

## Comparison of Postoperative Pain Control Methods after Bony Surgery of the Foot and Ankle

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**Introduction/Purpose:** We performed a prospective study to evaluate and compare the effectiveness of postoperative pain control methods after bone surgery of the foot and ankle.

**Methods:** Among the patients who underwent foot and ankle surgery from June 2014 to September 2015 with an ultrasound-guided nerve block, 84 patients who fully completed a postoperative pain survey were enrolled. An opioid patch (fentanyl patch, 25 mg) was applied in group A (30 patients), diluted anesthetic (0.2% ropivacaine, 30 ml) was injected into the sciatic nerve once, about 12 hours after the pre-operative nerve block in group B (27 patients), and periodic analgesic intramuscular injection (ketorolac (Tarasyn®), 30 mg) was performed in group C (27 patients). Visual analog scale (VAS) pain scores at 6, 12, 18, 24, and 48 hours after surgery were checked, and complications of all methods were surveyed.

**Results:** The mean VAS pain score was lower in group B, with a statistically significant difference ( $p < .05$ ) between groups A, B, and C at 12 and 18 hours after surgery. Four patients in group A suffered from nausea and vomiting, whereas no other patients complained of any complications or side effects.

**Conclusion:** The ultrasound-guided injection of diluted anesthetic into the sciatic nerve seemed to be the most useful method for controlling pain in the acute phase following foot and ankle bone surgery. By injecting the diluted anesthetic once on the evening of the day of surgery, patients suffered less postoperative pain.

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