Evaluation of the midline mandible lingual vascular blood vessel region using cone beam computed tomography

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Objective: The aim of this study was to characterize the the Mandibular median Lingual Foramen region using cone beam computed tomography (CBCT) to clarify its morphology and variations that take place.

Materials and Methods: A retrospective study of the Midline lingual canal was performed in the transverse and sagittal planes of 111 CBCT. Inclusion criteria were: patients older than 18 years and no artifacts or pathologies that would interfere in the evaluation.

The variables measured were: A, length of the outlet duct. B, distance from the canal to the vestibular cortical. C, distance from the canal to the inferior cortex. D: distance from the canal to the lingual cortical. E, distance to the alveoli of the tooth nearest dentate patients, and crest in edentulous patients. F, angle of the duct to the horizontal. G, diameter. H, output level of the socket in relation to the teeth and presence of bifurcations

Results: A total of 111 CBTC were analysed. 83 were of dentate and 28 of edentulous patients. In the Mandibular median Lingual Foramen region, a single canal was observed in 63%, 2 canals in 33.3% and a triple foramens in 2.7% of patients. Females showed slightly lower values than males for each of the analysed variables, with statistically significant differences in the length of the canal in edentulous (p=0.029) as well as in dentate (p=0.027).

Conclusion: Dental CBCT demonstrates the presence of the lingual vascular canals, their frequency, number, and size being of great importance for planning surgical procedures.

Keywords: Cone Beam Computed Tomography, mandibular midline, lingual foramen

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