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## NERVE GRAFTING IN PERIPHERAL NERVES INJURIES IN CHILDREN

**Abstract:** *Introduction:* The results of reconstructive procedures after nerves injuries in children are generally better than in adults, presumably due to brain plasticity and nerve repair potential. There are no important differences regarding diagnostic and management approach to peripheral nerve injuries among the pediatric and adult patients.

*Aim:* The aim of this study was to analyze the outcome of nerve repair in patients less than 16 years old, previously faced with peripheral nerve transections and lacerations.

*Method:* We analyzed 27 children who underwent surgery after nerves injuries. Patients follow up after the surgery was 2 to 5 years. The evaluation of motor and sensor function was achieved by using the scale of Highet and Millesi. Final results were classified into three groups: good, fair and bad. Additionally, factors that influenced microsurgery outcome and nerve recovery were analyzed, such as: timing of surgery, site and type of nerve injury, presence of associated injuries, length of nerve gap and type of microsurgical techniques.

*Results:* Out of 27 patients who underwent surgery, 19 was treated by interfascicular grafting and 8 by cable grafting. The mean patients age was 11.26 years. The motor outcome following the surgery was: good 77.8%, satisfactory 14.8% and bad 7.4%. The sensor outcome following the surgery was: good 85.2%, satisfactory 7.4% and bad 7.4%. Good motor outcome regarding the time of surgery was: < 3 weeks 100%, between 3 weeks and 3 months 77.8%, between 3–6 months 84.6%, between 6–12 months 50% and after 12 months 0%.

*Conclusion:* End to end anastomosis is the superior method for nerve reconstruction, but in the cases where the tension on the anastomosis could be severe, nerve grafting is the treatment of choice. Major conditions of functional recovery after nerve reconstruction are: early timing of surgery (in first three months), nerve gap length below 5cm and physical therapy. Importance of early and adequate treatment of peripheral nerve injuries in childhood is to enable normal growth and development of the child and to prevent permanent disability.

**Key words:** *nerves grafting, nerves injuries in children, recovery outcome*

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