Letter to the editor

Title: Comment on: “The novel Diagonal Suprascapular Canal block for shoulder surgery analgesia”

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Dear Editor,

I read with keen interest a technical report published recently in the *Korean Journal of Anesthesiology* describing the “diagonal suprascapular canal (DiSC)” approach for the suprascapular nerve (SSN) block [1] and wish to present my reflections.

I believe strongly that a few points need to be considered before this technique is adopted for perioperative analgesia. First, providing the SSN block at the midpoint between the suprascapular and spinoglenoid notches to selectively target the lateral trunk of the SSN might be a better option for patients with chronic pain, as suggested previously by Tran et al. [2]. However, applying the same technique for “shoulder surgery analgesia,” as per the title of this technical report [1], might not be adequate because the medial trunk of the SSN, which provides sensory coverage predominantly to the anterior region of the shoulder [3], also contributes to pain in surgical procedures. Furthermore, a previous cadaveric study found anatomical variations such that the “posterior region received innervation from the proximal branch of the medial trunk in half of the specimens” [3].

The author states that for patients with respiratory compromise, the sub-omohyoid SSN block may not be considered because of the risk of phrenic nerve involvement as well as significant associated sensory and motor block of the upper limb [1]. However, this statement contradicts a point based on two published articles made earlier in the article that “the main advantage of this combined shoulder block compared with other techniques, such as the interscalene block, is the reduction in the motor and sensory block of the upper limbs and minimal phrenic paralysis” [1]. In addition, the sub-omohyoid approach was not used in the cadaveric study cited for phrenic nerve staining (Ref #5 of the technical report [1]);
thus, the statement is not supported by that study. Indeed, that study [2] describes the SSN block at the midpoint between the suprascapular and spinoglenoid notches, similar to the technique described in this report [1]. Moreover, many clinical studies have shown that the sub-omohyoid SSN block does not compromise respiratory function, unlike the interscalene block, while the analgesic efficacy is similar. Because of the restriction of number of references, I will discuss two studies that specifically focus on this point [4,5]. Lim et al. observed a significant reduction of forced vital capacity and diaphragmatic excursion in the interscalene block group when compared to the anterior and posterior SSN blocks [4]. Notably, that study also found that pain relief was better with the anterior approach (sub-omohyoid plane at the supracleavicular fossa) than with the posterior approach (suprascapular notch) [4]. Similarly, Petroff et al. also observed a significant reduction of percentage lung ventilation assessed with electrical impedance tomography in the interscalene block group when compared to the anterior SSN block group [5]. In addition, contrary to the author’s fears [1], the upper limb would not likely be paralyzed with this approach because the volume is low and would not spread to the brachial plexus although the median distance to the plexus is 9 mm, as per the referenced study (Ref #4 of the technical report [1]). Furthermore, the referenced study was published in 2012, and many subsequent clinical studies, including the two cited above [4,5], have made no observation of this complication. Hence, the sub-omohyoid approach of the SSN block that provides complete coverage of the SSN might be a better option in shoulder surgeries, as the SSN provides most (70%) of the sensory supply.

Finally, I am not convinced that the technique described in this report is indeed novel [1], as the concept and approach are similar to that described by Tran et al. [2]; only the nomenclature of “DiSC” [1] has been changed from the “anteromedial” approach used in that cadaveric study [2].

References


