Can Ultrasound-Guided Nerve Block Be A Useful Method Of Anesthesia For Tumor Surgery In The Foot And Ankle

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Introduction/Purpose: Tumors arising in the foot and ankle are often need surgical treatment. However, there is hesitation about the surgical treatment of anxiety about general anesthesia in some patients. Ultrasound-guided nerve block can be a useful method of anesthesia for tumor surgery in the foot and ankle. This study was performed to compare general anesthesia and ultrasound (US)-guided nerve block for tumor surgery in the foot and ankle. Also, whether US-guided nerve block is a useful method of anesthesia for tumor surgery was investigated.

Methods: In this prospective, randomized study, 50 patients who underwent tumor surgery between February 2013 and February 2016 were allocated to two groups: general anesthesia (n = 25), or US-guided nerve block (n = 25). All patients completed a questionnaire with three questions 2 weeks after surgery. For the nerve block group, the procedure duration, interval between the procedure and onset of the anesthetic effect, the point of loss of the anesthetic effect, intraoperative, postoperative visual analog scale (VAS) pain score, and discomfort during surgery were assessed.

Results: There was no patient in which the anesthetic was changed to another method during the operation. VAS pain score of postoperative 1 and 6h was significantly different between the nerve block group (2.2 ± 1.5 and 3.0 ± 1.8, respectively) and general anesthesia group (5.2 ± 3.9 and 5.4 ± 4.5, respectively). Twenty three US-guided nerve block (92%) and 17 general anesthesia patients (68%) reported that they would prefer the same type of anesthesia if they were to undergo tumor surgery in the foot and ankle again; these differences were significant (P < 0.05). There were no long-term complications, such as neurological deficits or infection, after the procedure in all patients.

Conclusion: Tumor surgery, such as tumor excision or biopsy, amputation, and other procedures, was performed safely and effectively under US-guided nerve block. These results indicated that US-guided nerve block for tumor surgery is a highly satisfactory and safe procedure without complications and is available for use by any orthopedist.

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