

# **Electrophysiologic assessment of regeneration in rat sciatic nerve repair using suture, fibrin glue or a combination of both techniques.**

Authors: Martins R.S., Siqueira M.G., Da Silva C.F., De Godoy B.O., Pereira Plese J.P.

Publication Date: 2005

## **Abstract:**

We evaluated the repair of sectioned rat sciatic nerve by the comparison of electrophysiologic parameters. The repair was effected with suture (group A), fibrin glue (group B) or a combination of both techniques (group C). The amplitude, latency and conduction velocity of the motor and nerve action potentials were assessed before the nerve section and at reoperation after 24 weeks. There was no difference between the groups when the nerve action potential was evaluated. Rats of group B presented better results than those of group A ( $p < 0.05$ ) when latency and the nerve conduction velocity assessed at the reoperation, and the ratio between the conduction velocity at the reoperation and before the nerve section in the motor action potential evaluation were measured. Animals of group C presented better results than those of group A when the ratio between the conduction velocity of motor action potential at the reoperation and before the nerve division was considered ( $p < 0.05$ ). No difference between groups B and C was found. We conclude that repair using fibrin glue presented better results than suture following transection of sciatic nerve when the motor action potential was evaluated in the rat experimental model.