

Morphological Variations of the Foramen Magnum in Adult Human Dry Skull in South Indian Population

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Abstract

Foramen Magnum (FM) is present at the lower part of the occipital bone. It is a landmark for the anthropology, anatomy, forensic medicine, surgeons and other Medical fields for the skull base. The aim is to determine the structural (shape) variations in adult dry skulls. A study was carried out on 50 dry and undamaged adult human skulls. Specimens were used from the Department of Anatomy of Sree Balaji Dental College and Hospital and Sree Balaji Medical College and Hospital under Bharath University. The shape of foramen magnum of each skull was visually assessed. They were noted and classified as round, oval, hexagonal, tetragonal and egg shaped. Hence the most common shape of FM was found to be Tetragonal in 17(34%) skulls; followed by hexagonal shape in 9 (18%) and round shape in 9 (18%) skulls. The Egg shaped foramen magnum was found in 8 (16%) skulls and Oval shaped foramen magnum was present in 7 (14%) skulls. The recognition of size and shape of the foramen magnum is helpful to neurosurgeons in craniovertebral surgical approaches as well as in posterior cranial fossa surgeries. Data of the present study may apply to neurosurgeons, anthropologist or forensic persons. KEY WORDS:- Foramen magnum, Skull, Anatomical variations, Morphometric analysis, shape, structure, occipital bone, posterior cranial fossa, South India.

INTRODUCTIO