Comparing Ease of Clinical Performance on Ultrasound-Guided Pudendal Nerve Block: Observational Study on Volunteers

SS Chauhan*, E Kuppusamy. Burjeel Hospital, Abu Dhabi, United Arab Emirates

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Background and Aims Use of ultrasound has revolutionized Regional Anesthesia techniques to provide adequate surgical anesthesia. Blockage of Sciatic nerve in popliteal fossa is common technique for surgeries involving foot & ankle. There are various approaches described to perform block. We decided to do observational study on volunteers for comparing posterior & lateral approach on following parameters: 1. Need for external assistance for positioning 2. Time taken to localize sciatic nerve 3. Patient comfort 4. Anesthetist satisfaction score.

Methods Scanning was done by same anesthetist with same machine in all volunteers. Time was recorded starting from positioning till sciatic nerve was localized. Fifty volunteers were divided in two groups on random basis.

1. Group P [Posterior approach]: Scanning was performed in lateral decubitus or supine with knee flexed position. High frequency transducer placed in transverse position at Popliteal crease and Popliteal artery identified. Superficial and lateral to it hyperechoic oval/round structure, tibial nerve identified. Transducer scanned proximally till tibial and peroneal nerve joined to form sciatic nerve.

2. Group L [Lateral approach]: Scanning performed in supine position with limb in neutral position. Transducer placed in transverse position perpendicular to skin proximal to popliteal crease level. Scanning done proximally till hyperechoic sciatic nerve surrounded by hypo echoic muscles & hyper echoic shaft femur shadow identified.

Results No external assistance for positioning needed in Group L compared to Group P. No adjustments in limb position needed in Group L while flexion/extension of hip needed in Group P. Time to localize nerve was less in Group L. Anesthetist satisfaction score higher in Group L.

Conclusions We concluded that Lateral approach is simple & convenient for both patients and anesthetists & should be practiced more often.

Comparing Ultrasound-Guided Pudendal Nerve Block with Caudal Block for Postoperative Analgesia in Children Undergoing Perineal Surgeries under General Anesthesia

1A Gupta*, 2VK Singh, 1A Gupta. 1All India Institute of Medical Sciences, New Delhi, India; 2VMMC, New Delhi, India

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Background and Aims Caudal block is one of the most preferred regional anaesthesia methods in paediatric population, but its use is associated with potentially serious complications. Pudendal nerve block is an efficient alternative of caudal analgesia for perineal procedures. The aim of this study is to evaluate the efficacy of ultrasound-guided transperineal pudendal nerve block with respect to ultrasound-guided caudal block for perineal surgeries in children.

Methods Sixty children aged 1–12 years having physical status of ASA grade I-II and posted for elective perineal surgeries were included in the study. Patients were randomly assigned to receive ultrasound-guided caudal block (Group-C) or pudendal nerve block (Group-P) with 0.25% bupivacaine. Duration of analgesia, block performance time, first puncture success, FLACC/VAS scores and PADSS score was recorded for each patient.

Results Time to perform pudendal block was significantly more (17.2±2.4 vs 10.5±2.4 min, P<0.001) and success rate for block was less as compared to caudal block (83% vs 90%). The mean FLACC and VAS pain scores were comparable. The mean first rescue analgesia time was more in group-P (1035.3 ±174.8 vs 247.5±101.1 min, P<0.0001). The mean dose of postoperative diclofenac required(13.0 ±19.5 vs 3.3 ±8.0mg, p=0.014) and time to reach PADSS score of 9 (21.4 ±3 vs 14.9±4.8 hours, P<0.0001) was significantly more in Group-C.

Conclusions Ultrasound guided Pudendal nerve block provided a longer duration of analgesia, lower pain scores and resulted in faster readiness to discharge in children undergoing perineal surgery. We recommended wider adoption of this technique for perineal procedures in children.