

RESEARCH ARTICLE

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ANATOMOCLINIC CONSIDERATIONS IN THE OROTRAQUEAL INTUBATION IN CADAVERIC PIECE

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ABSTRACT

Introduction: Orotracheal intubation aims to maintain the respiratory process by placing a tube through the oral cavity to the tracheal structure. Because it is an invasive procedure, those who perform the technique must be endowed with theoretical knowledge and practical skills.

Objective: To conduct a study on the importance of anatomoclinic in orotracheal intubation in cadaveric specimens. **Methodology:** This is an exploratory study. We studied female corpse and intubation materials. **Results:** It was possible to observe during the procedure of orotracheal intubation in the cadaverous specimens in the laboratory of human anatomy the elements as the epiglottis, rhyme of the glottis. **Conclusion:** It is concluded that the academic knowledge about orotracheal intubation in a human anatomy laboratory is satisfactory since the study of anatomoclinics in the cadaveric specimen was essential for the intubation process since the practice of orotracheal intubation in human cadavers is a very important tool for the education of the medical student.

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INTRODUCTION

Tracheal intubation is the placement of a tube inside the trachea, either through the oral or nasal route (Carvalho, 2006). It is indicated to maintain permeable airways and to control ventilation in cases of hypoventilation, multiple trauma, coma, respiratory failure, cardiopulmonary arrest (Matsumoto, 2007). It is a common procedure within emergency units, as it is an invasive method and must follow a strict protocol, avoiding inappropriate maneuvers and complications for the patient (Yamanaka, 2010 and Cardoso, 2014). Complications of intubation may occur in the upper airways causing decreased local motricity and sensitivity, compromising the swallowing process (Kunigk, 2007).

There may also be trauma to the cervical spine and teeth, cardiac arrhythmia, among others (Jaber, 2006). To avoid complications, it is important to know the intubation technique, as they must obey all stages of application (Yamanaka, 2010). Thus, the objective was to conduct a study on the importance of anatomoclinics in orotracheal intubation in the cadaver.

MATERIALS AND METHODS

The sample consisted of 1 corpse, from the Human Anatomy Laboratory of the University Brazil, Campus Fernandópolis, SP. It was a formaldehyde corpse, being female. The material was used in accordance with Law 8501 of November 30, 1992,

which provides for the use of unclaimed corpses for study or scientific research purposes. Inclusion criterion patent upper airway. The body that did not have the complete block of the respiratory system was excluded. The materials were # 4 blade laryngoscope, # 6 endotracheal tube, and 10 mL syringe. The usual thoracic cavity was dissected and clinical aspects of the lungs were analyzed. The head was in a hyperextension movement, introduced the laryngoscope blade above the lower lip towards the epiglottic vallecula, extending the tongue laterally to view the epiglottis, so the laryngoscope was pulled up and back to elevate the epiglottis to visualize the vocal cords. The endotracheal tube is then placed into the trachea and the cuff is inflated with the syringe, finalizing the technique.

RESULTS AND DISCUSSION

The intubation procedure was performed in 22 seconds, within the ideal parameters indicated by the authors Syed *et al.* (2017) describe that it takes 10 to 30 seconds to perform intubation.

It is possible to observe in Figure 1 the glottis rhyme, besides this element is notorious the vocal cords, the aryepiglottic folds, the cuneiform and corniculate tubercles, and the epiglottis. It should be reported that at the time of intubation, these anatomical elements should be visible during the process, confirming the tube path and satisfactory intubation. Figure 2A shows the unventilated, airless lung; in Figure 2B, the lung is ventilated with the AMBU, resulting in the air filling in the pulmonary alveoli. It is important to note that at the end of intubation, the position of the tube should be checked, which may be through bilateral chest auscultation, and radiography to check if the tube is more than 2 cm from the carina. Figure 3 shows the clinical aspect of the lung, with scar tissue known as pulmonary fibrosis. Fibrosis is a chronic disease where normal lung tissue is replaced by fibrosis (healing tissue), altering hematoses. Importantly, due to pulmonary fibrosis (Figure 3), the lung does not expand as well, the lung tissue becomes hardened, making it difficult to get air, which makes the patient have dyspnea, making hematoses difficult.



Figure 1. The apex of the lamina in the epiglottic vallecula, showing the glottis rhyme

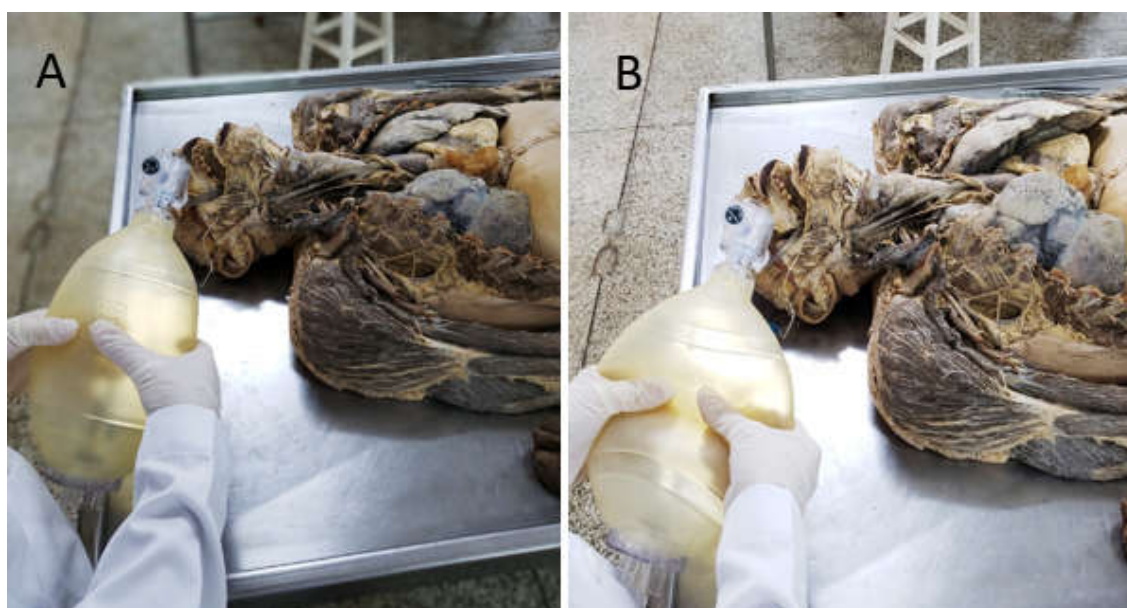


Figure 2. Unventilated, breathless lung (A). Ventilated, air-filled lung (B)

Other complications may cause difficulty in laryngoscopy, such as the large tongue, reduced volume of the oral cavity and mandibular space, fibrotic tongue due to pathological situations (Tallo, 2011).



Figure 3. Clinical aspect of pulmonary fibrosis

There are also contraindications, Amantéa *et al.* (2003), explain that the temporomandibular joint occlusion and obstructive process in the oral cavity make intubation difficult. The authors Chameides and Hazinski (1997), described in their work that doctors should be able to perform intubation correctly, without knowledge of the procedure and anatomical elements of the upper airway will maximize the risks to the patient. For this, it is important to know the intubation techniques, which must obey a rigid protocol and include all the steps and, to minimize the risks, the doctor should perform the initial assessment of the patient regarding their level of consciousness, factors of risk for pulmonary aspiration and presence of difficult airway.

Conclusion

The academic knowledge about orotracheal intubation in a human anatomy laboratory is satisfactory since the study of the anatomical clinic in the cadaveric specimens was essential for the intubation process.

Declaration of conflicts of interest

The authors declare nothing.

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