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“ A Traumatic Twist: Horner Syndrome Unveiling After Subarachnoid Hemorrhage”

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Introduction

Horner syndrome is a rare neurological condition defined by a triad of ptosis, miosis, and anhidrosis, resulting from disruption of the oculosympathetic pathway. While more often linked to tumors or vascular issues, traumatic causes are less common.

Case Description

A 25-year-old previously healthy male presented following a motorcycle accident. Examination revealed right-sided ptosis and miosis, suggestive of Horner syndrome. Anhidrosis assessment was inconclusive acutely. He was intubated for a GCS of E1V1M4. Hemodynamically stable, he underwent a non-contrast brain CT, which showed acute subarachnoid hemorrhage (SAH) in the ambient cisterns without midline shift, mass effect, or skull fracture. Cervical spine CT showed no bony injury. With no evidence of cervical trauma or vascular abnormality, a diagnosis of traumatic right-sided Horner syndrome secondary to SAH was made. The patient received conservative management with supportive care and close neurological monitoring.

Discussion

Horner syndrome results from disruption along the oculosympathetic pathway, which extends from the hypothalamus to the eye. Trauma-related cases are relatively uncommon and typically involve injury to the cervical spine or internal carotid artery dissection. In this case, radiological findings excluded both. The most plausible mechanism was direct irritation or compression of the sympathetic fibers within the brainstem or upper spinal cord caused by localized subarachnoid hemorrhage. Although uncommon, traumatic SAH can lead to secondary neurological complications such as Horner syndrome. Identifying these subtle signs is critical, as they may indicate deeper structural or vascular injury not immediately apparent on imaging.

Conclusion

This case illustrates a rare instance of Horner syndrome resulting from traumatic subarachnoid hemorrhage, in the absence of cervical spine or vascular injury. It emphasizes the importance of comprehensive neurological examination in trauma patients, as early recognition of subtle signs like ptosis and miosis can aid in the diagnosis of underlying neuroanatomical injury. Prompt identification and close monitoring are essential for optimal patient outcomes

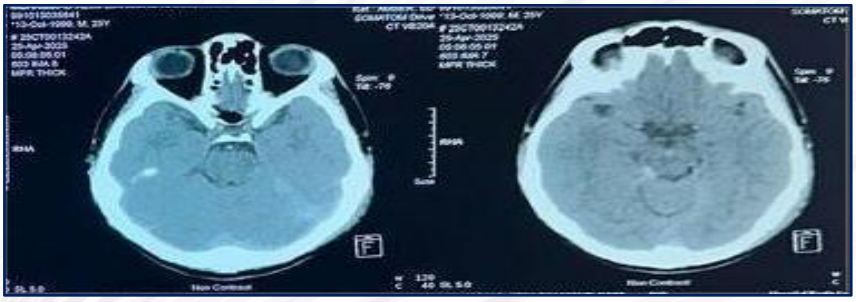

Figure 1: CT brain revealed an acute subarachnoid hemorrhage seen in ambient cistern and interpeduncular cistern with acute subdural hemorrhage along the left tentorium cerebelli and posterior falx

References:
1-Roth J, Toaff JS, Margalit N, Salame K. Traumatic Facial Diplegia and Horner Syndrome: Case Report. Eur J Trauma Emerg Surg. 2007 Aug;33(4):425-9. doi: 10.1007/s00068-007-6913-z. Epub 2007 Jun 29. PMID: 26814738.