

Landmark Guided Lower Interscalene Block as a Rescue Approach in a Case of Elusive Supraclavicular Block for Elbow Surgery

Pratibha Jain¹, A. Sashank¹, Divyanand Mishra¹

¹Department of Anaesthesia and Pain Management, Pandit Jawaharlal Nehru Memorial Medical College, Raipur, Chhattisgarh, India.

Dear Editor,

Our case was an 18-year-old male, weighing 54 kg without co-morbidities presented with pain in right elbow and was posted for screw fixation of fracture capitulum. His routine blood work and airway examination were normal to undergo the surgery under supraclavicular block (SCB). On arrival, patient's PR was 84/min, BP- 118/72 mm Hg, SpO₂- 98% on room air.

For right sided SCB, patient was placed supine, head turned to left side with shoulder depressed and needle was inserted lateral to subclavian artery pulsation just above the clavicle, posterolaterally. There was inadvertent puncture of subclavian artery each time, despite using standard techniques. Hence we decided to abandon standard SCB and proceed with lower interscalene block (LISB). Using modified Winnie's approach interscalene groove was palpated and needle was inserted 2-3 cm below the classical interscalene block (ISB) site. Paresthesia was attained over whole upper limb and then Inj. Lignocaine + Adrenaline (2%) 10 ml along with inj. Bupivacaine 0.5% 10 ml was injected after repeated negative aspirations. A satisfactory sensory and motor blockade was obtained after 15 minutes of injection. Throughout the procedure, patient was continuously monitored and surgery was completed within 1.5 hours without any adverse event. The patient was shifted to ward. The block weaned off in 6 hours and his vitals were stable throughout his course of stay in the hospital.

Traditionally, the subclavian artery is an important relation of the brachial plexus for landmark guided SCB. However, anatomical variation may be present in as

much as 50% of the population [1]. T1 nerve root supplies skin both above and below the elbow. Some authors have suggested a combined ISB + axillary block to get profound anaesthesia for elbow surgery [2, 3]. Axillary nerve block was not contemplated in our case as optimal arm positioning was precluded due to severe pain at elbow. The advantages of LISB over SCB and ISB or ISB + axillary block are that it significantly reduces the risk of pneumothorax, inadvertent arterial puncture, ulnar sparing (as lower trunks of brachial plexus are more superficial in LISB) and avoids multiple injections. LISB also provides adequate anaesthesia and analgesia to whole upper limb which could be due to the relative proximity of the inferior trunks to the other components of brachial plexus as they become tightly bundled between the clavicle and first rib at this level [2]. Performing an LISB is easier due to its accessibility and shallow location of the brachial plexus, which may be favourable to those who disfavoured or may not be comfortable with the supraclavicular approach [4].

Our case exemplifies that in those centres where ultrasound machine is unavailable and access to the brachial plexus for SCB by landmark technique remains elusive despite troubleshooting, lower interscalene block can be safely used to provide similar quality and extent of surgical anaesthesia.

Address of Correspondence

Dr. Divyanand Mishra,

Department of Anaesthesia and Pain Management, Pandit Jawaharlal Nehru Memorial Medical College, Raipur, Chhattisgarh, India.

E-mail: itsdnmishra09@gmail.com

Submitted: February 27-06-2022; Reviewed: 12-07-2022; Accepted: 21-08-2022; Published: 10-09-2022

DOI: 10.13107/ijra.2022.v03i02.064 | www.ijrajournal.com |

This is an Open Access article distributed under the terms of the Creative Commons Attribution Non-Commercial-Share Alike 4.0 License (<http://creativecommons.org/licenses/by-nc-sa/4.0/>) which allows others to remix, tweak, and build upon the work non-commercially as long as appropriate credit is given and the new creation are licensed under the identical terms.



Figure 1: X-ray lateral view capitulum fracture

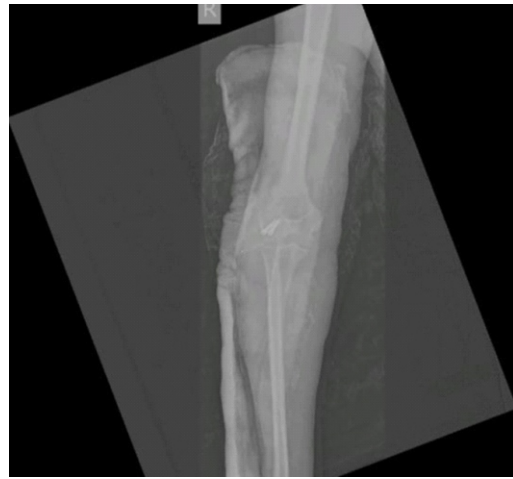


Figure 2: X-ray capitulum fracture post screw fixation



Figure 3: Anatomical landmarks and point of needle entry for lower interscalene block

Declaration of patient consent: The authors certify that they have obtained all appropriate patient consent forms. In the form, the patient has given his/her consent for his/her images and other clinical information to be reported in the Journal. The patient understands that his/her name and initials will not be published, and due efforts will be made to conceal his/her identity, but anonymity cannot be guaranteed.

Conflict of interest: Nil **Source of support:** None

References

1. Uysal I, Sekar M, Karabulut AK, Buyukmumcu M, Ziyilan T. Brachial plexus variations in human fetuses. *Neurosurgery* 2003;53(3):676-684.
2. Gadsden JC, Tsai T, Iwata T, Somsundarum L, Robards C, Hadzic A. Low interscalene block provides reliable anesthesia for surgery at or about the elbow. *Journal of Clinical Anesth* 2009;21:98-102.
3. Faryniarz D, Morelli C, Coleman S, et al. Interscalene block anesthesia at an ambulatory surgery center performing predominantly regional anesthesia: a prospective study of one hundred thirty-three patients undergoing shoulder surgery. *J Shoulder Elbow Surg* 2006;15:686-90.
4. Brown AR, Parker GC. The use of a reverse axis (axillary interscalene) block in a patient presenting with fractures of the left shoulder and elbow. *Anesth Analg* 2001;93:1618-20.

How to cite this article: Jain P, Sashank A, Mishra D | Landmark Guided Lower Interscalene Block as a Rescue Approach in a Case of Elusive Supraclavicular Block for Elbow Surgery | *International Journal of Regional Anaesthesia* | July-December 2022; 3(2): 105-106.