Nerve growth factor with fibrin glue in end-to-side nerve repair in rats.

Authors: e Silva D.N., da Silva A.C.M.B.A., Aydos R.D., Viterbo F., Pontes E.R.J.C., Odashiro D.N., de Castro R.J., Augusto D.G.

Publication Date: 2012

Abstract:

Purpose: To determine the effects of end-to-side nerve repair performed only with fibrin glue containing nerve growth in rats. Methods: Seventy two Wistar rats were divided into six equal groups: group A was not submitted to nerve section; group B was submitted to nerve fibular section only. The others groups had the nerve fibular sectioned and then repaired in the lateral surface of an intact tibial nerve, with different procedures: group C: ETS with sutures; group D: ETS with sutures and NGF; group E: ETS with FG only; group F: ETS with FG containing NGF. The motor function was accompanied and the tibial muscle mass, the number and diameter of muscular fibers and regenerated axons were measured. Results: All the analyzed variables did not show any differences among the four operated groups ($p>0.05$), which were statistically superior to group B ($p<0.05$), but inferior to group A ($p>0.05$). Conclusion: The end-to-side nerve repair presented the same recovery pattern, independent from the repair used, showing that the addition of nerve growth factor in fibrin glue was not enough for the results potentiating.