Perioperative Complications in Elderly Patients Undergoing Occipitocervical Fusion

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Introduction

Occipitocervical (OC) fusion is a surgical option for complex craniovertebral pathology, but is known to be associated with morbidity. To date, this procedure and its associated perioperative complications have not been extensively studied in the elderly population.

Methods

A retrospective chart review was performed and yielded 41 OC fusion patients, 22 of whom were greater than 70 years of age. Demographic information, surgical indications, operative data, perioperative complications, and neurologic function (pre- and postoperative ASIA grade) of each age group were then compared. Descriptive and comparative statistics were calculated.

Results

The mean age of the elderly group was 78.9 + 5.5 years and 52.1 + 13.3 years in the non-elderly group. Major complications included pulmonary failure, deep wound infection, malnutrition requiring feeding tube placement, pseudarthrosis, and postoperative hematoma. Minor complications included cerebrospinal fluid leak, delirium, and peri-incisional cellulitis. The elderly group had an overall complication rate of 31.2%, a major complication rate of 13.4%, and a minor complication rate of 18.2% The non-elderly group had an overall complication rate of 26.3%, a major complication rate of 21.1%, and a minor complication rate of 5.3%. The difference between groups was not statistically significant. There was no perioperative mortality in either group, nor was there any difference between groups in terms of neurologic recovery. Average follow-up for all patients was 16 months. At last follow-up, 8 total patients were deceased including 18.2% of the elderly group was deceased compared to 21.1% of the non-elderly group.

Conclusions

Overall complication rates for OC fusion for any age group are relatively high. However, the risk of complications following OC fusion surgery in the elderly is not statistically different than for younger patients.

Learning Objectives

By the conclusion of this session, participants should be able to: 1) Describe the indications for occipitocervical fusion, 2) Discuss the potential complications of occipitocervical fusion, and 3) Identify whether older patients are at increased risk of complication following this procedure.