

Procedure for Central and Over-the-Top Full-Endoscopic Cervical Spine Decompression: A Technical Note

Wiouel Hiu*

Department of Neurology, Cathay General Hospital, Hsinchu, Taiwan

Introduction

The management of cervical spine pathologies has evolved significantly over the years, with a shift towards minimally invasive techniques aimed at reducing surgical morbidity and improving patient outcomes. Central and over-the-top full-endoscopic cervical spine decompression has gained popularity as an innovative approach to treat conditions such as herniated discs, spinal stenosis, and foraminal stenosis [1]. This technical note provides an in-depth overview of this procedure, including its background, indications, patient selection, surgical technique, potential complications, and post-operative care. Cervical spine pathologies can cause debilitating symptoms such as neck pain, radiculopathy, and myelopathy. In the past, open surgical procedures, including Anterior Cervical Discectomy and Fusion (ACDF) or posterior laminectomy, were the primary options for decompression. While effective, these approaches are associated with potential complications, including prolonged recovery times, muscle disruption, and the risk of adjacent segment disease. The emergence of full-endoscopic techniques offers an alternative that minimizes tissue damage, reduces postoperative pain, and shortens the recovery period [2,3].

Description

When conservative treatments fail to relieve symptoms caused by a herniated disc, full-endoscopic decompression can be considered. This technique allows direct visualization and removal of the herniated material, relieving pressure on the spinal cord or nerve roots. Patients with central canal stenosis or foraminal stenosis may benefit from endoscopic decompression. This procedure helps to enlarge the spinal canal or foramen, alleviating pressure on neural structures. Full-endoscopic surgery is particularly effective for foraminal stenosis, where the exiting nerve root is compressed as it passes through the neural foramen. This technique can precisely target the affected area without disrupting adjacent structures. In cases of cervical myelopathy, endoscopic decompression can be a viable option for relieving spinal cord compression, thereby improving neurological deficits and preventing further deterioration. Patients with recurrent symptoms after a previous surgical procedure, such as ACDF, may benefit from endoscopic decompression as it avoids the need for additional fusion and preserves motion in the spine. Proper patient selection is crucial for the success of central and over-the-top full-endoscopic cervical spine decompression. Patients should have symptoms corresponding to their radiological findings. Imaging studies, such as MRI or CT scans, are essential for identifying the source of compression [4,5]. Patients should have exhausted conservative treatments, including physical therapy, medications, and injections, without experiencing significant

*Address for Correspondence: Wiouel Hiu, Department of Neurology, Cathay General Hospital, Hsinchu, Taiwan, E-mail: wiouelh@gmail.com

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relief of symptoms. Patients with severe cervical spine instability are not good candidates for full-endoscopic decompression, as this procedure is not designed to address significant structural issues. Patients must understand the limitations of full-endoscopic decompression and have realistic expectations regarding its outcomes [6].

Conclusion

In conclusion, central and over-the-top full-endoscopic cervical spine decompression is a promising technique for the treatment of various cervical spine pathologies. It offers several advantages over traditional open procedures, including reduced tissue disruption, quicker recovery, and improved patient outcomes. However, it is essential to carefully select appropriate candidates and educate them about the procedure's benefits and potential complications. By following proper surgical techniques and post-operative care protocols, surgeons can help patients regain their quality of life and effectively manage their cervical spine conditions with minimal disruption. As with any surgical procedure, a thorough discussion with a qualified spine specialist is crucial to determine the most suitable approach for each individual patient.

Acknowledgement

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Conflict of Interest

None.

References

1. Ruetten, Sebastian, Martin Komp, Harry Merk and Georgios Godolias. "Full-endoscopic cervical posterior foraminotomy for the operation of lateral disc herniations using 5.9-mm endoscopes: A prospective, randomized, controlled study." (2008): 940-948.
2. Gatam, Asrafi Rizki, Luthfi Gatam, Phedy and Harmantya Mahadhipta, et al. "Full endoscopic posterior cervical foraminotomy in management of foraminal disc herniation and foraminal stenosis." *Orthop Res Rev* (2022): 1-7.
3. KT, Foley. "Microendoscopic discectomy." *tech neurosurg* 3 (1997): 301-307.
4. Yeung, Anthony T. "The evolution and advancement of endoscopic foraminal surgery: One surgeon's experience incorporating adjunctive technologies." *SAS j* 1 (2007): 108-117.
5. Wirth, Fernanda, Esthael Cristina Querido Avelar Bergamaschi, Fabio da Silva Forti and João Paulo Machado Bergamaschi. "Development of Indications for Endoscopic Spine Surgery: An Overview." *J Int Med Res* 3 (2023): 321-333.
6. Gibson, JN Alastair, Ashok S. Subramanian and Chloe EH Scott. "A randomised controlled trial of transforaminal endoscopic discectomy vs microdiscectomy." *Eur Spine J* 26 (2017): 847-856.

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