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Poster(Non-Competing)

Assessment Of Prevalence, Length And Position Of Anterior Loop Of Inferior Alveolar Nerve: A Study Using CBCT

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Introduction: Adequate space is required in the interforaminal region for anterior mandibular surgery, where the anterior loop is located within this region. The aim of this study is to evaluate the prevalence of the anterior loop (AL) of the inferior alveolar nerve, and to measure its length and position in patients attending Kulliyyah of Dentistry using cone beam computed tomography (CBCT). **Materials and Methods:** CBCT images of mandibles from 70 patients (140 hemimandibles) were selected and evaluated in this retrospective study. A single detector, multiple slits CBCT machine was used for this purpose. The comparison was made based on gender, age and race. The prevalence, position and length of the AL were assessed using Romexis® software version 2.8.0.R. **Results:** An anterior loop was identified in 16.4% of the examined mandibles and mostly observed on the right side (21.4%). The prevalence of AL was significantly higher in males (69.6%) compared to females (30.4%). The mean anterior loop length recorded was 2.59 mm (± 1.63), ranged from 0.80 mm to 6.00 mm. Most of the loops were found located inferior to the apex of lower right second premolars (60%). **Conclusion(s):** In this study, the prevalence of AL found is significant and the length of AL was varied greatly. Although AL is an anatomical variation, findings of this study might be useful in determining the safe distance and to preserve the neurovascular bundle before an implant placement or osteotomy in the anterior region of mental foramen.

KEYWORDS: anterior loop, mandible, CBCT scans