



Early experience with Apollo Vibration/suction system for evacuation of intraventricular hemorrhage

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Introduction

The most common management of intraventricular hemorrhage (IVH) associated with hydrocephalus is placement of external ventricular drain (EVD). This strategy could be fraught with problems such as multiple EVD changes, infections and long length of stay in the hospital. We report our early experience with the Penumbra's Apollo vibration/suction system for evacuation of IVH.

Methods

Six patients with pure IVH and hydrocephalus underwent evacuation of hematoma after stabilization with EVD. All patients had vascular imaging to rule out aneurysm or vascular malformation. All patients underwent evacuation of the IVH in the lateral ventricle through a bur hole at the Kocher's points using the Penumbra's Apollo vibration/suction device. Amount of blood in the ventricle before and after the procedure were assessed using CT scan.

Results

All six patients underwent evacuation of the IVH using the Apollo vibration/suction system without any complications. In all six patients comparing the pre and post operative CT scan demonstrated reduction of the blood in the lateral ventricle.

Conclusions

Our early experience with the Penumbra's Apollo vibration/suction system for evacuation of IVH demonstrates feasibility of reduction of the IVH. Future studies will focus on benefits for reduction in hospital stay, EVD changes and placement of Ventriculoperitoneal shunt as well as clinical outcomes.

Learning Objectives

Options for treatment of intraventricular hemorrhage

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