

ANATOMICAL EVALUATION OF ROOT APEX MORPHOLOGY IN FRONTAL MAXILLARY TEETH

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INTRODUCTION: The success of root canal therapy is dependent on the clinician's knowledge of root canal morphology with goal to precisely locate all canals, properly clean, shape and obturate the canal space.

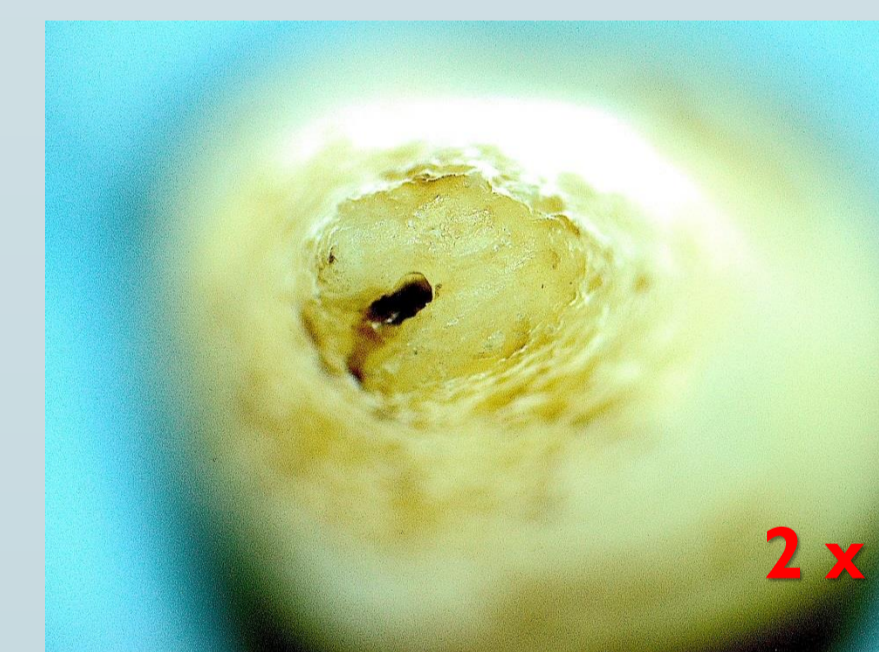
AIM: The aim in our study was to determine the morphologic shape and position of the root apex and the major foramen in maxillary teeth.

MATERIAL and METHOD: A total of 100 maxillary human frontal maxillary teeth with completely formed apices were evaluated. Each root specimen was measured at each root apex by using a calibrated microscope at magnification of 2X; 4,5X; 50X. The anatomic parameters evaluated were the shapes of peripheral contours of major apical foramen (rounded, oval, asymmetric, semilunar) and the root apex (rounded, flat, beveled, elliptical). The location was recorded and classified as center, buccal, lingual, mesial, or distal surface for both root apex and the major apical foramen.

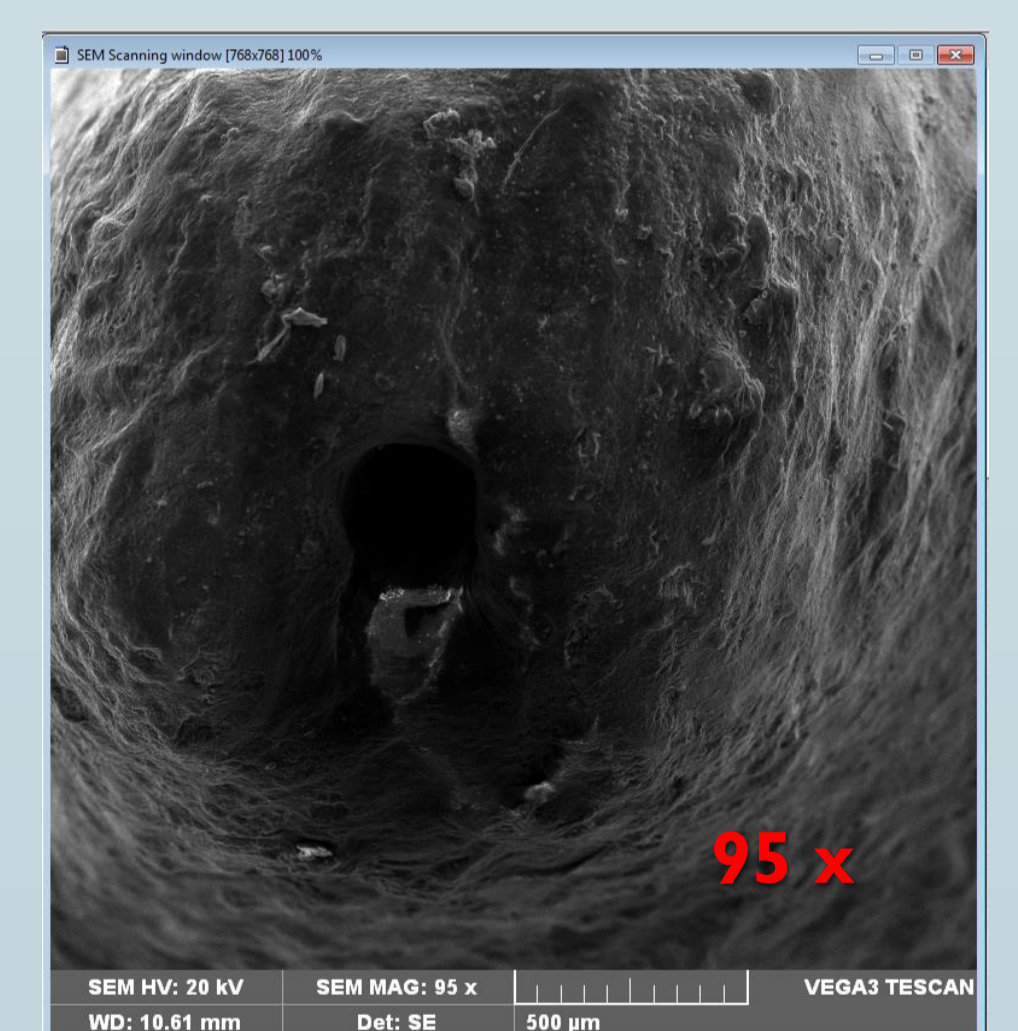
RESULTS:

