



Intracranial Complications Associated with Spinal Surgery

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Introduction

Though rare, intracranial complications have been reported as a result from spinal surgery. Most if not all of these are a result of intracranial hypotension from durotomy and cerebrospinal fluid (CSF) leak. We aimed to characterize these complications across a large postoperative population at our institution.

Methods

We conducted a retrospective review of all patients who underwent spinal surgery at our institution by four neurosurgeons from July 2008 to August 2013.

Results

Our review yielded 1,113 consecutive patients who underwent spinal surgery for a total of 1,396 procedures. Intracranial imaging using either computed tomography (CT) or magnetic resonance imaging (MRI) were obtained on 59 (4.2%) patients after a procedure due to neurologic change. Six patients (0.4%) were found to have intracranial findings of subdural hygroma (4 patients), remote cerebellar hemorrhage (1 patient), or subdural hematoma (1 patient).

Conclusions

Intracranial complications from spinal surgery are a rare event. We demonstrate an incidence of 0.4% of total intracranial pathology after spinal surgery. A strong clinical suspicion must be maintained after durotomy or CSF leak due to these infrequent but potentially life-threatening complications.

Learning Objectives

By the conclusion of this session, participants should be able to: 1) Describe the importance of how durotomy and CSF leak can cause intracranial complications, 2) Discuss, in small groups, what these complications may be, and 3) Identify the incidence with which these complications can occur in the spine surgery patient population.