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LITERARY STUDY OF NASAL SEPTUM DEVIATION: MAJOR CONSIDERATIONS ON THE CLINICAL ANATOMY

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ABSTRACT

Introduction: The nasal septum wall, located midline in the nasal cavity, is formed by the perpendicular lamina of the ethmoid, the vomer and the cartilage of the nasal septum, but can deviate to both sides (right or left) in the nasal cavity. , for various reasons such as congenital disorders, inflammatory diseases, infectious or even trauma, causing the deviated septum. **Objective:** The aim of this study was to perform a literature review study on the clinical anatomy of nasal septum deviation. **Methodology:** The article is a literature review study. A cadaverous specimen from the Human Anatomy Laboratory of the University of Brazil was used as a reference for demonstrating the nasal septum and septal deviation. The systematic survey was conducted through electronic scientific articles from Google Scholar, Virtual Health Library (VHL), Scielo and books from the Brazil University. The following keywords were used: Nasal Septum Deviation. Anatomy. Rhinoplasty The study was developed in the second semester of 2019, summarizing and transcribing the most relevant points of septum deviation. **Results:** Clinically, most cases of septal deviation are asymptomatic, however, some may have nasal obstruction related to symptoms such as dyspnea, snoring, sleep apnea, headache, and predisposition to sinusitis and epistaxis due to increased paranasal infections. Importantly, in symptomatic cases, it is necessary to perform a surgical procedure to correct the nasal septum, septoplasty. However, postoperatively it may present complications such as fever, vomiting, pain, nosebleeds, rapidly recovering sinusitis, synechiae, and adherence, but if treated properly, they may recover rapidly. **Conclusion:** It is concluded that the deviated septum affects a large part of the population, being mostly asymptomatic. However, there are symptomatic cases that require surgical correction through septoplasty, mainly. In such a procedure, complications may occur, but if properly treated, they have a rapid recovery.

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INTRODUCTION

The nose, very important for the respiratory system, has the functions of filtration, humidification, and heating of inspired air, besides having receptors for smell and ducts for conduction and elimination of secretions of the paranasal sinuses and tear ducts (Moore, 2014). The nose is subdivided into the outer and inner part, the outer part consisting of the nostrils and nasal vestibule with the presence of hair, and the inner part by the inner chamber, which is divided into right and left cavity by the vertical osteocartilage septum (nasal septum), extending to the posterior limit of the cavity (right and left choanas). This chamber communicates with the ethmoidal cells and the paranasal sinuses, being the frontal, maxillary and sphenoid sinuses (Standring, 2010). The nasal septum (Figure 1A) is composed of cartilaginous, bone and mucous tissue. The bony part, formed by the perpendicular lamina of the ethmoid, the vomer and the cartilage of the nasal septum (Figure 1B). Initially it is located in the midline, and from the age of seven, the septum begins to deviate left or right (FO,

2019) causing deviation of the nasal septum (Figure 2). The origin of septal deviation may be congenital disorders, growth disorders, or inflammatory, infectious, traumatic, or surgical diseases (H9J, 2019). To acquire knowledge and improvement of septal deviation, the objective was to conduct a literature review study on the clinical anatomy of nasal septum deviation.

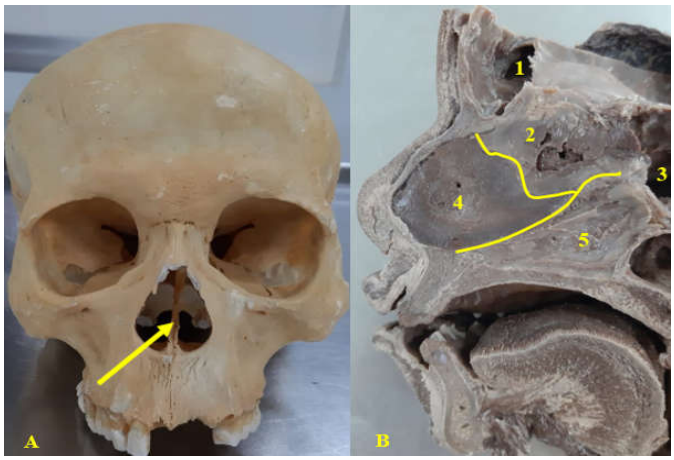

Figure 1. (A) Wall of the nasal septum. (B) Wall of the nasal septum formed by (2) perpendicular lamina of the ethmoid; (4) nasal septum cartilage and (5) vomer, also showing paranasal sinuses (1) frontal sinus and (3) sphenoid sinus

