EFFICACY OF CERVICAL EPIDURAL STEROID INJECTIONS FOR CERVICAL RADICULOPATHY

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Sir,

Cervical radiculopathy (CR) is a relatively common disorder manifested with neck pain, radicular arm pain, at times associated with neurological signs (paraesthesia, reduced muscle strength, reduced/absent reflexes). Commonly, it results from nerve root dysfunction, secondary to mechanical compression; although cytokines released from damaged intervertebral disks are also responsible. A diagnosis is established from a thorough history, physical examination corroborated by the findings from magnetic resonance imaging (MRI). CR is typically self-limiting with up to 90% of patients achieve symptomatic improvement with conservative management (immobilization, anti-inflammatory medications, physical therapy, cervical traction, and epidural steroid injections)[1]. Cervical epidural steroid injections (CESI) is an effective non-surgical treatment option to manage severe radicular pain[2]. However evidence supporting the effectiveness of CESI is relatively weak because of a lack of prospective randomized studies[3]. We performed this prospective study to evaluate the effectiveness of CESI in patients with CR secondary to a single level herniated intervertebral disc.

Following approval from the Institutional Review Board, and obtaining informed consent from the individual patients, thirty one adult patients (18 male, 13 female) aged between 35-67 years presented with CR and MRI showing a single level herniated intervertebral disc underwent CESI in this prospective study. The anatomical level of prolapsed disc was: C3-C4 in 3, C4-C5 in 8, C5-C6 in 9 and C6-C7 in 11 patients. The duration of symptoms were between 6-72 weeks (mean 30.4 weeks). Patients with significant functional deficits, severe systemic disease, and those with coagulopathy were excluded. All patients received a single dose of CESI using blind midline inter-laminar technique at the same level of the affected intervertebral disc. A mixture of methylprednisolone acetate (80 mg) and preservative free bupivacaine (2.5 mg) diluted to total volume of 4 ml by addition of 0.9% saline was administered in all patients. The outcome variables were the extent of pain relief immediately following the procedure and thereafter at 1, 3 and 6 months using visual analogue scale (VAS) and numeric rating scale (NRS). CESI was repeated if at any point during the follow up period VAS was greater than 5, and referred for surgery if VAS >7, had

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motor deficits or patient opted for surgery. Mean VAS was 8.7 pre CESI, 0.8 immediately following CESI, and thereafter 1.8, 3.9 and 3.8 at 1, 3 and 6 months respectively. As per NRS all patients had complete pain relief following CESI (mean 94%), and thereafter 78%, 60% and 58% at 1, 3 and 6 months respectively. No complication was noted in any patient, except local pain at injection site. Five patients needed repeat CESI and 3 out of them needed surgery.

The findings of this study indicate that CESI is an effective and safe treatment option to consider in selected patients with CR secondary to disc herniation to reduce the pain and could avoid surgical intervention. We recommend that the procedure should only be performed by experienced anesthesiologists. Although safe in experienced hands, rare catastrophic complications like spinal cord trauma and spinal cord hematoma have been reported flowing CESI; however fortunately seldom encountered following interventional procedures in the cervical spine[4].

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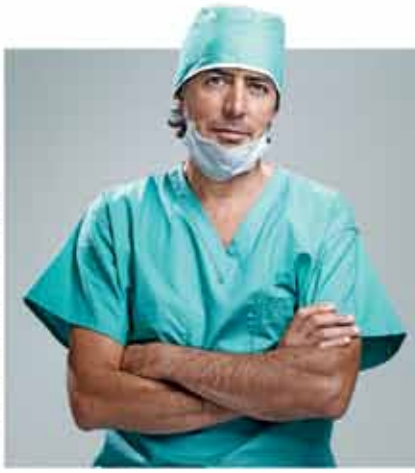

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* Train-of-four
† Post-tetanic counts
‡ Second twitch

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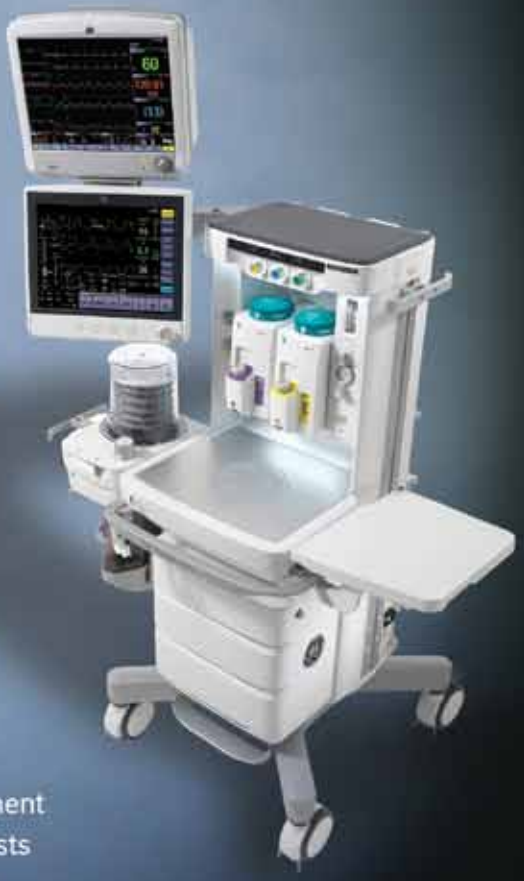

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