CORRESPONDENCE

Safety of neurolytic erector spinae plane blocks for cancer pain

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To the Editor,

Phenol is often used as a neurolytic agent to treat cancer-related pain. At the concentrations most commonly used, phenol can cause indiscriminate damage to both large and small motor and sensory axons. In a recent report in the *Journal*, Papa *et al.*¹ performed an ultrasound-guided neurolytic (8% phenol) erector spinae plane (ESP) block to treat cancer-related shoulder pain. The choice of this technique over a cervical epidural or a brachial plexus block was rationalized using cost considerations, its simpler performance, and easier ambulatory management. Papa *et al.* documented both improved analgesia and quality of life in their patient.¹ The main risk that the authors outlined related to the possible extension of the neurolytic solution into the epidural space; this was avoided by using slow fractional injections.

The use of a phenol neurolytic block of other nerves has been widely reported, including some of its complications. For example, Bodine-Fowler *et al.*² examined the effects of a 5% phenol-induced nerve block on the morphology of the sciatic nerve and selected muscles distal to the lesion at various time points (from two days to five months). The results of that study suggested that phenol may produce a very severe injury (i.e., more severe than a crush injury).

Those authors concluded that the use of phenol (concentrations $\geq 5\%$) can lead to permanent muscle weakness; thus, it should not be used if only a temporary block is desired. As the phenol concentration used by Papa *et al.* was much higher, we are concerned about the long-term implications of possible paraspinal muscle atrophy. The spread of the solution used in ESP block is unpredictable and can affect the dorsal rami of the spinal nerves in an extensive multilevel way.^{3, 4}

Thus, erector spinae muscle denervation might adversely impact its function as a stabilizer of the vertebral column and cranio-cervical region, and impair the maintenance of spinal balance and global alignment.⁵ These other outcomes should be studied in future studies before any definitive conclusions about the safety of neurolytic ESP block are drawn.

Conflict of interest None.

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