Post-exercise intracerebral haemorrhage: a case report

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Abstract

Introduction: Intracerebral haemorrhage (ICH) is the result of bleeding from an arterial source directly into the brain parenchyma. Despite ICH constituting 10–15% of all strokes, its incidence in people under the age of 35 is extremely low (0.3/100 000). Occurrence of ICH without demonstrated tissue pathology is labelled as "primary ICH" with an overall mortality rate estimated to be between 30–50%. Evidence that regular exercise decreases the likelihood of all types of stroke, including ICH has been demonstrated consistently. However, little is known about primary ICH in young adults.

Case Report: A 19-year-old Caucasian man was admitted for a spontaneous ICH after exercise practice without associated trauma, presenting a left hemiparesis, depression of consciousness and global aphasia. CT performed upon arrival demonstrated a midbrain tegmental hematoma with intraventricular extension. He had an interatrial communication without any other previous issues and was submitted to emergent surgical intervention. Despite a cavernous malformation hypothesis, brain CT and MRI angiography did not show any vascular abnormalities. An early rehabilitation program was started, and a percutaneous endoscopic gastrostomy was placed for severe dysphagia management. He was transferred to a national reference rehabilitation centre with partial recovery of previous functional and neuromotor deficits.

Conclusion: The reported case highlights the importance of understanding possible etiological factors in spontaneous ICH, knowing that the primary event can obliterate the evidence of the main cause. Early rehabilitation protocols might be beneficial, and the understanding of the possible mechanisms is needed in order to minimize the risk, given the severity of the illness.