Traumatic brainstem hemorrhage

Traumatic brainstem hemorrhages have previously been associated with poor neurological outcome and fatality.

Case reports

A report discusses 2 pediatric patients who sustained severe head trauma with subsequent brainstem hemorrhages, and yet experienced good neurological outcome; the possible mechanism is described [1].

A 21-year-old man who suffered a traumatic brain injury from a motor vehicle accident recovered brain function except for an isolated left fourth cranial nerve palsy. Brain CT showed a focal hemorrhage in the right dorsal midbrain, directly in the brainstem path of what would become the left fourth cranial nerve. Although there has been previous imaging documentation of midbrain and cisternal hemorrhage in patients with isolated post-traumatic fourth cranial nerve palsy, this is the first report to show a large midbrain hemorrhage on CT. The mechanism is likely to be concussive impact of the dorsal midbrain on the tentorium cerebelli [2].

1)
Beier AD, Dirks PB. Pediatric brainstem hemorrhages after traumatic brain injury. J Neurosurg Pediatr. 2014 Oct;14(4):421-4. doi: 10.3171/2014.7.PEDS13376. Epub 2014 Aug 8. PubMed PMID: 25105513.
2)
Sudhakar P, Bapuraj JR. CT demonstration of dorsal midbrain hemorrhage in traumatic fourth cranial nerve palsy. J Neuroophthalmol. 2010 Mar;30(1):59-63. doi: 10.1097/WNO.0b013e3181ce1b1d. PubMed PMID: 20182210.