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with its own tendon. Based on the anatomical definitions of the variant muscle mentioned above, we suggest that this formation of the muscle can be described as an accessory piriformis muscle (APM), rather than a slip or a bundle of the PM. Additionally, the SN diverged into the common fibular (CFN) and tibial (TN) divisions deep to the PM. We also observed two inferior gluteal nerves (IGN). The TN, one of the IGN and pudendal nerve were found to be emerging from the lower border of the APM, while the CFN, posterior femoral cutaneous nerve (PFCN) and the other IGN were located between the PM and the APM. The CFN and TN were coursing separately throughout the posterior thigh. On the right side PM, course of SN and the other nerves were observed as usual.

Conclusion: The most of the previous authors have reported the entrapment of the sciatic nerve or its divisions caused by the duplicated PMs. Similarly, the entrapment by the PM and APM could be considered as a potential cause of PS. In the light of all these findings, the possible existence of combined variations of the PM and related nerves, especially the nerves from the dorsal part of the sacral plexus, might be crucial for certain surgical approaches in the gluteal region and must be acknowledged by the surgeons.

Keywords: piriformis muscle, accessory piriformis muscle, sciatic nerve, regio glutealis

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Surgical anatomy of ventral C1-2 complex: a cadaveric study

Çırpan S[1], Sayhan S[1,2], Yonguç GN[1], Eyüboğlu C[1], Güvençer M[1], Naderi S[3]

[1]Department of Anatomy, Faculty of Medicine, Dokuz Eylül University İzmir, Turkey; [2]Clinics of Neurosurgery, Denizli Özel Ege Hospital Denizli, Turkey; [3]Department of Neurosurgery, Health Sciences University, Ümraniye Education and Research Hospital, İstanbul, Turkey

Objective: Transoral odontoidectomy (TO) is an important surgical procedure performed to decompress ventral spinal cord. A careful TO requires knowledge regarding surgical anatomy of the ventral C1-2 complex. The aim of this study is to evaluate the relation of ventral C1-2 complex with neurovascular structures and evaluate anatomical data of ventral C1-2 complex.

Methods: This study was performed on six 10% formalin fixed cadaveric head and neck specimens. Relevant anatomical parameters, including distances between the midline and each internal carotid arteries (ICA), each vertebral arteries (VA), and each hypoglossal nerves (HN), distance between C1 anterior tubercle and the superior dentes incisivus (SDI), height of the C1 anterior arcus, width and height of articular surface of dens axis, were measured by using electronic calipers.

Results: The distance between ICA and midline were 24.73 mm, 24.51 mm at the level of the atlas, and 26.32 mm and 25.92 mm at the level of axis, in right and left sides, respectively. The distance between VA and midline were 26.38 mm and 26.69 mm at the level of the atlas, and 15.44 mm and 15.31 mm at the level of axis, in right and left sides, respectively. The distance between HN and midline were 33.78 mm and 32.76 mm at the level of the atlas, and 33.51 mm and 33.65 mm at the level of axis, in right and left sides, respectively. The distance between the nares and the nasopharynx was 96.16 mm. The height of C1 anterior arch was 13.89 mm. The distance between the anterior tubercle of the atlas and SDI was 84.14 mm. The width and height of articular surface of axis were found to be 8.68 mm 11,64mm, respectively.

Conclusion: A safe to requires knowledge about ventral C1-C2 relationships, particularly regarding distances to neighboring neurovascular structures.

Keywords: atlas, axis, C1-2 complex, craniovertebral junction

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Lumbosacral transitional vertebrae: lumbarization – an anatomical study

Yonguç GN[1], Çırpan S[1], Sayhan S[1,2], Eyüboğlu C[1], Güvençer M[1], Naderi S[3]

[1]Department of Anatomy, Faculty of Medicine, Dokuz Eylül University İzmir, Turkey; [2]Department of Neurosurgery, Denizli Özel Ege Hospital, Denizli, Turkey; [3]Department of Neurosurgery, Ümraniye Education and Research Hospital, Health Sciences University, İstanbul, Turkey

Objective: Lumbo-sacral transitional vertebrae (LSTV) are common congenital anomalies. The incidence of this anomaly was observed from 3% to 30%. The aim of this study was to investigate the incidence and types of the lumbarization in dry human sacra.

Methods: One-hundred ten dried human sacra with unknown ages and gender belonging to the Anatomy Department Laboratory were examined macroscopically. At the S1-S2 level, the distance between vertebral bodies anteriorly and posteriorly; spinous process, transverse process, inferior articular process, and lamina of the vertebral arch were evaluated. The distance between vertebrae bodies were determined by dividing into 3 zones from right to left.

Results: We observed the LSTV on 24 sacra (21.82%). While performing the anterior aspect to the association between vertebral bodies of sacrum at S1-S2 level, we determined that it was completely unfused in 8 (33.33%) sacra whereas completely fused in 1 sacrum (4.17%). We observed gaps between vertebral bodies of sacrum at S1-S2 level, and these gaps have been located in 1 (4.17%) sacrum at first zone, in 11 (45.83%) sacra at second zone, in 1 (4,17%) sacrum at first and second zone and in 2 (8.34%) at first, second and third zone. While performing also the posterior aspect to the association between vertebral bodies of sacrum at S1-S2 level, we determined that it was completely unfused in 5 (20.83%) sacra whereas completely fused in 16 (66.66%) sacra. There were gaps between vertebral bodies of sacrum at S1-S2 level, and these gaps have been located in 1 (4.17%) sacrum at first zone, in 1 (4.17%) sacrum at second zone and in 1 (4.17%) sacrum at third zone. The transverse process and the articular process of sacral vertebrae at S1-2 level were completely fused bilaterally, in all 110 of sacral specimens. Lamina of the vertebral arches were uni-