

Abstract:

Perinatal brachial plexus palsy (PBPP) is the most common peripheral nerve injury for a newborn children. Theoretical part summarizes the following themes: brachial plexus anatomy, causes of a palsy, levels and types of peripheral nerve damage, treatment options and a summary of rehabilitation techniques that are used in a therapy.

Practical part focuses on pathophysiology after a nerve injury and an indication of electrical stimulation (ES) of peripheral nerve palsies. A lot of studies regarding this topic have been published, nevertheless the question whether ES is safe and beneficial method that should be applied in a peripheral nerve palsies treatment still remains unanswered. According to the obtained results, electrical stimulation necessarily has to be divided into electrical muscle stimulation and electrical nerve stimulation, to add to this, we have to determine their apparent parameters. It seems like electrical muscle stimulation is not as beneficial as electrical nerve stimulation. On the other hand, a takeover in the treatment of peripheral nerve palsies may be an intraoperative electrical nerve stimulation. Thesis includes case report of a patient suffering from PBPP with an indication for an ES.