Use of clavipectoral fascial plane block for clavicle fracture: Two case reports

To the Editor,

We report two cases presented with a rib fracture and received ultrasound-guided clavipectoral fascial plane block.[1] This block has the same analgesic effect as the brachial plexus block but can avoid phrenic nerve paralysis and upper limb motor block development. The patients signed a consent form, permitting the use of their relevant medical history and sonographic images for publication in the form of a case report.

The first case was a 37-year-old man presented with clavicle fracture after falling on a snowboard. As he wished to undergo surgical repair, an interscalene brachial nerve block was planned. However, he claimed that his shoulder movement was not good, hence clavipectoral fascial plane and superficial cervical plexus blocks were performed after general anesthesia induction. Ultrasonography revealed fracture of the clavicle. Therefore, about 15 mL of 0.375% levobupivacaine was administered to the fascia on both the medial and lateral sides of the clavicle fracture [Figure 1]. His heart rate and blood pressure were stable intraoperatively, and he did not present any postoperative pain (visual analog scale score [VAS] of 0/10) immediately; no analgesia was used until the next day.

In the second case, a 71-year-old woman with the chronic obstructive pulmonary disease was presented with a clavicle fracture. Respiratory examination showed that the patient’s forced expiratory volume in 1 s was <1 L. Thus, clavipectoral fascial plane block, instead of interscalene brachial nerve block, was scheduled to prevent phrenic nerve paralysis. Later, 15 mL of 0.375% levobupivacaine was administered to the fascia on both the medial and lateral sides of the clavicle fracture after the induction of general anesthesia with superficial cervical plexus block. Her heart rate and blood pressure were stable. She presented minimal pain (VAS score of 1–2/10) postoperatively, and no analgesic was used until 13 h postoperatively.

Sensory innervation of the skin that covers the shoulder clavicles and upper thoracic region depends on the supraclavicle nerves of the superficial cervical plexus. It occupies the gap between the pectoralis minor and subclavicle, enclosing both muscles within two layers at the top level. Both fascial layers are attached to the clavicle, forming the pectoral fascia. A circular structure surrounding the entire clavicle and the corresponding nerve endings reach the clavicle by penetrating the pectoral fascia. This type of block comprises injecting 10–50 mL of long-acting local anesthetic into the fascia on both the medial and lateral sides
of the clavicle fracture. This technique must be used along with the block of the supraclavicle branch of the superficial cervical plexus to anesthetize the skin above the clavicle, and the ultrasonographic probe is placed on the anterior superior border of the clavicle on the medial and lateral sides of the fracture. The needle is inserted in a caudal to cephalic direction, and local anesthetic is injected into the periosteum. Clavipectoral Fascial Plane block was first described in the 2017 European Society of Regional Anaesthesia Congress. It is a simple and highly safe procedure that can provide anesthesia and prolonged analgesia for clavicle fractures.

Declaration of patient consent
The authors certify that they have obtained all appropriate patient consent forms. In the form, the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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