High Spinal Block: Type of Spinal Needle, Does it Matter?

Dear Editor,

Achieving a level of subarachnoid block (SAB) higher than surgical requirement is not uncommon in the practice of anesthesiology due to the multitude of factors affecting the spread of local anesthetics (LAs) in cerebrospinal fluid. Some of these factors are the characteristics of the injected solution, the technique employed, and patient characteristics.[1] However, a discernible variation in the spread of LA consequent to different characteristics of the needle tip has not been reported often.

A 22-year old (weight 63kg, height 154 cm) primigravida at 23 weeks period of gestation had sustained flame burns 2 months back. The patient had sustained 2nd to 3rd degree burns over bilateral lower limbs, involving 25% to 30% of body surface area. After initial evaluation and stabilization, the patient was planned for split skin grafting of the raw area over bilateral lower limbs under SAB. The SAB administered and surgery was uneventful. One week later, the patient developed an abscess over the right lower limb and was given SAB in lateral position. SAB limited to one side of body was planned in the second instance since the surgery was limited to the right
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understand that their names and initials will not be published

clinical information to be reported in the journal. The patients

given his/her/their consent for his/her/their images and other

patient consent forms. In the form the patient(s) has/have

The authors certify that they have obtained all appropriate

and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

Financial support and sponsorship

Nil.

Conflicts of interest

There are no conflicts of interest.

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Access this article online

Quick Response Code:
Website: www.joacp.org
DOI: 10.4103/joacp.JOACP_302_19

How to cite this article: Singh S, Gupta N, Ambooken GC, Pradip KC. High spinal: Type of spinal needle, does it matter? J Anaesthesiol Clin Pharmacol 2022;38:160-1.

Submitted: 13-Sep-2019 Revised: 06-Jan-2020
Accepted: 24-Feb-2020 Published: 11-Mar-2022

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The literature search revealed that the width of pelvis is more than that of shoulder in females, thereby making lateral position practically equivalent to head down, and the same is also aggravated in pregnancy.[2] But Simin et al. reported that cephalic spread of drug with gravity in lateral position is highly unlikely in patient undergoing cesarean section.[3] Another randomized controlled trial by Bhat et al. revealed that position of administration of SAB in elderly patients has no effect on hemodynamic parameters or block characteristics.[4] In light of the above findings, it can be postulated that the use of Whitacre needle during second SAB can possibly be one of the determining factors for achieving unexpected high level of SAB. In a Whitacre needle, the exit stream is at 90° to the shaft of the needle, and if the direction of the orifice is pointing cranially, it can lead to more cephalad spread of LA. Quincke needle has a bevel, the direction of which does not affect the spread of LA as the stream of drug coming out is in the line of shaft of the needle.

Technique factors need to be given due diligence, as the direction of an orifice of Whitacre needle can significantly impact the outcome of the SAB in spite of using a low volume of drug, as seen in our patient.

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.