

## **Morphometric Analysis of the Nasopalatine Canal in the Sri Lankan Population Using Cone Beam Computed Tomography**

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Nasopalatine canal (NPC) is an important anatomical structure present in the anterior mid maxilla. It is also described as incisive canal or anterior palatine canal. It is a long slender bony canal which connects the palate to the floor of the nasal cavity. The objective of this study was to identify the morphometric characteristics of the NPC in a group of Sri Lankan people using Cone beam computer tomography (CBCT). Fifty Maxillary CBCT images of patients in the 21-30 age group having a clear image of anterior maxilla were obtained from the archives of the University Dental Hospital, Peradeniya. They were retrospectively analyzed to determine the position of the NPC. All the images were analyzed for NPC morphology, canal dimension, and its (NPC) relation to the maxilla. Majority had a single or 2 openings (n=47). Average diameter of the canal was 3.69 mm with a range of 2 to 6 mm. Majority of the canals had funnel shape and were vertically curved. Average length of canal was 12.14 mm and angulation of the curvature was 115.69°. Average antero-posterior diameter at nasal fossa was 2.85mm and at mid-palate was 2.36 mm. Within the limits of this study, we conclude that the form of the NPC is variable; predominantly funnel shaped with a single or two openings and with an average diameter of 3.7mm in the sample of Sri Lankan population. Identification of variations in the position and shape in relation to maxillary teeth will help in clinical practice specially in introducing local anesthetic block injections during dental treatment.

**Key words:** Nasopalatine Canal, Cone Beam Computed Tomography, Incisive canal, anterior palatine canal