Post-traumatic bilateral abducens nerve palsy

Sir,

We like to report a relatively rare case of bilateral sixth nerve palsy following trauma. A 35-year-old-gentleman was admitted with a history of road traffic accident 2 hours ago. Neurologically, his Glasgow coma scale (GCS) was 15/15. He had revealed bilateral 6th nerve palsy without any other deficits.

He was evaluated with CT scan brain (plain), which revealed pneumocephalus in the prepontine cistern and other multiple fractures [Figures 1 and 2]. He was managed conservatively and also started on oral steroids in view of the nerve palsy. Repeat CT scan brain revealed resolving pneumocephalus. He was discharged on antibiotics and oral steroids for a period of 3 weeks. On follow up, his sixth nerve palsy was gradually improving.

Bilateral abducens nerve palsy following trivial trauma is a relatively rare occurrence. Berlit et al evaluated 165 patients suffering from abducens nerve palsy as the main presenting symptom. A vascular origin (29.7%), inflammatory diseases (19.4%) and tumours (10.9%) were the most common causes while traumatic abducens paresis (3.1%) was rare. Posttraumatic...
bilateral abducens palsy has been reported mainly in various case reports thus emphasising its relative rarity. In our case, there were two possibilities regarding the causation of bilateral sixth nerve palsy: either the presence of prepontine pneumocephalus or the associated fracture of the sphenoid sinus extending into the petrous apex.

Holmes et al in his study concluded that non-recovery from acute traumatic sixth nerve palsy was associated with complete palsy and/or a bilateral palsy.[2] Treatment of post-traumatic bilateral abducens nerve palsy is usually conservative though Kao et al showed that such patients treated with subtenon injection of botulinum toxin showed higher recovery rates than patients treated conservatively.[3] Mutyala et al reported a spontaneous improvement rate of 27% in unilateral traumatic sixth-nerve palsy and 12% in bilateral traumatic sixth-nerve palsy.[4] However, Holmes et al reported an overall spontaneous recovery rate of 73%.[2] Spontaneous recovery was more frequent in unilateral cases (84%) than in bilateral cases (38%).[2] Our patient was managed conservatively with oral steroids and showed partial improvement after 3 weeks. Our extensive review of literature did not reveal any case in which prepontine pneumocephalus was the cause of bilateral sixth nerve palsy.

In conclusion bilateral isolated sixth nerve palsy is a rare occurrence and few cases have been reported in available literature. This case highlights the occurrence and management of posttraumatic bilateral sixth nerve palsy.

Srinivas Dwarakanath, Ravichandra, Swaroop Gopal, Neelam K. Venkataramana

Department of Neurosurgery, Manipal Institute for Neurological Disorder (M.I.N.D), Manipal Hospital, Airport Road, Bangalore - 560 017, India. E-mail: mind99@vsnl.net

References


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