



Conversion of external ventricular drains to ventriculoperitoneal shunts:comparison of utilizing an existing burr hole versus creation of a new burr hole

Alexandra Rose Paul; Constantine E. Plakas MD; Junichi Yamamoto MD PhD; John C. Dalfino MD; Alan S. Boulos MD

Introduction

Many patients who undergo emergent placement of an external ventricular drain eventually require conversion to a ventriculoperitoneal shunt. Some surgeons utilize the exisiting entry site from placement of the EVD while others feel it is safest to create a new entry site. We sought to clarify if there was an increased risk of infection if the existing burr hole was utilized. We also sought to compare the need for further revisions, cost and operative time.

Methods

A retrospective analysis of patients who required ventriculostomy placement followed by a ventriculoperitoneal shunt was performed from January 2010-January 2014. Patients with a history of previously placed ventriculoperitoneal shunts or ventriculitis were excluded. All patients received two standard doses of post operative antibiotics.

Results

Fifty patients were included in the study. Thirty two of the patients(64.0%) had placement of a VPS utilizing a new entry site and 18(36.0%) had placement of a VPS utilizing the exisiting site. The average duration of external ventricular drainage was similar in both groups(16.5 days vs 18.6 days, p=0.37). No patients in either group had a postoperative infection(p=1.0). There was no significant difference in hemorrhage along the catheter tract(p=0.4). Three patients in the new entry site group required proximal revision in less than one month compared to zero patients when the existing site was utilized(p=0.54). There was no significant difference in the average operative time(50 minutes vs 58 minutes, p=0.61).

Conclusions

The use of exisiting EVD sites for placement of permanent VPS was not associated with an increase risk of infection. There was no significant difference in operative time or need for further revisions. Utilizing an existing EVD site does not seem to confer an increased risk of infection or require longer operative time and seems to be a reasonable option when placing a new VPS in a patient with a current EVD.

Learning Objectives

By the conclusion of this session, participants should be able to:

- 1) Discuss the benefits of utilizing an existing burr hole vs creating a new burr hole when converting an EVD to a VPS
- 2) Identify which factors may lead to an increase in cost in both situations

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