Intracranial Foreign Body That Miraculously Missed All Vital Structures
Marco Mikhael, MD
Loyola University Medical Center, Maywood, IL

INTRODUCTION
Accidents can happen to any age group including infants. They are the fifth leading cause of death in that age group. If severe enough, they can lead to permanent disability. In rare occasions, like the case presented here, no major residual deficits occur.

CASE DESCRIPTION
A 12 month old female presented to ED after falling out of her crib and landing in a wicker basket, at which time a rod of the metal frame impaled in the left frontal skull. She was vomiting, floppy and was immediately intubated. Head CT was obtained which demonstrated a rod penetrating the scalp just anterior to the coronal suture and lateral from midline where it traversed the ventricular system with blood in the left lateral ventricle, between the thalami and superior to the brainstem, through the cerebellum and exited the right occipital bone. The rod was lying within 1mm of right PCA. Her neurological exam improved to spontaneous eye opening and purposeful movements. Neck CT showed no fracture or misalignment. The patient then was taken to the OR for this rod extraction.

DISCUSSION
This case presented many challenges regarding the patient's anesthesia care. The first was the close proximity of the rod to the major cranial vessels and the profound bleeding that can occur before, during or following extraction of the rod. The subsequent postoperative bleeding can lead to significant complications such as vasospasm, increased ICP and transtentorial herniation.

Another concern was airway management. Fortunately, the rod was away from all the airway passages. In other instances, different plans should be in place if the object compromises the airway. Injuries to the neck soft tissues or cervical spine complicate dealing with the airway in these unusual trauma cases.

A third concern was injury and/or compression of the vital brain stem centers with resulting arrhythmias, hemodynamic compromise and irregular breathing. The latter can be a challenge to her postoperative ventilator weaning.

A fourth concern was infection risk with its short and long term sequelae. Other concerns were intraoperative PAE and, in the long term, residual motor, sensory or visual deficits, formation of a cerebral abscess and/or development of a seizure disorder.

MANAGEMENT OF ANESTHESIA
After placement of the ASA standard monitors, general anesthesia was induced, and two big IVs and a femoral a-line were started. A femoral arterial line can be used intraoperatively, postoperatively and also in the catheterization lab if needed for cerebral angiograms. Blood products were ready. The procedure was accomplished with no complications. The patient did not have any of the postoperative problems mentioned above and was discharged home after 5 days.

REFERENCE