MORPHOLOGY OF THE ROOT APEX					
TOOTH	ROUNDED (%)	FLAT (%)	BEVELED (%)	ELIPTICAL (%)	N
INCISORS	12 (35)	9 (25)	7 (20)	7 (20)	35
CANINES	8 (23)	7 (20)	5 (14)	15 (43)	35

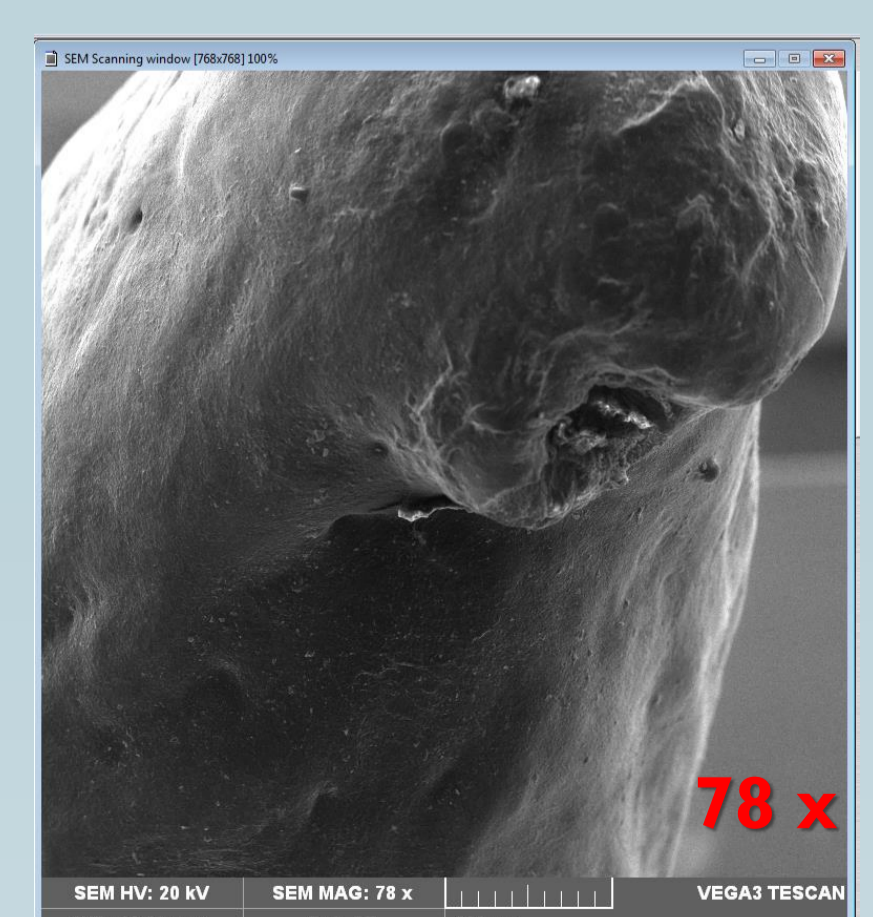
MORPHOLOGY OF THE MAJOR FORAMEN					
TOOTH	ROUNDED (%)	OVAL (%)	ASIMETRIC (%)	SEMILUNAR (%)	N
INCISORS	16 (46)	9 (26)	6 (17)	4 (11)	35
CANINES	15 (43)	9 (25)	7(20)	5 (12)	35



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CONCLUSION: The most common morphology of the root apex in incisives and canines was the round shape. The most common shape of the major foramen in all groups was round, followed by oval. The root apex was most commonly located in the center in all groups followed by distal and buccal locations.