INTRODUCTION

One of the major hurdles in clinical Prosthodontics has been selection and replacement of maxillary anterior teeth in absence of Pre-extraction records\(^1\). As maxillary anterior teeth play a pivotal role in aesthetics. Maxillary anterior teeth are reported to be the most important to satisfy esthetic requirement of the patient width being considered more critical than length, as a result selecting artificial teeth requires an understanding of both physical and biological factor that are related to individual patient features\(^1\).

The size of anterior maxillary teeth is imperative for optimal dental and facial esthetics as well as good phonetics. Maxillary central incisors are particularly important to meet the esthetic concerns of the patient because they have maximum display in frontal view\(^2\).

Nature provides harmony between the object and the surrounding. Complete denture esthetics is achieved when artificial teeth are in harmony with surrounding environment, i.e face, apart from teeth arrangement, facial harmony is constituted by matching of shape, color, mould and size of teeth to that of face\(^3\). Primary consideration in manufacturing a denture is selection of maxillary anterior artificial tooth\(^4\).

The lost masticatory function, esthetics, phonetics and maintenance of the patients general and oral health can be restored with one of the modalities of Prosthodontics, namely, THE COMPLETE DENTURES. Among all, esthetics is one of the most important factors to be taken in to consideration by prosthodontist in the selection of anterior teeth for an edentulous patient where no pre-extraction records are available. In edentulous patients we select teeth which are to be accommodated in anterior and posterior segment of upper jaw, depending upon the space available.

Anterior teeth normally should extend mesiodistally up to the canine eminence of either side. This also holds good for the posterior teeth that are distal to canine. All teeth must be accommodated between the ascending slope of the residual alveolar ridge anterior to retromolar pads in lower jaw and between maxillary tuberosities in upper jaw. Such normal procedure is being followed keeping in view the preservation of remaining natural tissue and achieving
maximal masticatory efficiency. Meticulous selection of teeth and its orientation improves facial profile of the patients because about seventy percent of the appearance in lower half of the face depends up on the teeth, particularly the shape of the anterior teeth has some definite relation with shape of face and the harmonious relation between the shape of the face of an individual improves the facial appearance of that individual.

In the selection of anterior teeth not only the shape and the color but also the size which includes length, width and thickness of anterior teeth has paramount importance for esthetics.

Natural tooth shape and size varies from one individual to other. In absence of pre-extraction records exact shape and size of teeth cannot be determined. The anterior teeth are selected for edentulous patients under certain guidelines. These guidelines have been evolved by research and experiences of professional people. The guidelines which are recommended and being followed in selection of maxillary anterior teeth in our country are based on data obtained from investigation carried out on western population. Shape and size of teeth vary from one race to other and people from one continent to the other. Presently there are many studies.

Hence it was planned to establish the relations if any between some fixed reference points of the face and cranium and maxillary anterior teeth. This relationship would help in selection of artificial maxillary anterior teeth for edentulous patients in the subcontinent. The properly selected anterior teeth as far as practicable should represent natural teeth of the same individual in respect of size, shape and color. With the existing guidelines many methods have been suggested which help in selecting anterior teeth for their length, width and color. These methods satisfy the need to certain extent. But definite method for selecting the width of anterior teeth is still lacking particularly for individual patient in Indian population. Increased or decreased width of anterior teeth markedly affects the esthetics of the patient wearing artificial denture. So this study has been kept limited only to find out the width of all upper anterior teeth and also to establish any existing constant relation between the total width of upper anterior teeth and certain fixed anatomical land marks of cranium and face such as width horizontal cranial circumference, inter-zygomatic distance and interalar distance. For this study the following methods were planned to measure fixed anatomical landmarks.
1. Horizontal cranial circumference was measured by passing a nylon measuring tape from glabella to inion and then up to the accuracy of 0.1cm.
2. Interzygomatic distance was measured by face bow from one zygion to the other and then metallic scale up to the accuracy of 0.1cm.
3. Interalar distance was measured by vernier calipers up to the accuracy of 0.1cm.
4. The mesiodistal width of maxillary anterior teeth were measured in the patients mouth by vernier calipers and then on metallic scale up to the accuracy of 0.5mm.

From the above reference points we have obtained some consistent record obtained with that of mesiodistal width of upper anterior teeth which might give a constant relation.