Retained Foreign Body Following use of Integra Camino intraparenchymal Intracranial Pressure Monitor - Case Report

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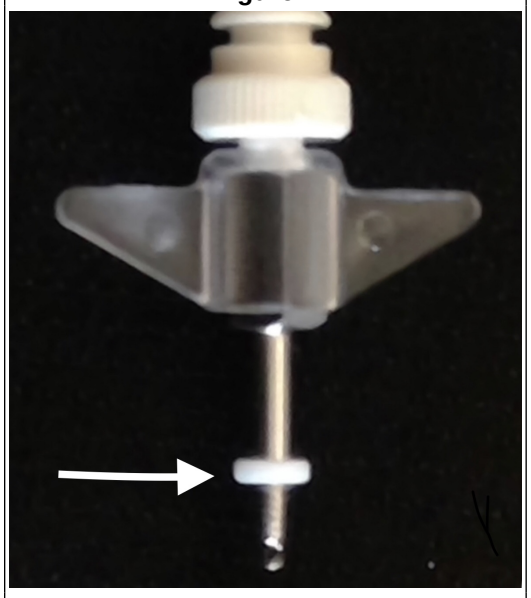
Figure 1



Integra Camino Intracranial Pressure Monitor Spacer

Introduction

The use of the Camino Intracranial Pressure Monitor (Integra, Plainsboro, NJ) is common in both pediatric and adult patients when there is a concern of an increase in intracranial pressure. The device comes with a spacer for use in pediatric patients to prevent the surgeon from inserting the device too deep within the skull (Figure 1). The spacer is not used in a consistent way between providers.

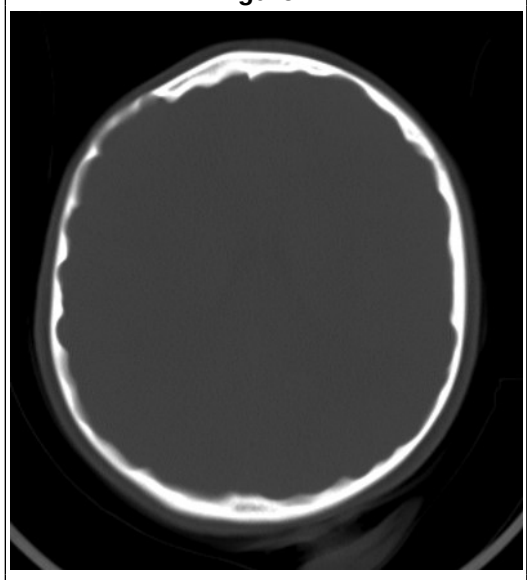
Methods

A review of a pediatric patient case was performed.

Results

An 8 yo girl with chromosomal translocation and developmental delays presented with a history of mild unicoronal synostosis, not corrected, and recently diagnosed central apnea with headaches. Head CT demonstrated a copper-beaten inner table (Figure 2). ICP monitoring was recommended to help determine whether cranial vault expansion was warranted. The Camino device was placed with the spacer via a small scalp incision (10mm) by an attending neurosurgeon. Intracranial pressure was not elevated. The device was subsequently removed by a neurosurgical resident without opening the entire incision. Three months later, she presented with a palpable subcentimeter mass under her left frontal scalp incision. The foreign body was identified as the spacer from the Camino device, which had been left behind. The spacer was subsequently removed without event coupled with a previously planned otolaryngology procedure under the same anesthesia.

Figure 2



Copper Beaten Skull with Unilateral Coronal Synostosis.

Conclusions

Surgeons can use the Camino spacer as intended, remove it, or place it outside the scalp to tamponade the scalp edges. At our hospital there were no standards in place regarding the use of the spacer and no documentation of whether or not the spacer was placed in the subgaleal space. The options to prevent this from happening again included trying to develop a system where better documentation of placement and removal of the device or to simply stop using the spacer in all cases. Neurosurgical programs with multiple providers should have a standard practice regarding the use (or non-use) of the spacer to avoid this preventable complication.

References

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