Accidental Chopstick Injury Resulting in Internal Capsule Lesion and Intracerebral Hemorrhage

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A 3-yr-old boy was evaluated at a physical medicine and rehabilitation outpatient clinic, having presented with left hand dystonia and a left foot drop. There was no sensory impairment in the affected limbs. It was reported that the patient was playing with a pair of chopsticks while unattended. He apparently had fallen and a chopstick penetrated the skull through his left upper eyelid. He pulled the chopstick out on his own and then fell into a deep sleep. He woke up with clear consciousness 2 days later but showed signs of left hemiparesis.

At an initial neurosurgery outpatient clinic visit, the patient’s left upper eyelid penetration wound had spontaneously closed. Brain computed tomographic and magnetic resonance images revealed a penetrating tract from the left upper eyelid to the right internal capsule, causing subsequent small intracerebral hemorrhage and infarction (Fig. 1A–B). There was no evidence of central nervous system infection, and no surgery was performed. After 1 mo of inpatient rehabilitation, the patient’s gait pattern improved substantially with the application of a left ankle-foot orthosis.

Among penetrating head injuries, stabbing traumatic brain injury in childhood is rare. Children up to 4 yrs of age are prone to accidents that occur at home, where the stairways and kitchen are the most high-risk locations. Sharp objects tend to penetrate and enter the cranial cavity through the fragile points of the orbit, the squamous part of the temporal bone, and the paranasal sinuses. The occurrence of ischemic lesions and injuries to the basal ganglia and internal capsule in children is unusual. Most of these cases in children are caused by mild head trauma or varicella zoster infection and are with good outcome. Transient hemiparesis, arm weakness, gait disturbance, and hand dystonia are common clinical manifestations.

The patient was free of seizures after this incident, and close observation was recommended without prescription of prophylactic anticonvulsants. This is a unique case in which our patient experienced only minor neurologic deficits from the penetrating traumatic brain injury. It reminds the physician that penetration by sharp objects must be considered in a child presenting with the previously described symptoms.

REFERENCES


VISUAL VIGNETTE

FIGURE 1

A, The fluid-attenuated inversion recovery magnetic resonance images revealing mixed hyperintensity and hypointensity bands at the right centrum semiovale, corona radiata, and posterior limb of internal capsule as well as at the rostrum and genu of the corpus callosum (arrows). B, Nonenhanced computed tomographic images showing mixed hyperdense and hypodense lesions at the right centrum semiovale, corona radiata, internal capsule, basal ganglion, and corpus callosum (arrow).