

OP43

Headache outcomes in children undergoing foramen magnum decompression for Chiari I malformation

Saba Raza-Knight, Kshitij Mankad, Prab Prabhakar, Dominic Thompson
Great Ormond Street Hospital, London, United Kingdom

Introduction: A common symptom of CIM is headache; furthermore, CIM can represent an organic cause of refractory headache in the paediatric population. Chiari I-associated headache is diagnosed using non-validated criteria from the International Headache Society (IHS)^[1]. It should resolve following neurosurgical treatment by foramen magnum decompression (FMD). We aimed to validate the IHS criteria and define the features of Chiari I-associated headache that predict a favourable outcome after FMD.

Methods: A retrospective review of paediatric CIM cases treated with a first FMD at Great Ormond Street Hospital from 1989-2010 was carried out. Clinical headache characteristics were compared against IHS criteria and correlated with outcome following FMD.

Results: Headache was a presenting symptom in 35/78 (44.9%) of patients. Using the latest IHS criteria, 28/35 (80.0%) of patients could be diagnosed with a Chiari I-associated headache. Of these, 18/28 (64.3%) did not show any recorded clinical evidence of posterior fossa dysfunction (otoneurological symptoms or signs; transient visual symptoms; clinical signs of brainstem, cerebellar, lower cranial nerve and/or cervical spinal cord dysfunction; ataxia or dysmetria). Although 20/28 (71.4%) patients undergoing FMD showed a long-term improvement in their headache symptoms, the majority (17/28; 60.1%) had not shown a clinical improvement within three months of surgery, as specified by the IHS criteria. There was no significant difference in headache outcome for children undergoing FMD with duraplasty compared with a dura-sparing technique ($p=0.390$, Fisher's exact test).

Conclusions: Chiari I-associated headache is clinically heterogeneous, and not reliably associated with evidence of posterior fossa dysfunction. Our data suggest that performing FMD with duraplasty does not significantly affect long-term headache outcome compared to dura-sparing FMD. Prospective studies will be necessary to define a causal relationship with Chiari I-associated headache, and the expected window for improvement following FMD.

References:

¹ (2013) The International Classification of Headache Disorders, 3rd edition (beta version). Cephalalgia: an international journal of headache 33: 629-808