Peripheral nerve repair in the rat: Functional and electrophysiological aspects.

Authors: Kuiters R.R.F., De Koning P., Van Der Zee C.E.E.M., Tulleken C.A.F., Gispen W.H.

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Abstract:

The influence of difference nerve repair techniques, following sciatic nerve transection in the rat, was studied using functional and electrophysiological tests. The techniques applied were: perineural suturing, tubulization with silicone, polypropylene and polyglycol lactate tubes, fibrin glue fixation or the placement of a bioresorbable gelating sponge round a perineural suture. Recovery of sensory function was assessed by means of local electric stimulation of the sole of the foot. Motor recovery was monitored by means of an analysis of walking patterns. Nerve conduction measurements were performed 65 days following the nerve lesion. Tubulization and the use of fibrin tissue glue were superior to fascicular microsurgical repair in this experimental model of nerve repair.