

Figure 1

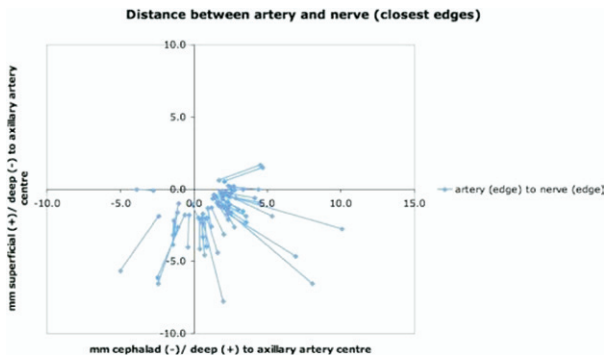


Figure 2

541. A prospective, randomized comparison between ultrasound and multiple injection technique for a posterior popliteal sciatic nerve block

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Background and Aims: This prospective, randomized, blinded study tested the hypothesis that ultrasound guidance reduce onset time of distal sciatic nerve block as compared with nerve stimulation guidance when using a multiple injection technique.

Methods: Fourtyfour patients receiving a posterior popliteal sciatic nerve block with 20 mL of ropivacaine 0.75%, were randomly allocated to receive either nerve stimulation (group NS= 22), or ultrasound guidance (group US, n=22) for nerve location. A blinded observer recorded the onset of sensory and motor blocks, needing for sedation or general anesthesia to complete surgery, number of punctures, needle redirections, procedure-related pain and patient satisfaction.

Results: Onset time of sensitive block showed no significative differences between US and NS group [Tibial Nerve in US group 14.32 min. Vs 16.25 min. ($p=0.4$); Peroneal Nerve US 12.48 min vs 16.05 ($p=0.125$)]. Onset times of motor block in the peroneal branch was 12.19 (± 4.764) min in US group vs 17.93 (± 8.517) min, reaching a significant statistical difference ($p= 0.028$). Time for tibial nerve motor block showed no significative difference ($p= 0.408$).US technique showed a significant reduction of needle redirections [US:3 (0-4); NS:5 (0-9) ($p =0.01$)], lower procedural pain ($p= 0.002$), lower time required for performing the block [2 minutes (2-8) min in the US group and 5 minutes (2-15) min in NS group ($p=0.002$)] and lower vascular puncture (US=0; NS=5; $p=0.05$).

Conclusion: Multiple injection technique of sciatic nerve with ultrasound guidance provided similar success rates and comparable onset times as compared with nerve stimulation. However in the US group a reduction in the time spent for performing the block was recorded, dipping incidence of vascular puncture, paresthesia and a reduction of procedural pain.