

### PD-1. NEW TECHNIQUE: COMBINED FEMORAL AND SCIATIC NERVE BLOCK BY SINGLE INJECTION

Gabriel, H.F.<sup>1</sup>; Muthusamy, K.<sup>1</sup>; Cooper, M.<sup>2</sup>

1. Department of Anesthesia, Saint Louis University Hospital, St. Louis, Missouri; 2. Department of Anatomy, St. Louis University, St. Louis, Missouri

A 43 year-old male presented for open reduction and internal fixation of the right medial malleolus and fasciotomy. The past medical and surgical history were uneventful. No known drug allergies. The patient's vital signs and physical exam were normal. Patient consented for a combined femoral nerve and sciatic nerve block for intra-operative and postoperative pain control. Patient was sedated with Midazolam 2mg, then was placed in a semi-supine position with a pillow under the right side of his back. The femoral nerve location was marked on the skin. The lateral aspect of the right thigh, groin and the buttock were sprayed with Betadine spray, left to dry. Patient was draped with sterile towels with exposure of the front of the thigh and leg. A 22G, 5-inch insulated needle, connected to a nerve stimulator (Neuro-Trace) was introduced through the lateral aspect of the thigh at the level of the lower border of the greater trochanter. The needle was directed anteriorly, medially at an upward angle of 45 degrees to the skin towards the femoral nerve. The nerve stimulator was set at 2 mamp at 2 Hz, contraction of the quadriceps were noted and the current was reduced gradually as the needle was advanced until the appropriate contraction was obtained at 0.4 mamp. The femoral nerve was injected with 30cc Chirocaine 0.5% with 1:200000 epinephrine. Later the needle was withdrawn to the skin. Redirected posteriorly at an angle of 80 degrees to the skin towards the sciatic nerve. The nerve stimulator was set at 2 mamp at 2 Hz; contraction of the Gastrocnemius was noted and the current was reduced gradually as the needle was advanced until the appropriate contraction was obtained at 0.4 mamp. Injected the Sciatic nerve with 30cc Chirocaine 0.5% with 1:200000 epinephrine. Ten minutes later the patient was tested for sensory stimulus (pin prick). No response to pin prick along the distribution of femoral and sciatic nerves. The patient was taken to the operating room, sedated with Propofol infusion 30 mcg/kg/min. Patient was comfortable during the procedure with uneventful intra-operative course. In the recovery room the patient had a pain score of 0 out of 10 (0 = no pain and 10 = intense pain). Twelve hours later the patient's pain score was of 2 out of 10. The patient described the level of discomfort and pain during the placement of the block to be mild. The block was successful without complications.

Combined femoral nerve and the sciatic nerve block are the corner stone for post-operative pain control in patients undergoing lower extremity surgery. The current techniques are painful if performed on fractured patients due to changing the position of the patient while performing the block. The current techniques also takes a longer time due to changing the position of the patient, re-prepping and re-draping for each nerve blocked. This adds to the cost of the procedure to the patient. This new technique allows anesthesiologists to perform the block of both nerves on fractured patients without changing the position, reduce the time spent to do both nerve blocks and reduce the expenses to the patient avoiding re-prepping and drapping.

*Regional nerve block for total knee arthroplasty*

*Lau HP, Yip KM, Jiang CC. J Formos Med Assoc 1998 Jun;97(6):428-30*

*Combined sciatic/3-in-1 block in routine surgical care*

*Denning L, Billich R, Buhrle E. Reg Anaesth 1987 Oct;10(4):114-20*

