Anterior Cervical Spine Surgery-Associated Complications

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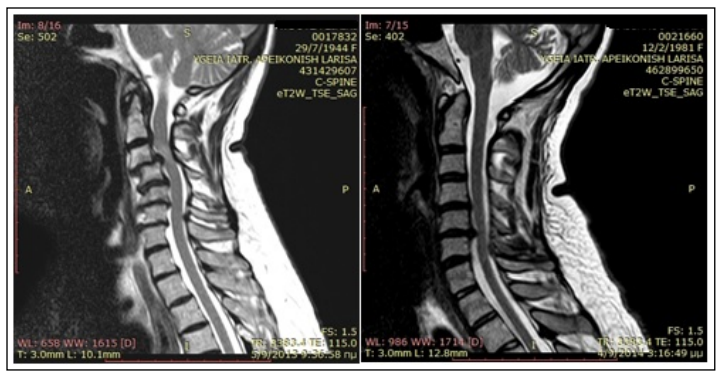
Introduction

Anterior cervical spine procedures have been associated with quite satisfactory outcome in the vast majority of cases. However, the occurrence of troublesome complications, although rare, needs to be taken into consideration. The purpose of our current study is to identify the actual incidence of any anterior cervical spine procedure-associated complications.

Methods

A total of 114 patients (73M and 41F) with a mean age 49.8 years (range 21-82 years), were included in our retrospective study (January 2009 to December 2014). The diagnosis was cervical radiculopathy, and/or myelopathy due to degenerative disc disease, cervical spondylosis, or traumatic cervical spine injury. All our participants underwent surgical treatment, following a standard Smith-Robinson approach. Intraoperative and postoperative complications were recorded. Mean follow-up time was 36.5 months (range 1-72 months).



Results

Anterior cervical discectomy and fusion (ACDF) was the most commonly performed procedure (79%). Fourteen patients (12.3%) underwent anterior cervical corpectomy and interbody fusion, seven (6.1%) ACDF with plating and two patients (1.7%) odontoid screw fixation. One patient underwent surgery for severe Forestier's disease.

The overall complication rate was 13.2% (15 out of 114 patients). Specifically, we encountered **superficial wound infection** in one patient (0.9%), while remarkable postoperative **soft tissue swelling and hematoma** were observed in 1.7%. None of these cases required surgical intervention. Symptomatic **recurrent laryngeal nerve palsy** occurred in 0.9% of our cases, **dural penetration** in 1.7%, **esophageal perforation** in 0.9%, **aggravation of preexisting myelopathy** in 0.9%, abscess due to **tracheoesophageal fistula** in 0.9%, **screw backout** in 0.9%, and **adjacent disc segment degeneration** in 2.7%. **Dysphagia** was observed in 1.7% of them. No deaths occurred.

Complications	Frequency
superficial wound infection	0.9%
soft tissue swelling and hematoma	1.7%
recurrent laryngeal nerve palsy	0.9%
dural penetration	1.7%
esophageal perforation	0.9%
aggravation of myelopathy	0.9%
tracheoesophageal fistula	0.9%
screw backout	0.9%
adjacent disc segment degeneration	2.7%
dysphagia	1.7%

Conclusions

In the majority of cases, anterior cervical spine surgery-associated complications are minor, requiring no further intervention. However, some of them can become disastrous. Awareness, early recognition, and appropriate management, are of paramount importance to improve the overall functional outcome in these patients.

Learning Objectives

By the conclusion of this session, participants should be able to: 1) identify the incidence of anterior cervical spine surgery-associated complications, 2) evaluate the functional outcome in these patients, 3) discuss about the fact that the occurrence of anterior cervical spine surgery-associated complications can occasionally be troublesome.

References

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