Anatomic assessment of variations in Kambin's Triangle: A Surgical and Cadaver study

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The relationship of exiting root and Kambin's triangle is discussed in this article. Transforaminal endoscopic surgery as the gold standard of less invasive lumbar disc surgeries is performed through Kambin's triangle. Existing root damage is one of the most important complication for this type of surgery. Anatomic variations in Kambin's triangle may be the main reason for nerve root damage during endoscopic lumbar disc surgery.

Kambin's triangle was investigated with surgical views and cadaver studies. Thirty-four patients with far lateral disc herniation were treated with an extraforaminal approach under the microscope. On the other hand, 48 Kambin's triangles were dissected on 8 cadavers. Three main types of triangle were identified, and patients were grouped according to these 3 types of the triangle.

Only 6 of the 34 patients had type 3 triangles, which is the wide classical triangle described by Kambin; however, 17 patients had type 2, with a narrow space in the triangle, and 11 patients had type 1, with no space inside the triangle. Cadaver results were similar; only 10 of the 48 specimens had the type 3 classical triangle, whereas 23 specimens had type 2, and 15 specimens had type 1 triangles. Our results disclosed narrowed or no space in 82.4% of the patients and 79.2% of the cadavers.

We observed that a wide and safe room of the triangle may not be exist in some patients. Therefore, more care must be taken during endoscopic lumbar disc surgery to avoid nerve damage.

Speaker Biography

Ali Fahir Ozer is currently working as a Neurosurgeon and academic staff at the Koc University, Department of Neurosurgery, and at the VKV American Hospital (Istanbul, Turkey). His Clinical interest focuses on spine surgery. Dr. Ozer's research focuses on biomechanics Of spine, and dynamic stabilization of spine. He has authored or co-authored well over 70 papers. He is the member of advisory board and reviewer of many scientific journals. Currently, he is a member of TNS, ISAS, NASS, AOSpine, and Eurospine.

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