ABSTRACT

Background: - Numerous studies have correlated palatal rugae with ethnicity, gender and orthodontic treatment and its uniqueness has been established. No studies in literature yielded a relationship between palatal rugae and the size of maxilla. So an attempt was made to evaluate the relationship between palatal rugae and maxillary anteroposterior dysplasia.

Aim and objectives: - To determine the uniqueness of palatal rugae pattern, by comparing them among orthognathic, retrognathic and prognathic maxilla.

Materials and methods: - 90 samples in the age group of 15-25yrs with orthognathic mandible were chosen and grouped into orthognathic maxilla group(30 samples), prognathic maxilla group(30 samples) and retrognathic maxilla group(30 samples). The palatal rugae pattern for each group were recorded and assessed for their number, size and shape. The data were tabulated and statistically analyzed. Finally results were compared among the three groups.

Results: - The number of rugae on the right side of the maxilla showed significant differences among the three groups. Group with prognathic maxilla and retrognathic maxilla had shown high propensity for 4 rugae with 63.3% and 53.3% of the total sample respectively when compared to orthognathic maxilla which showed this propensity in only 23.3% of the total samples. Orthognathic maxilla had shown high propensity for 5 rugae in 26.7% of the total sample when compared to prognathic (6.7%) and retrognathic maxilla (3.3%). Wavy pattern was the most predominant shape but this was not statistically significant. No statistically significant differences were found with respect to the size of rugae and the size of maxilla.

Summary and Conclusion: - This study identified variations in distribution of various palatal rugae pattern in three groups. The number of rugae was found to be statistically significant on right side of the maxilla. Though different types of anteroposterior dysplasia are more prone to have a specific type of rugae pattern, future studies are still needed to further validate this study.

Key words :- palatal rugae, rugae pattern, maxillary anteroposterior dysplasia, rugoscopy,