E-Poster

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Double Fascicular Nerve Transfer to Restore Elbow Flexion in Upper Brachial Plexus Injuries

Topic: Health Conditions (Nervous System, Musculoskeletal System, Cardiopulmonary System)

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BACKGROUND

In a patient with upper brachial plexus injury who lost elbow flexion, the restoration of this flexion will allow a return to more activities of daily living. A double fascicular nerve transfer has been developed in which a partial median nerve and partial ulnar nerve are transferred to the motor branch of the brachialis and biceps muscles, respectively. The purpose of this study is to present the results of the nerve reconstruction using the double fascicular nerve transfer.

METHODS

From 2014 to 2024, seven patients with upper type of brachial plexus injuries were treated using double fascicular nerve transfers described above. The average age was 40.4 years. One patient had C5-6 injuries, four had C5-7, one had C5-8 and one had sustained an infraclavicular injury. The average period between injury and surgery was 5.1 months. The mean follow up period was 99.1 months

RESULTS

M4 elbow flexion was restored in each of the six patients. One patient restored M3 elbow flexion. The average weight which the patients were able to lift was 1.9 kg. There was no secondary deficit in grip strength.

CONCLUSION

Using the double fascicular nerve transfer, the percentage of success and the strength of elbow flexion restored were increased. The double fascicular nerve transfer is a reliable surgical method for a patient with upper brachial plexus injury.

Statement of Disclosures

None

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