

58. POPLITEAL NERVE BLOCK AND ITS SAFETY IN FOOT AND ANKLE SURGERY

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Introduction: We retrospectively studied the charts of 573 patients, from September 1997-March 2000 to look for any neurological complications after popliteal nerve block for foot/ankle surgery.

Methods: After IRB approval, charts of all patients who had foot and ankle surgery between September 97-March 2000 were reviewed medical records of patients with prior neurological deficits were excluded.

The data reviewed was for patient age, type of surgery, type of anesthesia, operative time (duration of tourniquet inflation and the inflating pressures). The type of local anesthetic used and the outcome of the block.

Popliteal nerve block(1) was performed in patients in the holding area of the OR and vital signs were monitored during the procedure. Patients were in prone position and the operative leg was reidentified. The popliteal nerve was blocked in the popliteal fossa by using a short bevel 22 gauge 50 mm Stimuplex needle. A Braun Stimuplex nerve stimulator was used to identify the branches of the sciatic nerve. The motor response elicited was inversion and dorsiflexion of the foot at 0.5 mA or less. 40cc of local anesthetic was injected after repeated aspiration. The patient was turned supine and the saphenous nerve was blocked by injecting 10cc of local anesthetic at the level of the tibial tuberosity.

Results: Charts of 573 patients were reviewed. 307 patients had popliteal nerve blocks (53.6%), 186 patients had GA (32.4%), 68 patients had spinal (1.4%), 4 patients had local anesthesia with IV sedation (.7%). Mean age of the patients was 48 years (range 15-87). All were physical status 1 or 2. All blocks were performed by residents, fellows and attendings. Local anesthetic used was mepivacaine, ropivacaine, and bupivacaine. Majority of the solutions contained bicarbonate and epinephrine. Surgical procedures included ankle arthroscopy, triple arthrodesis, open reduction and internal fixation of ankle fractures. Achillies tendon repair, tarsal tunnel release. Tourniquet inflation time 4-150 minutes (mean 57 minutes). Tourniquet pressure 225-325 mmHg (mean 284 mmHg). Of the 303 patients who received the popliteal nerve block, 233 had surgical anesthesia, 9 patients needed local supplementation, 55 patients needed GA (inadequate block), 3 patients did not tolerate the tourniquet intraop and were given GA. 12 of the patients who received GA had working blocks in the PACU and did not need analgesics for pain control.

All patients were seen the next day if they were inhouse. All were seen in the orthopedic clinic for their follow-up one week later. There was no evidence of any local infection, hematoma formation, neuralgia, or neuropraxia. The degree of patient satisfaction was very high.

The popliteal nerve block is a safe technique for ankle and foot surgery and in our series was associated with no neurological complications.

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