

Failed Spinal Anaesthesia: A Novel Technique to avoid it

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Editorial

Intrathecal injection of local anaesthetic (LA) produces reliable and dense neuraxial blockade. A successful neuraxial block requires the puncture of dura and injection of LA into subarachnoid space as described very aptly by Gaston Labat in 1922 [1]. But despite all the preventive measures, failure of subarachnoid block can happen, even in experienced hand due to various reasons with an incidence ranging from <0.5% to over 17% [2]. Ensuring free flow of cerebrospinal fluid (CSF) and/or gentle aspiration before administration of LA are routinely practised by anaesthesiologists to prevent failure. Recently, 'Advik technique' has also been described by using 1 ml syringe for CSF aspiration and 360° rotation of the spinal needle to identify the free flow of CSF [3]. This technique of four quadrants rotation of the spinal needle may create a large hole in dura/arachnoid which can cause continuous leakage of CSF and increase incidence of post dural puncture headache.

We deduced a simple technique which can decrease the failure rates as we have observed in our practice. In our technique, after confirming free flow of CSF at the hub of spinal needle, we inject 0.5-1 ml of LA (0.5% hyperbaric bupivacaine) into subarachnoid space. Then we ask the patient for subjective feeling of tingling, numbness or warmth sensation or increase in warmth from distal to proximal part of lower limbs. Once the patient confirms, we inject the remaining volume of drug. We usually wait for thirty seconds to one minute if we don't get any response and ask again. If no positive response, then we relocate the subarachnoid space and repeat the same technique. Patient should be monitored with the standard anesthetic monitors throughout the procedure even though a small volume of LA is used in this technique. Although it is a subjective method, outcome depends on patient's cooperation but still we firmly believe that, this technique will help to avoid the need of a second attempt and bring down the failure rate in repeat spinal anaesthesia (specially in patients with 'difficult spine' or deformity of the back). A randomised controlled trial with large number of patients comparing this technique with other techniques is required to support our observation.

References

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