Repair of motor nerve defects: Comparison of suture and fibrin adhesive techniques.

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Abstract:

Two groups of rats were used to evaluate the results of nerve repair using fibrin tissue adhesive. In one group of 10 rats, a simple neurotomy of the sciatic nerve was performed. In the second group of 10 rats, a 1-cm segment of sciatic nerve was excised bilaterally and used as an autogenous nerve graft. The neurotomy and the nerve graft were repaired on one side by microsurgical suture technique using 10-0 nylon suture. The opposite side was repaired using fibrin adhesive. The results of the repair were assessed at 12 weeks. Functional assessment of nerve regeneration was performed in those rats with intact repair sites. Nerve-muscle twitch strengths were not significantly different ($p > 0.05$) between nerves repaired using suture and fibrin adhesive; however, compound active potential parameters were significantly better in nerve grafts repaired using suture technique ($p < 0.05$).