Introduction

- The accurate identification of location of Mental Foramen (MF) is important for both diagnostic and clinical procedures.
- The mental bundle could be traumatized during periradicular/orthognathic surgeries/implant placement resulting in paresthesia or anesthesia.
- The MF has been reported to vary in its appearance, size and locations in different population groups.1-12
- With a thorough literature search and to the best of our knowledge, till date, there has been no such study representing the Dravidaian group of people in South India.

Objectives

- To document radiographic information on appearance, size, and vertical locations of MF among the Dravidaian ethnic group.
- To determine the relationship of age and gender with the radiographic appearance and location.

Methodology

- 1662 Panoramic radiographs were randomly selected from the de-identified register (during 2 year period) held at Manipal Hospital, India and retrospectively evaluated and examined for eligibility against selection criteria (245 fulfilled the inclusion criteria).
- Patients aged from 19-60 were divided into 2 groups - Group A(19-40 years) and Group B(41-60 years). Radiographs were those of 156 males and 89 females.
- Each radiograph was traced on a tracing paper to record the horizontal location, vertical locations and size of MF.
- The appearance of MF was determined by visual examination and was classified as any one of the four different types:11. Continuous, Separated, Diffuse and Unidentified type.
- The horizontal location in relation to the apices of the teeth were categorized11 as - Anterior to 1st PM, In line with 1st PM, Between 1st and 2nd PM, In line with 2nd PM, Between 2nd PM and 1st Molar, In line with 1st molar.
- The vertical location was estimated11,12 as shown in the figure below. The ratio of x/z gave the relative vertical field of the foramen.
- Size of each MF was recorded in mm both in horizontal and vertical direction using digital caliper.
- The Intraclass correlation coefficient and Kappa statistics for the inter and intra examiner reliability were 0.82 and 0.95 respectively.
- Chi-square and t-test were employed. The level of two-sided significance was set at 5%.

Conclusions

- The results of our study supports few2,5,6,7,8 (but not all) previous studies in special regard to the locations of MF, which clearly indicates that it has positional variations in different population groups.
- These findings can be used as reference material for the dental practitioners of South India while performing clinical procedures that involve MF.