

Case report

Cervical plate fracture: a rare complication

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Abstract

In traumatic and degenerative diseases cervical fusion with anterior cervical plate are commonly used. The increase in the use of cervical plate segment level is also increased risk of developing complications. This case report shows that the increase in the use of cervical plate segment level and also the complications in cervical spinal instrumentation, short-segment cervical plate rare case reported to be broken.

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Introduction

Cervical fusion with anterior cervical plate in traumatic and degenerative diseases is commonly used [1]. This article discusses the complications in cervical spinal instrumentation and short-segment cervical plate rare cases have been reported to be broken.

Patient and observation

After a motor vehicle accident 18 years old male patient was brought to the emergency department. In neurologic examination; confused of consciousness, left hemiparesis, orientation and cooperation of the examinations in patients with limited, and upon detection level of C5-6 dislocation of grade 2, and patients were included in our service. In addition, patients who had pneumothorax, chest tube was inserted by chest surgery and the patient was operated. The disc of C5-6 space was determined by microscope and C5-6 Anterior cervical discectomy initiative was made using a microscope. One to C5-6 PEEK cage was placed in the disc space, and then plates were placed on anterior C4-C5-C6. Postoperative patients, Glasgow Coma Scale (GCS) as e3m3v neurosurgical intensive care were included. Patients without post-operative problems, was discharged after 2 months. Postoperative patient made physical therapy neck movement for exercise. Therefore, two years after surgery on the occurrence of severe neck pain were admitted again. Anterior cervical plate is broken at the level of the C45 range was determined by x-ray (**Figure 1**).

Discussion

There are still ongoing debates about the pathology of cervical trauma is stable or unstable and intervention which will be banned from the anterior or posterior. Both initiatives have the advantages and disadvantages [2]. In the treatment of traumatic anterior instability ensuring stability cervical plating is very helpful and it is a widespread method in recent years [3, 4]. The goal of treatment of cervical fractures and dislocations: spinal cord protection is to ensure that no damage or more. The resulting distorted spine fracture or dislocation region is rotated normal sequence for stabilization [5]. Plaque stabilization of the anterior cervical spine; provide stability in the patient fully, spinal deformities that may

occur in the post-operative period and decreased inhibition of bone graft migration and in patients the early stages of recovery provides significant advantages [6] After post-treatment of anterior cervical plating stability the specific complications can be listed as screw breakage, migration, plaque fracture, migration, pseudarthrosis formation, esophageal injury [3, 4, 7, 8]. In our case, we determined the grade 2 dislocation, closed subarachnoid space, traumatic disc detection and compression of the medulla from the ventral anterior so we used anterior approach.

Conclusion

After spinal instrumentation early or late in the several complications arise. Cervical plaque rupture is one of them, but in this case, as mentioned, albeit short segments can be broken plates. For this reason, patients should be informed about the stabilization of the neck in the postoperative period and demanding excessive neck movement can cause damage to the instrument should be warned.

Competing interests

Authors declare no competing interest

Authors' contributions

All the authors have contributed to this case report and have read and approved the final version of the manuscript.

Figure

Figure 1: the plate is broken at the level of the anterior disc space C45 is seen

References

1. Stulik J, Pitzén TR, Chrobok J, Ruffing S, Drumm J, Sova L, Kucera R, Vyskocil T, Steudel WI. Fusion and failure following anterior cervical plating with dynamic or rigid plates: 6-months results of a multi-centric, prospective, randomized, controlled study. *Eur Spine J.* 2007 Oct;16(10):1689-94. **PubMed | Google Scholar**
2. Laus M, Pignatti G, Tigani D, Alfonso C, Giunti A. Anterior decompression and plate fixation in fracture dislocations of the lower cervical spine. *Eur Spine J.*1993 Aug;2(2):82-8. **PubMed | Google Scholar**
3. Cho DY, Lee WY, Sheu PC. Treatment of multilevel cervical fusion with cages. *Surg Neurol.* 2004 Nov;62(5):378-85, discussion 385-6. **PubMed | Google Scholar**
4. Hakalo J, Wronski J, Ciupik L. Subsidence and its effect on the anterior plate stabilization in the course of cervical spondylodesis, Part I: definition and review of literature. *Neurol Neurochir Pol.*2003 ;37(4):903-15, Review. **PubMed | Google Scholar**
5. Özer AF, Öktenoğlu T, Kiliç T, Özgen S, Keles GE, Pamir N. Servikal Travrnalarda Plak-Vida Sistemi ile Posterior internal fiksasyon (Posterior Internal Plate - Screw Fixation In Cervical) Trauma Patients. *Türk Nörosirürji Dergisi.* 1995; (5) :65-69. **PubMed | Google Scholar**
6. Deda H, Coskun K, Gökalp HZ, Arasil E, Erdogan A, Tasgioglu AO. Servikal Vertebraların Biomekanik Stabilizasyonunda Anterior Plak Uygulamaları (Anterior Plate Procedures For The Biomechanic Stabilization of Cervical Spine). *Türk Nörosirürji Dergisi.* 1995; (5) :59-64. **Google Scholar**
7. Daffner SD, Wang JC. Anterior cervical fusion: the role of anterior plating. *Instr Course Lect.* 2009, 58:689-98. **PubMed | Google Scholar**
8. Barnes B, Haid RW, Rodts GE, Subach BR, Kaiser M. Early results using the Atlantis anterior cervical plate system. *Neurosurg Focus.* 2002 Jan 15;12(1):E13. **PubMed | Google Scholar**



Figure 1: the plate is broken at the level of the anterior disc space C45 is seen