

The Morphological and Morphometrical Evaluation of the Bores That Transmit Emissary Veins in Terms of Surgery

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Abstract : The complications such as bleeding, thrombosis and air embolism depend on injuries emissary veins is often encountered in surgery. Detailed descriptions of the mastoid foramen, occipital foramen, parietal foramen, posterior condylar canal and foramen vesalius are lacking in the literature. For this reason, the purpose of our study was to explore and represent the morphology and morphometry of these emissary foramina in order to prevent complications and to guide for surgeons. The present study was made on 60 dry human skull in the laboratories of Pamukkale University, Faculty of Medicine Department of Anatomy. After taken photograph of emissary foramens by Canon 650D professional camera, the evaluation and measurement's these foramens made with Matlab program by computer. The overall prevalence of mastoid foramen was 90.52%, occipital foramen was 72.52%, parietal foramen was 42.85%, posterior condylar canal was 91.25% and foramen vesalius was 78.26%. The mean diameter of the mastoid foramen was 1.81 ± 0.76 mm, occipital foramen was 1.20 ± 0.25 mm, parietal foramen was 1.49 ± 0.46 mm, posterior condylar canal was 2.83 ± 1.33 mm and foramen vesalius was 1.74 ± 0.60 mm. Distances between emissary foramina and fixed bony landmarks were measured. Emissary veins are important in clinic practice and surgical procedures because they act a route of spread of extracranial infection to the intracranial structures and these veins may be a significant bleeding during surgery of the skull and they can be source of thrombosis and air embolism. The detailed anatomical knowledge of these veins and foraminas may help to prevent complications and to guide for surgeons.

Keywords : emissary foramina, mastoid foramen, occipital foramen, parietal foramen, posterior condylar canal, foramen vesalius, morphology, morphometry

Conference Title : ICMMA 2015 : International Conference on Microscopic and Macroscopic Anatomy

Conference Location : Barcelona, Spain

Conference Dates : August 17-18, 2015