Preservation of Myofascial Cuff During Posterior Fossa Surgery to Reduce Rate of Pseudomeningocele Formation: A Technical Note

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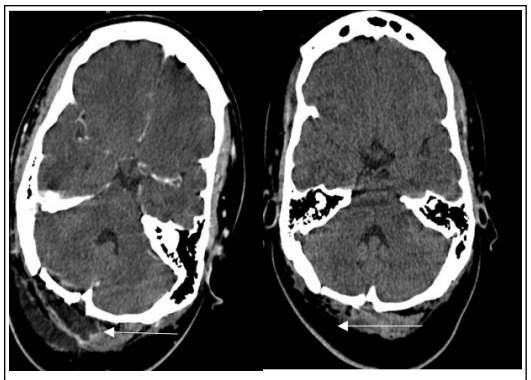
Introduction

The suboccipital craniotomy or craniectomy is a fundamental neurosurgical approach to the posterior fossa. Because of the gravity dependent position, post-operative pseudomeningocele is not an uncommon occurrence. Several surgical nuances emphasize a water tight dural or fascial closure. In addition cerebrospinal fluid diversion can be employed. We attempt to analyze a simple surgical technique that enhances the water tight fascial closure by providing another point for suture attachment.

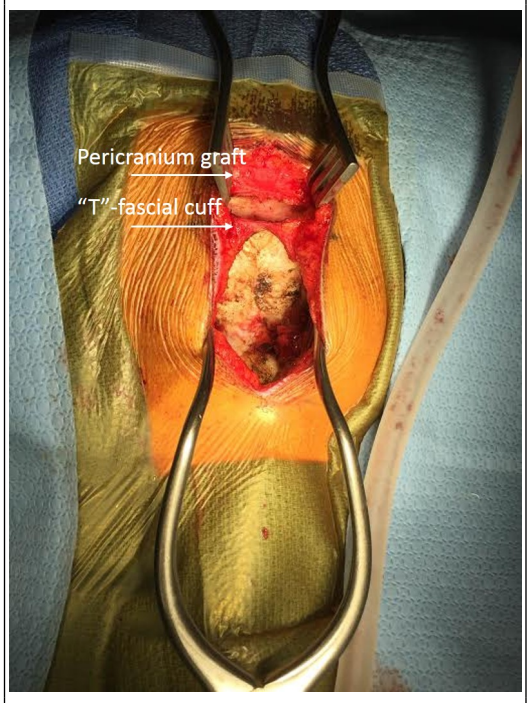


Pseudomeningocele Resolution

Methods

We retrospectively performed a chart review performed by several surgeons from January 2013 to July 2015. We identified 18 patients that underwent a suboccipital procedure for a variety of etiologies.

"T"- Fascial Cuff



"T" - Fascial Cuff

Results

Five patients underwent a suboccipital craniectomy with duraplasty for Chiari. Ten patients underwent a suboccipital procedure for tumor, while the remainder under craniectomy for cerebellar stroke. A craniectomy was performed in 8 patients. Pre-operative hydrocephalus requiring external ventriculostomy was present in 4 patients. No wound revisions were necessary. There was 1 (5%) post-operative pseudomeningocele present that resolved spontaneously, with a separate patient ultimately requiring permanent CSF diversion (7%).

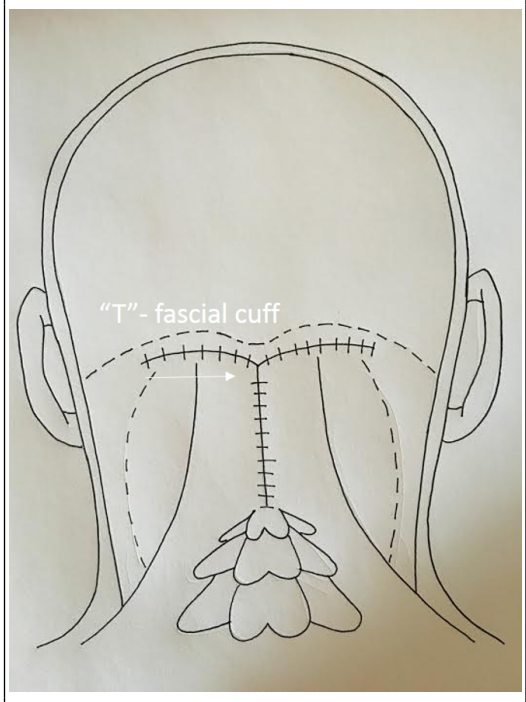
Conclusions

We report a simple surgical technique that resulted in a 5% outcome for permanent CSF diversion with no cases developing infection or requiring wound revision. Although the case series has a limited number, we believe that the technique for fascial closure allowed for decreased symptomatic pseudomeningocele formation and merits more in depth analysis and adoption in surgical practice.

Learning Objectives

Analyze a simple surgical technique that may aid in preventing surgical morbidity

"T" - Fascial Cuff



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