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Complications after Popliteal Block for Foot and Ankle Surgery

William Braaksma, MD (Grand Rapids, Michigan)
Kuldeep Gadkari, MS(Orth),MBBS; Donald R Bohay, MD; John G Anderson, MD;
John D Maskill, MD;
Michelle A Padley, BS, CRC; Lindsey A Behrend, BS

Summary:
A retrospective chart review of complications in 220 patients who underwent foot and ankle procedures with a popliteal block for post-operative pain management.

Introduction:
Peripheral blockade of the sciatic nerve in the popliteal fossa is a commonly employed form of analgesia for foot and ankle procedures. A very low (0.5-1%) occurrence of neuropathic symptoms and complications is reported after this block. This study reports the incidence of neuropathic manifestations and other complications in 220 patients who received a popliteal block for foot and ankle surgery.

Methods:
CPT codes were used to identify patients who received a popliteal block for foot and ankle surgery beginning March 2009 through August 2009 and a retrospective review of their perioperative, anesthesia and follow up records was conducted. The primary outcome variable was the incidence of neuropathic symptoms. Probable risk factors were identified and the significance of each factor towards the primary outcome variable was assessed by Chi square and T tests. Patient data was accessed minimum follow up of 4 months.

Results:
220 patients were included in this study out of which 170 patients received a single shot block while 50 received a continuous catheter infusion. The mean age of the patients was 50.6 years (range 13-85). Nine of 50 patients with continuous catheter (18%) and 23 of 170 patients with a single shot block (13.5%) reported neuropathic symptoms in the post operative period. In three patients, the symptoms were severe enough to warrant referral to a pain clinic. Univariate statistics did not show smoking (p=0.26), prior diabetes (p=0.39), tourniquet location (p=0.26), type of block (p=0.83), guidance used (p>0.999) or use of epinephrine (p=0.09) to be significantly associated with neuropathic symptoms. Similarly, tourniquet pressure (p=0.58), tourniquet time (p=0.98) and BMI (p=0.58) were also not significantly associated with neuropathy. One patient had a generalized seizure after ropivacaine injection but recovered without any permanent deficit.

Conclusion:
Neuropathic adverse events have a much higher incidence following popliteal block than has been reported in the literature. A prospective analysis would be beneficial to determine the true incidence of these symptoms and associated risk factors.