6th International Conference and Exhibition on

ANESTHESIA AND SURGERY

September 07-09, 2017 | London, UK

Can ultrasound-guided nerve block be a useful method of anesthesia for tumor surgery in the foot and ankle?

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Statement of the Problem: Tumors arising in the foot and ankle often need surgical treatment. However, there is hesitation about the surgical treatment with general anesthesia in some patients because of some anxiety. The purpose of this prospective study is performed to compare general anesthesia and ultrasound (US)-guided nerve block for tumor surgery in the foot and ankle.

Methodology & Theoretical Orientation: 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.

Findings: VAS pain score of postoperative 1 and 6h was significantly different between the nerve block group $(2.2 \pm 1.5 \text{ and } 3.0 \pm 1.8)$, respectively) and general anesthesia group $(5.2 \pm 3.9 \text{ and } 5.4 \pm 4.5)$, respectively). Twenty-three US-guided nerve blocks (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 & Significance: 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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