Early supported discharge after stroke in France
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Early supported discharge is a main challenge after stroke. The length of stay in acute stroke unit then in rehabilitation unit could be shortened, what needs an adapted outpatient organization for rehabilitation care. In France there are 125,000 new strokes per year, among them about 100,000 with physical and/or cognitive consequences lasting more than 24 hours. After the acute stage, 33.8% of the survivors are admitted in an inpatient rehabilitation facility (specialized unit for 10.4%, general or geriatric rehabilitation unit for 23.4%), most of the patients being treated at home or in an institutionalized facility. Physical and speech therapies, but not occupational therapy can be provided at home with national insurance reimbursement. In case of a complex rehabilitation program needed, rehabilitation in daily hospital can be provided. The national plan for stroke 2010–2014 made recommendations to improve the local organization of rehabilitation care. A specialized PMR, Neurologist or Geriatric consultation is mandatory within the first year. Mobile PMR units, at least made of a PMR specialist, an occupational therapist and a social worker, in charge of the organization of rehabilitation care from the acute stage to the latest stage at home are encouraged but financing remains an issue.

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Very early supported discharge in Sweden
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Keywords: Stroke; Early supported discharge

The talk will present the situation of rehabilitation in the home setting in Sweden as well as the early supported discharge. There will be information on the recommendations in Sweden, how many that are getting early supported discharge and how this is organized. Some information will also be given regarding an ongoing study of very early supported discharge. How feasible is this and who is considered suitable to be discharged early and still need rehabilitation?

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Organization of the rehabilitation after hospitalization in Italy
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Keywords: Stroke; Rehabilitation; Organization; Discharge

Rehabilitation pathways after rehabilitation in Italy are very patchy due to the regional autonomy of the single region. The organization range from a mainly private organization with a definite difference from hospital and community, to systems mainly public where the rehabilitation from the hospital to the community in a smooth continuity of care.

In the first case, rehabilitation is provided from the patients himself that buy services. In the second case, the physiatrist decides the appropriate setting at discharge. From the acute hospital the possible setting is: severe brain injury rehabilitation center in the case of an injury with a GCS ≤ 8; moderate-severe stroke to intensive rehabilitation unit; the mild-moderate to the community rehabilitation (home or outpatients). If severe capability is present a low intensity rehabilitation facility is used. In the community, rehabilitation is organized in specific rehabilitation services. The intervention is concentrated on the post acute phase although a part of activity if for the “chronic phase”. A real continuity of rehabilitation between the acute and the post-acute phase without a lengthy waiting list is one of the main goals.

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Effect of AFO on gait stability and balance control in patients with hemiparetic stroke
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Keywords: Ankle-foot orthosis; Stroke; Gait stability; Balance; Walking capacity

Introduction.– The aim of this study was to quantitatively analyze the effect of ankle-foot orthosis (AFO) on gait stability and to probe the use of AFO to improve walking capacity, gait stability and balance control in patients with post-stroke.

Methods.– A total of 25 inpatients with prior chronic hemiparesis resulting from stroke who could walk at least 10 m without assistance. The maximum walking speed and gait asymmetry index were examined using the motion analysis system. Functional balance was assessed using the Functional Ambulation Category. Results.– The AFO had positive effects on hemiplegic gait parameters, improving walking speed, gait stability and functional balance (P < 0.01). Pair wise comparisons suggested that there were significant differences between using AFO immediately and no only on the maximum walking speed, Functional Ambulation Categories and gait asymmetry index (P < 0.05). After 4 weeks, there were significant differences the walking speed, gait asymmetry index and functional balance control (P < 0.01).

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Discussion.– As part of the round table format, Mark Delargy will review the challenges and benefits of pursuing an ESD initiative for acute stroke patients.

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Conclusion.– The AFO compensated for the instability of the gait and balance. Functional tests were performed significantly better with orthosis.

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A three-dimensional kinematics study of the relationship between the joint movements of lower extremity and walking ability in hemiplegic gait of stroke

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Keywords: Stroke; Gait capacity; Leg; Gait analysis

Introduction.– To assess the relationship between the joint movements of lower extremity and walking ability (velocity) by analyzing the correlations between them through measuring the kinematics parameter in stroke patients.

