

# Turkish Journal of Medical Sciences



Turkish Journal

of

Medical Sciences

## A Morphometric Evaluation of Some Important Bony Landmarks on the Skull Base Related to Sexes

Aynur Emine ÇİÇEKÇİBAŞI, Khalil Awadh MURSHED, Taner ZIYLAN, Muzaffer ŞEKER, Işık TUNCER  
Department of Anatomy, Meram Faculty of Medicine, Selçuk University, Konya - Turkey

 [Keywords](#)  
 [Authors](#)



[medsci@tubitak.gov.tr](mailto:medsci@tubitak.gov.tr)

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**Abstract:** The purpose of this study is to evaluate the morphometric measurements of some important bony landmarks on the cranial base and to determine their relationships between the sexes and their bilateral differences. In this study, 60 (34 male and 26 female) skulls were obtained from the teaching skeletal collections at the Anatomy Department of Meram Medical School, Selçuk University. The axial length of the occipital condyles (ALOC), the anterior intercondylar distance (AICD), the sagittal intercondylar angle (OICA), the transverse and sagittal diameters of the jugular foramen (TDJF) and (SDJF), the distance from the apex of the mastoid process to the outer border of the jugular foramen (MJ), the distance from the apex of the mastoid process to the outermost lateral point of the foramen magnum (MFM) and the distance from the apex of the mastoid process to the center of the external opening of the carotid canal (MCF) were measured by using a millimetric sliding caliper and a goniometer. Student's t- test was used to compare the male-female and right-left measurements. To determine the relationships between the studied parameters, Pearson correlation coefficients were calculated. The results showed that the ALOC of both sides and the AICD parameters were significantly longer in males than in females ( $P < 0.01$ ). Bilateral differences in the studied parameters showed that the measurements on the right side were significantly greater than those on the left in the MCF, MFM, SDJF and TDJF. Significant associations were found among some of the studied measurements. We believe that the results of this study may be useful in cases of cranial base surgery, moreover a knowledge of the anatomical relationships and features of this region is very important for surgical approaches.

**Key Words:** Skull base, occipital condyles, jugular foramen, measurements

Turk J Med Sci 2004; **34**(1): 37-42.

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