

# EGYPTIAN DENTAL JOURNAL

OFFICIAL ORGAN OF THE EGYPTIAN DENTAL ASSOCIATION

## ACCEPTANCE FORM

10/12/1996

TITLE:

The evaluation of the triangular relationship of the tips of the primary cusps (the TRIGON) of the first permanent molar in Egyptians.

AUTHORS:

Dr Medhat A. EL Zainy.

Dr Gammal Zulhemma

DATE FIRST RECEIVED

10/12/1996

RECEIVED AFTER REVISION

10/12/1996

Dear Colleague,

With reference to your above mentioned submitted paper, I am pleased to inform you that the advisory committee has recommended acceptance of your paper for publication.

The paper will therefore be published in the 1999 issue of the journal.

1999  
↓  
Vol 44 Number 4

THE EDITOR

D. 10/12/96



# 1.

## **The evaluation of the triangular relationship of the tips of the primary cusps ( the Trigon)of the first permanent molar in Egyptians.**

**BY**

Prof. Dr .Medhat A.EL Zainy& Dr. Gammal Zulhemma

### **Abstract.**

436 Egyptian persons of class 1 occlusion at the age of 20-25 year (218 males and 218 females) were used in this study. Alginate impressions were taken for maxillary dental arches of these persons and poured into plaster stone casts which were utilized for determination of the triangular relationship of the tips of primary cusps(Trigon) of the first permanent molar in both male and female Egyptian dental arches Each maxillary dental stone cast was photographed on Xerox duplicating machine twice,the first one was at the same cast size and the other was magnified.Certain reference points on the tips of mesiobuccal cusp, distobuccal cusp and mesiolingual cusp were marked on the casts and their photographs for the determination of the required dimensions and relations. The form of dental arch was determined according to the classification of Renner (1984) .

### **Introduction.**

Anatomically the first molar represents the prototype or basic pattern of the human permanent maxillary molars since the second and third molar differ from it morphologically only with regard to the appropriate interrelationship of their component parts.in addition the first molar is the largest of the three permanent molars and show the least morphological variations. The outline of the first molar occlusaly is square to rhomboidal. The mesiobuccal cusp and the distolingual angles are acute while the distobuccal and mesiolingual angles are obtuse. The occlusal table consists of two separate and distinct components. The trigon bears three cusps,the two mesial and distobuccal cusps. The talon consists of a single cusp,the distolingual cusp and the distalmarginal ridge ( *Krause et al. 1969*)

The three largest cusps (mesial cusps and distobuccal cusp) are arranged in a pattern typical of maxillary molars. They are linked together in a tricuspate- triangular pattern by:

1. The buccal cusp ridges which form the base of the base of the triangle.
2. The mesial ridge which form the mesial side of the triangle.
3. The oblique ridge which crosses diagonally across the occlusal surface to form the the distal side of the triangle.

If straight lines are drawn connecting the tips of the mesiobuccal, mesiolingual and distobuccal cusps,in most cases,the resultant figure will approximate an equilateral