

A radiographic study on the visualization of the anterior loop in dentate subjects of different age groups

Abstract

The anterior loop is defined as where the mental neurovascular bundle crosses anterior to the mental foramen then doubles back to exit the mental foramen. It cannot be seen clinically but can be detected in 11-60% of panoramic radiographs. As this anatomical structure is important in determining the placement position of endosseous implants in the mandibular premolar region, a pilot study was undertaken to determine its visibility on dental panoramic radiographs in dentate subjects of various age groups. One or more anterior loops were visible in 39 (40.2%) radiographs encompassing 66 sites (34.4%). Interestingly, anterior loops were most commonly observed bilaterally, followed by on the right side of the mandible only. An anterior loop on the left side only was observed in just 1 radiograph. Visibility of anterior loops reduced as the age of subjects increased. More than half (58.1%) of subjects aged 20-29 years exhibited at least one anterior loop; this gradually reduced to only 15 percent of subjects aged 50 and older. There was no association between visualization of the anterior loop and subject gender.

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