Purpose: The authors analyzed the anatomic location differences of the mandibular foramen (MF) and lingula in a cone beam computed tomography study, aiming to obtain information that could be used when performing mandibular osteotomies and the inferior alveolar nerve block (IANB).

Methods: Three-dimensional mandibular computed tomography images were reconstructed from data for 139 patients (278 sides) aged between 9 and 18 years (growth group, 27 patients) and aged 19 to 71 years (adult group, 112 patients).

Results: In the adult group, positive correlations were seen between right and left measurements. In the growth group, there are significant differences in lingula-anterior and MF-posterior ramus measurements. In the adult group, there are significant differences between man and woman MF-gonion distance measurements. Differences were seen in edentulous and asymmetry patients.

Conclusions: The MF is an important anatomic landmark for ramus surgery and IANB. When applied to ramus operations and IANB, the anatomic data provided by this study may help surgeons gain more understanding of nerve position during surgery.

Key Words: CBCT, mandibular foramen, lingula