

A Novel Application of the Integra Camino Bolt for the Drainage the Chronic Subdural Hematoma: A Technical Note

Ninh Doan MD PhD; Shekar N. Kurpad MD, PhD; Ha Nguyen MD; Michael Gelsomino; Saman Shabani BS, MD
Department of Neurosurgery, Medical College of Wisconsin

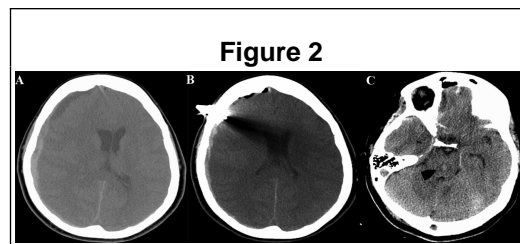
Introduction

Chronic subdural hematoma (CSDH) is a disease of mostly old age. The incidence is expected to increase over the next 25 years.

Therefore, developing a new technique that is both simple and quick to implement while using a low cost material is highly important.

Methods

The bolt entry point was chosen at the location with the thickest collection of CSDH. The placement of the Integra Camino bolt was in accordance with the manufacture instruction. To ensure penetration of the subdural space, the bolt was tightened until the wing of the bolt came in contact with the skin. Next, the strain relief sheath is connected to the compression cap of the bolt. The Jackson-Pratt drain is then connected to the strain relief sheath. Suction is then applied to promote drainage. The CT of the head can be performed to confirm that the bolt tip resided in the subdural space



Results

2 patients underwent this procedure. Patient 1 presented with bilateral chronic subdural hematoma. Patient 2 presented with a right chronic subdural hematoma coupled with a 1cm midline shift and a pontine Duret hemorrhage. This technique was effective in draining the chronic subdural hematoma in both patients. The midline shift was almost completely resolved. Both patients demonstrated significant clinical improvements. The patient has returned to work in just 2 weeks following the procedure.

Conclusions

To combat the increasing incidence of chronic subdural hematoma, developing easy-to-do, low cost technique is highly essential. The technique described here is effective, simple to perform and can be done in a short period of time, using a device that is both low cost and readily available. Utilizing this technique, in 2 patients, has resulted in good outcomes without complications.

Learning Objectives

-A method of modifying the Integra Camino bolt to function as a hollow screw device for the drainage of chronic subdural hematoma is reported

-2 patients undergoing bilateral chronic subdural hematoma drainage using Integra Camino bolts with good outcomes are described

-The technique is effective, simple to perform and can be done in a short period of time, using a low cost device

