proved that in late peripheral nerve injuries there were still certain capacity for regeneration. But due to the lack research on major regeneration inducing factor — on central neuron, therefore the regeneration mechanism in late peripheral nerve injury had not clearly understood, it remained to be further investigated. Moreover, questions of how to promote the regeneration in late peripheral nerve injury, and to increase the therapeutic efficacy are important issues which need further study.

Clinical Application of Nerve Growth Factor on the Treatment of Peripheral Nerve Lesions
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Clinical treatment of peripheral nerve lesions is still a difficult task. We had collaborated with Wu Han Biological Product Research Institute to extract the purified nerve growth factor (NGF) from the calf sperm. Through animal experimentation we proved that it could promote regeneration of peripheral nerve. On this basis, we followed the request of the institute to put the purified NGF on clinical trial. In treatment of 8 cases with 10 nerves lesioned, 4 were at median nerve, 4 at ulnar nerve, 1 at radial nerve and 1 at accessory nerve. The length of lesions was: 5 with 2.2-3.0cm lesion, 4 with 3-5cm lesion, 1 with 8cm lesion. Site of lesions were: 9 below elbow joint (7 above wrist joint), 1 at posterior cervical triangle. Method of treatment was to isolate the separated nerve, resect the neuroma at two ends until normal nerve bundles appeared, and used medical silicon tube to bridge the lesioned nerve, used 7/0 atraumatic suture to fix the epineurium of the cut nerve between the 2 cut ends. In 7 cases 9 nerves were followed over 6 months. The results were: excellent (M4S4) 6 nerves, poor (M1S2) 3 nerves.

The purified NGF had protein content of 600ng/ml, protein purity reached 95%. Molecular weight was about 15000, iso-electric point was 9.5-1.0 and had rather high activity (2-4 ng/ml), completely in accord to the request of biological products institute. In our clinical trial of 8 cases with 10 nerves, there was no general or local toxic side effect after using this product.