



Prof. Dr. Kadir Kotil anısına

XIV Uluslararası Türk Omurga Kongresi

“Yaşlanan Omurga”

25-28

MAYIS

2022

İzmir
Wyndham
Grand İzmir

KONGRE KİTABI





25 MAYIS 2022, ÇARŞAMBA

SALON 1

SESSION 4

16.45-17.45 **Challenges in osteoporotic vertebral fractures** **Moderators: Dr. Esat Kiter, Dr. Deniz Konya**

16.45-17.00	Management of osteoporotic insufficiency fractures of sacrum	Dr. Cumhur Öner
17.15-17.30	Complications & revisions in surgical management of osteoporotic vertebral fractures	Dr. Cumhur Öner
17:30-18:00	Case discussions	Dr. Esat Kiter, Dr. Deniz Konya

18.00-18.20	Açılış Konuşmaları Kongre Başkanı Kongre Başkanı TOD Başkanı	Dr. Ömer Akçalı Dr. Mehmet Zileli Dr. Erdal Coşkun
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18.20-19.20 **YILIN BİLDİRİLERİ** **Oturum Başkanları: Dr. Hasan Kamil Sucu, Dr. İ. Safa Satoğlu**

S001	Loads At Adjacent Segment Level Before And After Surgery – Combined Clinical And Simulation Study Of 205 Adult Spinal Deformity Patients Cağlar Yılmaz	
S002	Behavior of $\geq 30^\circ$ Upper Thoracic Curves After Thoracoscopic VBT for Main Thoracic Curves: A Matched Cohort Analysis Cağlar Yılmaz	
S003	Aksis (C2 Anatomisi) Ve Yüksek Yerleşimli Vertebral Arter Vakalarında Vertebral Arter Mobilizasyonu İle C2 Pedikül Vida Yerleştirilmesi, kadavra Diseksiyonu Ferhat Harman	
S004	Servikal Spondilolitik Miyelopati Olgularında Dekompresyon Ve Posterior Stabilizasyon Cerrahisi Sonrası Posterior Longitudinal Ligament Ve Disk Kompleksinin Prospektif İncelenmesi Ali Erhan Kayalar	
S005	Tamamlayıcı Görüntüleme Yöntemi: Rasterstereografinin Kullanılabilirliği ve Radyografi ile Validasyonu Altug Yucekul	



S-003

AXIS (C2 ANATOMY) AND MOBILIZATION OF VERTEBRAL ARTERY AND C2 PEDICLE SCREW PLACEMENT IN CASES OF HIGH RIDING VERTEBRAL ARTERY, CADAVERIC DISSECTION

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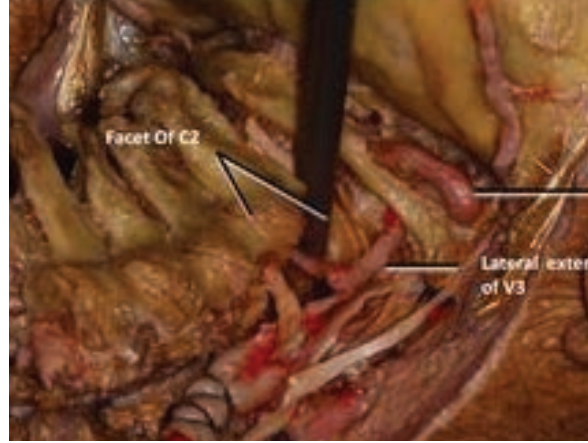
Introduction: C2 vertebrae differs significantly from other vertebrae in terms of anatomy and mobility (1). If there is a need for screw placement due to pathologies related to the axis, surgery can be performed with anterior or posterior approaches. The most important complications that may occur during the posterior approach are the development of neurological damage and vertebral artery (VA) injury. The distinct anatomical structure of the C2 vertebra and the possibility of a high-riding vertebral artery increases the risk of the spinal cord and VA injury while inserting the C2 pedicle screw (2). It is possible to reduce the risk of the spinal cord and VA injury by releasing the vertebral artery within the C2 transverse foramen and inserting the pedicle screw directly into the corpus (3). In this study, the authors aimed to demonstrate the vertebral artery mobilization for safe pedicle screw placement on the cadaveric specimen.

Methods: This study was conducted with the permission and decision of the University Clinical Research Ethics Committee (09.2021.488). Twelve adult and two adult dry cadaveric C2 bones were used. Colored silicone was injected into the arteries and veins of these twelve cadaveric specimens. Then, muscle dissection was performed step by step and the C2 vertebrae of the cadavers were revealed. Each stage was photographed with a 3D photography technique by Canon EOS.

Results: When it is necessary to expose the vertebral artery, it is safer to feel and expose the vertebral artery half a centimeter lateral to the C1-C2 facet joint. On the other hand, the vertebral artery was found at the transition place of V2 to V3 where it leaves the C2 vertebrae by exiting the transverse foramen. The posterior facet wall above this transition place was released by removing around half a centimeter medially with the help of a Kerrison Rongeur and a high-speed drill and then the vertebral artery groove of the C2 facet was felt with the dissector. The vertebral artery was mobilized inferolateral with the help of the dissector and the safe zone was created for C2 corpus screw placement. (Figure 2)

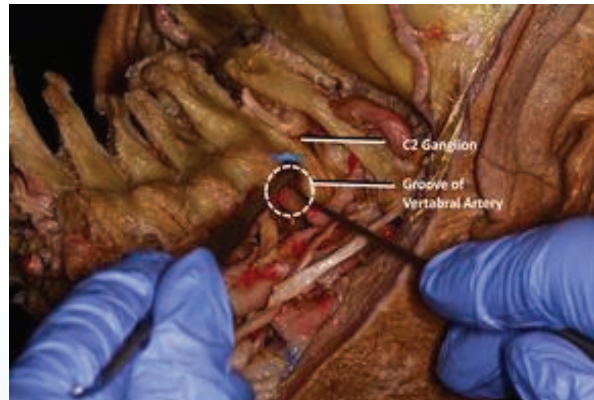
Conclusion: C2 transpedicular screw technique provides stronger biomechanical stability compared with the translaminar and the facet screw fixation (4). However, this technique is risky in high riding vertebral artery cases. Therefore, identification and mobilization of the vertebral artery may reduce the risk of transpedicular screw insertion in the cases of high riding vertebral artery.

Figure 1



Exposing and mobilization of high riding vertebral artery

Figure 2



The blue star shows entry of pedicle screw.

Keywords: axis, c2 vertebra, high riding vertebral artery, pedicle, screw

Kaynakça:

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