**At neck- breaking speed : A case of altered mental status from indirect trauma to the carotids**

NORHARA BT NOORSHAM KAMAL1, NUR ABDUL KARIM1, SYAZANA KAMARUL BAHRIN2

*1KPJ DAMANSARA SPECIALIST HOSPITAL, SELANGOR, MALAYSIA*

*2KPJ DAMANSARA SPECIALIST HOSPITAL 2, SELANGOR, MALAYSIA*

Introduction

Traumatic cervical artery dissections (TCAD) is a complication of severe blunt head or neck trauma, the main cause being motor vehicles accident (MVA). TCAD are increasingly recognized with an incidence of up to 0.86% for internal carotid artery and 0.53% for vertebral artery. Here, we present a compelling case of TCAD associated with a sports injury.

Case description:

A previously healthy 14-year-old boy was brought to the emergency room after colliding with a basketball pole during a match. Despite the impact, he continued playing but subsequently experienced restlessness and three episodes of vomiting three hours later. Upon assessment in the emergency room, he displayed altered sensorium with a Glasgow Coma Scale (GCS) score of E3V1M5 with no neurological deficits. A plain CT scan of the brain was initially normal, and he was admitted for observation due to suspected cerebral concussion. On the next day, he developed right dense hemiplegia and a repeated CT brain showed patchy hypodensities in territory of left middle cerebral artery (MCA) with mild cerebral edema. A further MRI showed evidence of left internal carotid artery (ICA) dissections and thromboembolic stroke. The patient was promptly initiated on dual antiplatelet therapy (DAPT), anti-seizure medications, and physiotherapy.

Discussion:

Sports-related TCAD can occur due to direct or indirect mechanisms, particularly in activities involving rapid neck movement such as abrupt rotation or flexion-extension. The clinical presentations of TCAD vary, ranging from stroke to Horner syndrome and cranial nerve paralysis. Arterial thrombosis, leading to permanent neurological deficits, is the most common manifestation, with mortality rates approaching 40%.

Early initiation of anticoagulation or antiplatelet therapy is crucial to prevent further thromboembolic events, with treatment tailored to individual patient factors, comorbidities, and overall injury severity.

Conclusion:

A high index of suspicion for TCAD is warranted in cases of head and neck injuries, regardless of initial symptomatology. Timely detection and intervention, such as the early administration of anticoagulants, could potentially mitigate the risk of subsequent stroke. To our knowledge, this represents only the second reported case of internal carotid dissections associated with basketball sports.

Keyword:

Carotid dissection, trauma, basketball