THE ROLE OF DEXAMETHASONE FOR MILD TO MODERATE TRAUMATIC BRAIN INJURY; A CATCH-22 SITUATION

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Introduction:

The use of steroids in an acute setting after a traumatic brain injury has been controversial. However, recently, with a better understanding of the complex process of post-traumatic cerebral oedema (CO) – *biphasic; whereby it is initially cytotoxic followed by vasogenic*, steroids could potentially be a good catch in the management of delayed post-traumatic CO, hence avoiding surgical intervention. In this study, we report a case of delayed post-traumatic CO and its response to steroid therapy.

Case presentation:

A 61-year-old male complained of moderate-to-severe debilitating headache 10 days after sustaining mild TBI (GCS 14 and left temporal contusion without mass effect). Clinically, his GCS was 13 without pupillary abnormalities and no focal neurological deficit. Repeated computed tomography (CT) brain showed resolving clot but worsening left temporal CO (vasogenic) with mass effect. Magnetic resonance imaging brain also confirmed no mass and evidence of vasospasm. Parenteral dexamethasone 4mg thrice a day was administered for 2 days and then tapered over a duration of 7 days enterally. His condition and symptoms markedly improved within 48 hours and showed complete resolution by day 5. A repeat CT brain 1 week after dexamethasone administration showed drastic reduction of CO with resolved mass effect. No adverse effect of steroid was encountered.

Conclusion:

Steroid could be beneficial in post-traumatic CO in mild to moderate TBI. With such a renewed interest in steroids for delayed post-traumatic CO, it is worth exploring further as it could bring about positive outcomes for patients. Future prospective trials are needed to confirm or refute these findings.

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