Method.– Three-nine subjects with a chronic hemiplegia due to stroke, who could walk at least 10 m independently without a walking aid were recruited. Pearson’s correlation was used to assess the relationship between the joint movements parameters of lower extremity and walking ability (velocity). The significance of the correlation was assessed by comparison with the sample correlation coefficient. The correlation coefficient was said to be significant at the 5% or 1% level if it exceeded the sample coefficient.

Results.– The correlation between walking ability and hip extend, and hip joint ROM, and knee flexion, and knee joint ROM of weak side showed significant relationships P < 0.01. The correlation between walking ability and symmetry of hip extend, and symmetry of knee joints ROM showed significant relationships P < 0.05.

Conclusion.– Restoration of normal movements of the lower extremity joint while walking is the important factor. Gait analysis can be of importance in documenting abnormalities and determining the effects of therapeutic modalities.

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Clinical modeling of neurolysis

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Keywords: Neurolysis; TENS & FES; Locomotion; Restoration; Self-care

Introduction.– TENS and FES have been used in several purposes, antispasticity an antinociceptive effects on muscles, neuromodulation and modification of motor patterns.

Material and methods.– Clinical investigation, with group of 30 patients suffered from UMNS, origin from ICV/TBI/13 female and 17 male/had done. Functional status of patients has been measured according own clinical flow sheet and scale, after their exposure to TENS/FES.

Results.– Results shows significant negative correlation between application TENS/FES and spasticity and improvement in locomotion of paralyzed arm. There is evidence that these effects are permanent.

Discussion.– Electroneurolysis by TENS as first and FES as an second act, through spinal cord and UMN, initiate reflex attenuation, suppressed the pathological and nociceptive reflexes and accentuated the spasmodic effects. Mathematical analysis shows that program of TENS/FES enables functional progress in patients that reached plateau in recovery and support faster restoration function of hand and better self-care.

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Long-term quality of life and functional impairment after decompressive craniectomy for malignant middle cerebral artery infarction

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Keywords: Decompressive surgery; Malignant middle cerebral artery territory infarction and quality of life

Methods.– Patients from 5 French stroke units with malignant MCA infarction (MMI) treated with decompressive craniectomy between 2004 and 2010 were enrolled in the study. Survivors were followed for a minimum of 2 years after surgery. Long-term outcome was evaluated with the modified Rankin scale (mRs), the stroke impact scale (SIS) and the life satisfaction checklist (LiSat-11). Family caregivers answered the proxy version of the SIS and the Zarit Burden Interview (ZBI).

Results.– Mean age was 46.6 years. Two-years survival was 73%. 68% of the survivors were functionally independent (mRs ≤ 3) after 24 months of follow-up. No patient was in a vegetative state (mRs = 5). The mean patient assessment of global stroke recovery was 45%. According to the LiSat checklist, 64% found their life as a whole satisfying. Eighty-six percent of the survivors had a retrospective acceptance of craniectomy. Seventy-eight percent of their caregivers regarded their burden as mild.

Conclusion.– Patients with malignant MCA infarction treated with decompressive craniectomy display a sustained, long-term functional improvement that lasts far after the first year of their stroke. At 2 years and later, most of them are functionally independent and found their life satisfying. The burden on most of the caregivers ranged from none to mild.

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Knowledge of cardiovascular risk factors in stroke patients

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Keywords: Stroke; Knowledge; Cardiovascular risk factors; Rehabilitation; Assessment; Secondary prevention

Goal.– A prospective study was carried out in a neurological rehabilitation unit with the aim of assessing knowledge of cardiovascular risk factors in stroke patients.

Patients and methods.– Fifty-five patients performed an open and closed-ended questionnaire regarding stroke risk factors, stroke warning signs and improving stroke knowledge.

Results.– The mean number of stroke risk factors spontaneously cited by patients increased from 2.5 to 3.1. Patients most cited excessive alcohol consumption, smoking and high cholesterol level. They had difficulty to identify their own stroke risk factors, but then improved their answers in closed-ended questionnaire. Improving stroke knowledge was pretty poor especially concerning patients with hypertension, obesity and diabetes. The most frequent rules cited by patients were limited alcohol consumption, smoking cessation and low-fat diet.

Discussion.– Few data is available about knowledge of risk factors in stroke patients. The level of knowledge significantly improved during rehabilitation stay, with initial received opinions.

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