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Abstract

Internal acoustic porus is a space that opens to the posterior part of the petrous part of the temporal bone that goes inside the facial nerve, vestibulocochlear nerve, intermedial nerve and labyrinth artery. The purpose of this study is the assessment of the internal acoustic porus from a morphometric perspective, determination of the shape of the hole and determination of the distance to some important anatomic formations. This study is conducted on 57 temporal bones with unknown gender information which are part of the skull collection in Necmettin Erbakan University Meram Medicine Faculty and Karatay University Medicine Faculty, Anatomy Department. In this study, the vertical (PAIV) and horizontal (PAIH) diameter of the internal acoustic meatus, its distance to the bottom (PAILA) and top (PAIU) sides of the posterior part of the petrous bone, its distance to the superior sagittal sinus (PAIS) and its distance to the apex of the petrous part (PAIAp) were measured. Moreover, in this study the internal acoustic meatus spaces are categorized into five groups as circular, oval, U-shaped, fissure and irregular. Digital caliper was used for internal acoustic meatus measurements. While the vertical and horizontal diameters of the internal acoustic meatus on the right side are 4.42±1.21 mm respectively, they are 4.68±1.08 mm and 7.10±1.38 mm on the left side respectively. We have observed in this study, 14 (24.6%) of the internal acoustic meatus as circular, 13 (22.8%) as oval, 11 (19.3%) as U-shaped, 5 as fissure and 14 as irregular. We believe that these measurements can provide guidance and help in surgical procedures.

Key words: Internal acoustic meatus, cranium, internal acoustic porus, os temporale

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