## MANDIBULAR MOLARS, 3D RECONSTRUCTION AND CONFIGURATION OF THEIR MORPHOLOGICAL VARIATIONS K.LYROUDIA,C.CHATZIKALLINIKIDIS,A.DINGA AND I.PITAS Stoma,no 27,pp. 281-286,1999

During the last decade a number of articles studied the morphology of mandibular molars. The C-shaped root canal, an unusual anatomic configuration has been reported in studies referring to the mandibular second molar. The purpose of this study was a three-dimensional reconstruction of six free of caries mandibular molars. The teeth were embedded in a twophase polyester resin. Serial cross sections were taken from each tooth and were digitized. Contours of the external as well as the internal borders of the teeth were followed and a semiautomatic alignment of the sections were achieved by using image processing techniques. The next step was the trhee-dimensional representation of the outer susface of the teeth, as well as of the root canal surface, with the use of the triangulation method.

This method allowed as to model and visualise the external and the internal anatomy of the teeth under study. Four of these teeth were second molars and two were first molars. The classical morphology as well as a number of variations, such as 1) a three-rooted C-shaped mandibular molar, 2) a three-rooted first mandibular molar, 3) a double-rooted tooth with four root canls were visualized through the 3D reconstruction method.

The above mentioned technique has been proved to be a very useful one for the study of the morphological features of the mandibular molars.