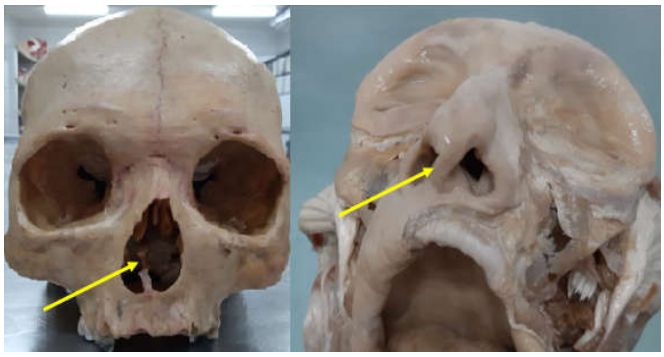

Figure 2. Deviation of the nasal septum

METHODS

The article is a literature review study that aims to observe and describe data on the origins, clinic, complications, and treatment of septal deviation. A cadaverous specimen from the Human Anatomy Laboratory of the University of Brazil was used as a reference for demonstrating the nasal septum and septal deviation. For data research, it was used as Keywords: Nasal Septum Deviation, Anatomy and Rhinoplasty. The data were searched through electronic scientific articles from Google academic, Virtual Health Library (VHL), Scielo and books from the University Brazil. The work was carried out in the second semester of 2019, summarizing and transcribing relevant data for the article.

RESULTSAND DISCUSSION

In Brazil, nasal septum deviation is very common in the population, according to the Brazilian Association of Otorhinolaryngology and Cervical-Facial Surgery, this problem affects approximately 85% of the population in different degrees (Pilan, 2019). Septum deviation can be identified by rhinoscopy, and one of the main symptoms of septal deviation is nasal obstruction, clinically presenting alterations such as mouth breathing syndrome, snoring, hyposmia, closed rhinolalia, hearing disorder (Miniti, 2000). In the study by Neto et al. (2005), shows that there is a relationship between individuals who have sleep breathing disorders with structural changes in the nose, predominantly septal deviation. Nascimento's research, et.al. (2018), when analyzing 500 panoramic radiographs of patients aged 15 to 90 years, shows that most have deviated septum, with 60% being female and 40% male. And in females, there is a higher incidence of left shift, whereas in males there is a predominantly right shift. Moreover, such a study proves that panoramic radiography is efficient for detecting nasal septum deviation. In most cases it is asymptomatic, ie no surgical correction is required. However, in the symptomatic individuals may present unilateral or bilateral nasal obstruction, dyspnea, snoring, sleep apnea, headache and predisposition to sinusitis and epistaxis due to increased paranasal infections. In cases where there is damage to the patient, septoplasty or rhinoseptoplastyis indicated as surgical treatment (Fried, 2019). Importantly, septoplasty is performed under general or local anesthesia, initially, a small incision is made inside the nose where the mucosa that is on the cartilage and septal bone is detached. The deviated parts are removed and replaced with a nasal splint, a mold that repositions the mucosa and nasal septum, and nasal plugs can be placed to prevent bleeding (Pilan, 2007). Such surgery may cause complications such as fever, vomiting, pain, nosebleeds, rapidly recovering sinusitis, synechiae, adhesions that may occur between the lateral and medial walls of the nose and in rare cases infection, abscess and bruise, septal perforation may occur. However, ifproperlytreated, theyhaverapidrecovery (FO, 2019).

Conclusion

It was concluded that the deviated septum affects a large part of the population, being mostly asymptomatic. However, there are symptomatic cases that require surgical correction through septoplasty and, when performing this procedure, complications may occur, but if properly treated, have rapid recovery.

Declaration of Conflicts of Interest: The authors declare nothing.

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