

Potentialiation of local anesthetic activity of neosaxitoxin with bupivacaine or epinephrine: Development of a long-acting pain blocker

Rodriguez-Navarro, Alberto J.

Lagos, Marcelo

Figueroa, Cristian

Garcia, Carlos

Recabal, Pedro

Silva, Pamela

Iglesias, Veronica

Lagos, Nestor

Local anesthetics effectively block and relieve pain, but with a relatively short duration of action, limiting its analgesic effectiveness. Therefore, a long-acting local anesthetic would improve the management of pain, but no such agent is yet available for clinical use. The aim of this study is to evaluate the potentiation of the anesthetic effect of neosaxitoxin, with bupivacaine or epinephrine in a randomized double-blind clinical trial. Ten healthy males were subcutaneously injected into the left and right forearms with a randomized pair of the following treatments: (i) bupivacaine (5 mg); (ii) neosaxitoxin (10 ?g); (iii) neosaxitoxin (10 ?g) plus bupivacaine (5 mg), and (iv) neosaxitoxin (10 ?g) plus epinephrine (1:100.000), but all participant received all four formulations (in 2 ml; s.c.), with 1 month elapsing between the two round of experiments. A validated sensory and pain paradigm was used for evaluating the effect of the treatment 0-72 h after the injections, measuring se