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Management of shoulder pain in the hemiplegic patient

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Introduction: Shoulder pain in hemiplegic occurs in 22-70% of cases. It can begin as early as the 2nd week with a peak between 6 and 8 weeks. A shoulder-hand syndrome, adhesive capsulitis may be originally favored by glenohumeral subluxation or significant spasticity. The diagnosis is mainly clinical. The treatment is mainly based on preventive fixed assets, strapping, prudent mobilization and electrostimulation. **Objectives:** Remind the clinical, treatment and results of this condition and evaluate our results based on literature data. **Methods:** Prospective study of hemiplegic patients between Mai 2016 to September 2016. Results: 34 patients were seen with only 10 patients who had shoulder pain in the hemiplegic side; age 57.14 ± 14.9 years; Stroke time: 3 to 28 weeks (15.5 ± 12.5); Sex ratio: 18 F / 16 H; hemiplegic side: 16 rights / 17 left and a patient with quadriplegia; pain assessed by VAS at 8 ± 1 ; etiologies: 6 complex regional syndrome type I / 2 subluxations / 1 of the scapula pain / 1 partial rupture of the subscapularis and tendinopathy of the biceps and supraspinatus. Treatment: All patients were treated by strapping and sling immobilization when standing or sitting, medicated analgesic therapy, TENS, local infiltration of corticoid in cases of Type I Complex Regional Syndrome. **Discussion:** Shoulder pain is particularly high in hemiplegic particular patients, requiring particular therapeutic attention warranting research. The diagnosis of upper limb pain in the hemiplegic remains a subject of controversy. Its origin is multifactorial dominated by glenohumeral subluxation, complex regional syndrome type I, capsulitis, spasticity. We must stress the importance of the prevention avoiding decoaptation glenohumeral by proper installation of the patient and the diagnosis and initiating treatment early. **Keywords:** Hemiplegia; Pain; Shoulder

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Functional results of surgical correction of varus equin spastic foot about 4 cases

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Introduction: The adult spastic equine varus foot is usually responsible of instability , pain and foot accrochage at walking. which often compromises walking. Its treatment requires multidisciplinary care: rehabilitation, orthopedic and neurosurgical. The objective of the study is to present results of surgical management of spastic equine varus foot, applied in 4 hemiplegic patients, followed for post-operative rehabilitation in the Department of Physical Medicine and Rehabilitation between 2013 and 2016. **Methods:** This retrospective study includes a woman and 3 men, aged 19 to 33 years with an average age of 25 years. The etiologies is stroke with hemiplegia. The deformity of foot associates a varus and an equinism. The surgical treatment essentially consists of an elongation of the Achilles tendon with immobilization plastered for 6 weeks, followed by rehabilitation. We evaluated recovery from verticalization, and walking and relief from walking aids and abandonment of wearing orthopedic footwear. **Results:** Before surgery, three patients used orthopedic Shoes, only two was autonomous at walking and all of them needed technical assistance for walking. After management, no one need orthopedic shoes, all of them were autonomous at walking and just one used technical assistance for walking. **Discussion:** Compared with data from literature, our results are considered good in the 4 cases. However, the patients retained parasitic movements due to spasticity and a mild variant component. Result of surgical management of spastic equine varus foot would be better when performed in two stages: a neurosurgical first step with correction of spasticity by fascicular neurotomy of the posterior tibial nerve and a truly orthopedic second time with correction of The equine by elongation of the Achilles tendon resuscitation of the dorsal flexion essentially by transfer of the anterior tibialis.

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Early multicomponent motor rehabilitation of patients with ischemic stroke in the carotid

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Objective: To evaluate the efficacy and safety of early comprehensive rehabilitation of patients with ischemic stroke in the carotid using hardware techniques motor rehabilitation with biofeedback mechanisms. **Materials and methods:** The early rehabilitation of 46 patients conducted at the clinic of the Tashkent Medical Academy, suffered acute ischemic stroke. Patients came for treatment immediately after being discharged from the clinic angio neurological offices. Empirically comprehensive programs were developed motor rehabilitation of patients with the use of new hardware methods Mechanotherapy with biofeedback, and combinations thereof. **Results:** Inclusion in the early rehabilitation of patients with ischemic stroke, carotid hardware techniques with biofeedback mechanisms increases its effectiveness, evaluated using clinical and neurophysiological tests. -technology biofeedback allows the patient to train freely control their complex motor acts, forming an additional feedback loop between the body and the brain, substitute damaged due to stroke. Classes at -exercises biofeedback allows a minimum time delay inform the patient about his state of functional systems, whereby there is a possibility of conscious regulation. Non-invasive, non-toxic, reliability biofeedback -methods opportunity individually metered load when working on machines and automatically track the load tolerance, makes the use of these techniques are safe even in the early recovery period of ischemic stroke. **Conclusion:** Intensive complex kinesiotherapy using hardware techniques with biofeedback is more effective than traditional rehabilitation base, as evidenced by clinical, hardware and neurophysiological research. Using biofeedback-technologies enables the patient in the process of conscious recovery of lost skills by translating unconscious motor acts in a lucid, coherent and execution of complex motor acts on simulators more pronounced stimulates the formation of additional feedback loops between the brain and the periphery than the traditional physiotherapy. Multiple kinesiotherapy using hardware techniques to develop a protocol for the safe is in the early recovery period of ischemic stroke and carotid is well tolerated by patients.

