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LETTER

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Preoperative treatment with botulinum A toxin in patients with cervical disk herniation secondary to dystonic cerebral palsy

Sir: Cerebral palsy (CP) patients may present dystonic or dystonic-athetoid movements. If dystonia is localised to neck muscles, a secondary myelopathy [1, 2] or radiculomyelopathy may develop [3, 4]. Continuous involuntary neck movements are a major problem in cases requiring surgical treatment, as they can prevent post-operative stabilisation of the spine. In these subjects, preoperative treatment with botulinum toxin A (BoTX-A) injection could be a useful aid to control movement disorders. However, only one report has been published recently concerning the use of botulinum toxin in patients with disk herniation secondary to dystonic CP requiring surgical treatment [5]. Likewise, we used large doses of BoTX-A in two patients suffering from spondylotic myelopathy with neck dystonia as part of generalised dystonic cerebral palsy before surgery to decrease the movement disorder and to allow stabilisation of the cervical spine.

One male and one female CP patient (30 and 38 years old, respectively) with predominantly cervical dystonia developed progressive symptoms of spinal cord compression consisting of tetraparesis and sensory disturbance due to disk herniation at the C3-C4 level. Despite dystonic cerebral palsy, the patients were independent in daily living activities before developing signs of spinal cord compression. Cervical spine magnetic resonance imaging (MRI) performed in narcosis demonstrated a rough osteophyte and disk herniation at C3-C4 level in both patients, requiring surgical intervention. Preoperative injection of musculi sternocleidomastoideus and splenius capitis with BoTX-A (440 and 490 IU, respectively) markedly reduced cervical dystonic movements, allowing immobilisation of the neck and recovery after surgery. However, a re-injection of BoTX-A (100 IU in the sternocleidomastoid muscle, bilaterally) one week after surgery was required in one patient. Cervical spine X-rays obtained after surgery showed that cervical fusion was well stabilised in both patients. Clinical outcome after surgery was good as patients were transferred to a rehabilitation setting and regained independence in daily living activities.

Cervical disk herniation requiring surgical treatment may complicate severe neck dystonia of dystonic cerebral palsy patients. We suggest that preoperative paralysis of neck muscles with BoTX-A injection facilitates surgical stabilisation of cervical spine and favours good outcome in these patients.

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