed that the distal end of the catheter laid 2 to 3 mm. above the epiglottis (50 and 20%) respectively. The oxygen therapy in which the catheter is inserted measuring the nasal apex-earlobe distance, does not provide the expected quantity of oxygen to the patient because the catheter lies in the transitional region between the esophagus and the trachea. This causes discomfort for the patient in face of air going to the stomach and also oropharyngeal drying.