



Editorial comment

Ultrasound-guided high concentration tetracaine peripheral nerve block: Effective and safe relief while awaiting more permanent intervention for *tic douloureux*

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In this issue of the *Scandinavian Journal of Pain* Kenichi Takechi and co-workers report on another useful pain nerve block using ultrasound (US) guidance to deposit a high concentration tetracaine (40 mg/ml) dissolved in bupivacaine (5 mg/ml) around the infra-orbital nerve in patients with *tic douloureux* of the second branch of the trigeminal nerve (V2) [1]. They report pain relief lasting up to at least 6 months. They did not observe any of the adverse effects of other neurolytic solutions: after phenol, glycerol, or ethanol up to almost 1/3 of cases experience damage to surrounding tissues, neuritis, de-afferentation pain (neuropathic pain), and even anaesthesia dolorosa [2].

The Editor of the *Scandinavian Journal of Pain* accepted this report in order to kindle interest in a relatively simple intervention that is a highly effective and safe way to help patients with such excruciating facial pain. The patients are candidates for ultrasound-guided neurolysis with high concentration tetracaine when they are suffering severe attacks of pain, they do not tolerate or do not have effects of carbamazepine or similar drugs, and neurosurgical interventions are not readily available, or the patient is too old and too feeble to tolerate the more permanent treatment with microvascular decompression or radiofrequency thermo-lesion.

The scientific literature describes almost 20 ultrasound guided neuraxial and peripheral nerve blocks or other interventions for the management of chronic pain conditions, several of which have equal or superior efficacy and safety when compared to CT- or fluoroscopic guidance [1,3].

Undoubtedly, an area of much improved, very helpful methodology for such interventions in pain management has arrived [3]. Those who were trained to do interventions based on knowledge of anatomy and landmarks, sometimes helped by fluoroscopy, they have to join the ultrasound-enthusiasts and learn how to

interpret the rapidly changing grey and black shadows produced by the ultrasound-machines [4].

Once mastered, one important advantage of ultrasound guided nerve blockade is the possibility to identify in real-time the spread of the injectate around the nerve [1]. This is a great benefit of ultrasound-based techniques compare to conventional neuro-stimulation or paresthesia techniques [4]. Erroneous intra-neuronal or intra-vascular injections are both easily identified when using ultrasound. Not only is the risk of nerve-damage reduced, effective nerve block can also be obtained with small volumes of a local anaesthetic or a neurolytic solution [1,4].

The ultrasound-machines are becoming affordable for many, the cost being outweighed by increased safety and less exposure to ionizing radiation from CT- and fluoroscopy-equipment.

Conflicts of interest

None declared.

References

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