

Influence of Sensation in the Anterior Teeth by Posterior Superior Alveolar Nerves

Stanbouly Jiang*

Department of Prosthodontics, University of Cape Town, Cape Town, South Africa

ABOUT THE STUDY

To prevent issues like nerve damage during antrotomy and sinus augmentation surgery, it is crucial to comprehend the 3 Dimensional (3D) interaction between the Posterior Superior Alveolar Nerves (PSANs) and the maxillary sinus (sinus floor elevation). According to the theory of maxillary innervation, the Anterior Superior Alveolar Nerves (ASANs) and Posterior Superior Alveolar Nerves (PSANs), respectively, innervate the maxillary anterior and posterior teeth. We obtain more information on the courses of ASANs and PSANs in the anterior alveolar canals which run in the anterior walls of the sinus or within sinus grooves. The infraorbital nerve, a branch of the maxillary nerve that travels from the inferior orbital fissure to the orbita, gives rise to the superior alveolar nerves known as ASANs, MSANs, and PSANs, which are branches of the maxillary nerve that travel from the alveolar foramina into the maxillary sinus. These superior alveolar nerves are hypothesised to join together to form a superior dental plexus above the apical foramina of the maxillary teeth. The anterior, middle, and posterior superior alveolar nerves and arteries, as well as their minor nameless branches, are grooved or canalised in the sinus' thin walls. Regarding the topographical connections between the maxillary sinus and the superior alveolar nerves, the PSAN's branches pass through canaliculi in the lateral wall of the sinus (62.3%) or beneath the sinus' mucous membranes (37.8%). Within the anterior face of the maxilla, the patterns of ASAN vary considerably. The superior alveolar nerves in the maxillary sinus are located in the sinus wall or behind the sinus mucous membrane, making it challenging to macroscopically understand their 3 Dimensional (3D) courses.

It is commonly known that the superior alveolar nerves and vessels run through "Alveolar Canals/Grooves (ACGs)". However, depending on the researcher, the terminology for these structures has also been referred to as "bony canals" or "canalis sinuosus". ACGs have been identified by Computed Tomography (CT) scan data, and a recent work that combined CT with histological analysis made it clear that these structures contain alveolar nerves and arteries. The fact that the maxillary nerve splits into an infraorbital nerve and PSANs is widely accepted as fact. ASANs and MSANs are formed by further dividing the former nerve. Finally, three alveolar nerves use various ACGs to innervate various tooth regions. Recently, we showed that three ACGs converge into one alveolar canal in the maxilla's anterior region. It is still unclear how frequently they occur, the precise regions that each superior alveolar nerve innervates, or the superior alveolar nerves' 3D trajectories in these ACGs.

It is crucial to comprehend the 3D interaction between the maxillary sinus and the PSAN in order to prevent potential issues like nerve damage during antrotomy or sinus floor augmentation surgery. The information on the ASAN and PSAN rates in the anterior alveolar canal of the maxilla may shed light on the PSAN's role in the nociception of the anterior teeth and their supporting tissues. Anesthesia, hypesthesia, paraesthesia, and dysesthesia in the anterior region may result from iatrogenic problems such as injury to the PSAN, which peripherally innervates the anterior teeth, during dental implantation in the molar region. This study used helical CT, cone-beam CT, and -CT along with histological analysis to clarify the 3D courses of ACGs, the relationship between ACGs and superior alveolar nerves, and the contribution of PSANs.

Correspondence to: Stanbouly Jiang, Department of Prosthodontics, University of Cape Town, Cape Town, South Africa, E-mail: jiang.s@gmail.com

Received: 01-Nov-2022, Manuscript No. DCR-22-19001; **Editor assigned:** 04-Nov-2022, Pre QC No. DCR-22-19001 (PQ); **Reviewed:** 18-Nov-2022, QC No. DCR-22-19001; **Revised:** 25-Nov-2022, Manuscript No. DCR-22-19001 (R); **Published:** 05-Dec-2022, DOI: 10.35248/2161-1122.22.12.609.

Citation: Jiang S (2022) Influence of Sensation in the Anterior Teeth by Posterior Superior Alveolar Nerves. J Dentistry. 12:609.

Copyright: © 2022 Jiang S. This is an open access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.