

# Transoral penetrating intracranial injury

Sharp [penetrating intracranial injury](#) to the [skull](#) and [brain](#) is uncommon in children. The related pediatric literature consists mainly of cases involving penetrating stab wounds to the face or scalp resulting from assaults or accidents.

Self-inflicted intracranial stab wounds are an even rarer form of traumatic brain injury, with common entry points being the orbital space and the nose. Intracranial brainstem injuries mostly result in death, with reported penetration areas being the pons or midbrain.

## Case reports

### 2013

A first reported case of self-inflicted intracranial stabbing via a transoral route with lesions to the medulla oblongata and cerebellum. Unlike previous cases of low velocity penetrating injuries to the brainstem, the patient underwent full neurologic recovery after manual knife removal and intensive rehabilitation.

Self-inflicted transcranial injuries have been mentioned only briefly and sporadically in the literature. This article highlights a rare case of self-inflicted intracranial stabbing with a not yet reported entry route and brainstem lesion. Unlike the other fatal outcomes associated with such injuries, the patient underwent full neurological and functional recovery through a comprehensive approach that included intensive rehabilitation <sup>1)</sup>

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A 3-year-old girl with a transoral injury by a bamboo chopstick penetrating the middle skull base. The features of imaging are described and the management is discussed. The potential for injury to the cavernous sinus is emphasized, even if there is no hemorrhage on the initial CT scan. Early intracranial infection in relation to penetrating injuries is a factor in planning treatment by craniotomy. <sup>2)</sup>

### 2002

Herein, we present two cases of perioral intracranial penetration. The first case was a 2-year-old boy who presented with septic complications and developed a brain abscess. The second case was a 2-year-old girl who presented with a subarachnoid hemorrhage and developed a traumatic pericallosal artery aneurysm. After craniotomy and clipping, both patients made a satisfactory recovery. A high index of suspicion, liberal use of neuroimaging and early operative intervention are important points in the successful management of such cases <sup>3)</sup>.

<sup>1)</sup>  
Kim SW, Kim JH, Han ZA. Self-inflicted trans-oral intracranial stab wound. Brain Inj. 2013;27(10):1206-9. doi: 10.3109/02699052.2013.801514. Epub 2013 Jul 29. PubMed PMID: 23895312.

<sup>2)</sup>

Wang HF, Li WC, Xu N, Fu SL. Transoral penetrating craniocerebral injury by a bamboo chopstick in a child. J Clin Neurosci. 2013 May;20(5):746-8. doi: 10.1016/j.jocn.2012.03.053. Epub 2013 Feb 26. PubMed PMID: 23453158.

<sup>3)</sup>

Shih TY, Kuo YL. Development of intracranial complications following transoral stab wounds in children. Report of two cases. Pediatr Neurosurg. 2002 Jul;37(1):35-7. PubMed PMID: 12138218.

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