Rehabilitation managements of patients with Peripheral Nerve Damage

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Neurorehabilitation of damaged peripheral nerve is a challenging subject. Surgeons are only focusing on the neurological problems and surgical management. Motor and Sensory Deficits cause functional disability of the hand. There is substantial research on motor and sensory recovery and cortical reorganization after peripheral nerve injury and many modalities are evaluated (rTMS, ES, SCS, MCS, tDCS,...).

Studies have shown concomitance of emotional and psychological stress due to pain, affected independence, doubt on outcomes, and poor appearance of injured hand. All of them can deteriorate the rehabilitation success.

The far-reaching role of upper extremities is responsible for the serious effect of brachial plexus injury on long-term disability and quality of life which needs early and long lasting treatment.

The critical aspect of peripheral nerve damage is its multidimensional clinical picture which consists of sensorimotor disturbances (pain, atrophy, weakness and secondary deformities), reorganization of central nervous system secondary to disuse of upper limb, in conjunction with psychological factors, all of them complicating the process of neurorehabilitation.

In this session it is tried to introduce a guideline for algorithmic approach to rehabilitation of peripheral nerve and review the scientific evidences of used modalities in this field.