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Particularities of vesicosphincteric disorders hemiplegic population

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Introduction: Urinary disorders in hemiplegic are frequent and very particular. they are a prognostic and functional factor. Their incidence is evaluated at nearly 50% of which 2 /3 incontinence and 1/3 dysuria / retention. They appear to be markers of Gravity. **Objective:** To investigate incidence and to establish relationship with predictive factors. **Methods and methods:** Prospective study of 84 hemiplegic patients . Evaluation was done at day 15 and 90 and in the end of the study. **Results:** Mean age was 65 years with male predominance (56%). Ischemic (72%), haemorrhagic (28%), right sensitivity (60%), Left (40%), faciobrachial hemiplegia (41%) and proportional (51%), hypertension (75%), diabetes (34%), neuropsychological disorders (56%) urinary disorders (41, 7%). **Discussion:** Urinary disorders compromise functional prognosis of our patient. Their incidence is correlated with gravity of stroke (Haemorrhagic stroc), incidence of hypertension, diabetes, neuropsychologicaland motor disorders and autonomy in everyday life. Their management is under evaluation in our country. **Keywords:** stroke; Hemiplegia; Urinary disorders.

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Hemiplegy and isocinetic rehabilitation of the knee

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Introduction:The isokinetic is a means of objective and reproducible assessment of muscle strength, it is widely used in rehabilitation especially joint and muscle pathology. There is little applied to the neurological disease. **Objective:** To report the experience of our rehabilitation field service isokinetic knee of hemiplegic through three observations. **Observation1:** 65 years old patient, who suffered an ischemic stroke right for 2 years, who presented a quadriceps spasticity 2, walking with a cane, he received isokinetic knee rehabilitation for a year, with exercises concentric, eccentric and proprioceptive. There was an improvement of walking and climbing and descending stairs. **Observation 2:** Patient aged 42, suffered an ischemic stroke left for 2 years and a half, which has a quadriceps spasticity 2, slow walk unaided, after about ten therapy sessions, patients reported an improvement walking, with increase of the rate of the step, as well as ease of the ascent and descent of stairs. **Observation 3:** patient aged 30 , suffered a stroke from left ischemic year and a half , spasticity of the quadriceps 1 , slow walk unaided, after about ten therapy sessions comprising concentric and proprioceptive exercises , the patient reported improved walking and isokinetic evaluation noted improved quadriceps and hamstrings deficit of hemiplegic side. **Discussion/conclusion:** The hemiplegic lower limb recovery after stroke is often favorable.The objective of rehabilitation of the walk is ambulatory autonomy, walking simple, and performance improvement : in security, speed, autonomy, efficiency , and aesthetics. Various rehabilitation techniques are used depending on the main problems presented by the patient. The isokinetic remains one of the least used means but has shown its efficiency objective.

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Efficacy of arm weight support training in virtual environment in poststroke rehabilitation of basic motor skills and daily activities

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Introduction: The successful movement recovery requires task oriented training provided in close to real environment, active patient”s participation and interactive feedback. Arm weight support training is a widely used method for active motor training facilitation. Nevertheless such training is limited due to the lack of patient motivation and task oriented approach.Virtual imitation of basic motor and daily tasks is an innovative rehabilitation method that can be used to improve arm motor function recovery. **Objectives:** To determine the degree of effectiveness of virtual reality as a supplement to the method of arm weight support. **Materials and methods:** Enrolled patients (14 male; 10 females)with median age 54 (38; 79) and stroke age 9,5 month (3; 23), were divided in three groups.Training course in all groups included 10 session that lasted 45 minutes, 5 times per week. Group #1 (n=17) received training on arm exoskeleton device with spring based weight support with combination of virtual environment (Armeo Spring). During the training session patients were practicing 10 game exercises having unconstrained degree of freedom at the shoulder, elbow and wrist joints. Group #2 (n=10)were trained on a virtual biofeedback system based onKinect sensor(Habilect) without unloading.The program included exercises for isolated movements (shoulder abduction, shoulder flexion, elbow flexion), complex movements (reaching movements), as well as exercises for bimanual coordination. Group #3 (n=7)received training infacilitated environment aimed at the paretic arm unloading equal to the actual weight of the upper limb, without virtual biofeedback,with accent at the development of rational movement patterns during specific tasks (reaching, grasping and moving the objects). Evaluation were performed using Fugl-Meyer Assessment scale (FM), Action Research Arm Test (ARAT) and Modified Ashworth scale (MAS), Frenchay test. **Results:** In group #1were found statistically significant (p<0,05) improvements in FM: arm and hand movements, passive range of motion, sensitivity (mostly caused by proprioceptive feeling improvement) and total score; ARAT: significant (p<0,05) improvement of cylindrical and pinch grip, and total score.In group #2 were found statistically significant (p<0,05) improvements in FM: arm and hand movements, and total score; ARAT: significant (p<0,05) improvement of pinch grip, gross movements and total score. In group #3 were found statistically significant (p<0,05) improvements only in range of passive movements (FM).Daily activities improvements measured using Frenchay test were significant only in group #1. **Conclusion:** Therefore using combination of virtual reality and facilitation environment is more effective than separated application