domized into two groups ($n = 12$/group): implanted FES vs AFO. Kinematics gait analysis at free speed assessed speed, step length, cadence, maximal active dorsiflexion and eversion in swing, dorsiflexion at late swing, without and with assistive device (OFF vs ON) at 3 and 6 months of treatment onset (M3, M6).
Results.– Between-groups comparison showed similar treatment effects. The treatment-associated (both groups pooled) kinematic changes included increases in gait velocity (+13%; OFF, 0.69 ± 0.06 m/sec; ON, 0.78 ± 0.06 m/sec, $P = 1.2E-4$), paretic step length (+4%, $P = 0.009$), non-paretic step length (+9%, $P = 0.019$), cadence (+6%, $P = 4.5E-4$), maximal active dorsiflexion (OFF, $-4.5 \pm 1.4°$; ON, $1.1 \pm 1.5°$, $P = 2.3E-6$), and reduced late swing plantar flexion (OFF, $-11.5 \pm 1.3°$; ON, $-2.8 \pm 1.5°$, $P = 1.5E-7$) and ankle inversion (-30%, $P = 1.3E-4$).
Conclusion.– Three and 6 months of implanted peroneal nerve FES or AFO produced similar positive effects based on gait laboratory analysis.

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Assessment of spasticity with sonoelastography in stroke patients

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Keywords: Sonoelastography; Spasticity; Stroke
Introduction.– Sonoelastography (SE) which is a ultrasound-based technique can assess tissue elasticity. We have investigated the capability of SE to show muscle stiffness in spasticity and the correlation of SE findings with muscle architecture features in spastic gastrocnemius muscles of stroke patients.
Material and methods.– Twenty-six stroke patients (20 males, 63.6%; 6 females, 36.4%) who had spasticity of more than modified Ashworth scale 1+ in gastrocnemius muscle were evaluated with ultrasonography. Muscles architecture features (pennate angle, fascicle length, muscle thickness and muscle compressibility) of gastrocnemius medialis and lateralis on both sides were scanned using B-mode. Elasticity Index (E) was measured using SE in subcutaneous region and muscle. E value ranged from 0 to 6 (6 indicates the hardest tissue).
Results.– E ratio was significantly higher in the affected gastrocnemius medialis and lateralis compared to the unaffected side ($P < 0.05$). Pennate angle, fascicle length, muscle thickness and muscle compressibility were lower in the affected side. However, there was only significant difference in muscle compressibility on both side and pennate and on lateral side ($P < 0.05$). There was not any significant correlation between muscle architecture features and SE findings.
Discussion.– SE as a novel diagnostic tool can be used to assess spasticity in stroke.

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Round table

TR04-001-e

Early supported discharge (ESD) services for stroke patients

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Stroke services in developed countries usually features a period of care in hospital. However, patients and families often face major challenges at the time of discharge home from hospital and in the subsequent weeks of adjusting to care at home. Early supported discharge (ESD) services challenge this model of care by aiming to accelerate discharge home and provide rehabilitation input in the home setting. A substantial number of clinical trials have tested this approach to care of ESD services and ensuring that they are implemented widely.
The objectives of this presentation are to:
– summarize the rationale for ESD services after stroke;
– provide a detailed description of these services as tested in the randomized trials – we are aware of 16 randomized trials of which two tested very atypical ESD services and a further two are not yet reported. These trials suggest that ESD services will:
– reduce the length of hospital stay,
– reduce the number of patients requiring long term nursing home care,
– reduce the number of patients with long term disability,
– summarize the progress in developing guidance for establishing and running such services.

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TR04-002-e

Early discharge after stroke: A Belgian experience

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Keyword: Stroke discharge rehabilitation
In Belgium, the health care financing system puts a pressure to reduce as much as possible the length of stay in all the acute care hospitals. Unfortunately, this system is mainly based on diagnoses (All Patients Refined Diagnostic Related Groups) and does almost not take into account the functional ability of the patients. Consequently, the neurologists try to discharge their stroke patients as soon as possible. The neurologists working in the acute hospital then have to collaborate with other facilities, usually independent from their institutions. If the patient returns home, collaboration with the community-based care is required. If the patient is unable to return home, he will be discharged to rehabilitation facilities or to a nursing home.
Since several years, our Physical Medicine and Rehabilitation department have developed a close collaboration with the Neurology departments for two purposes. On one hand, to provide an early rehabilitation after stroke when the patient stay in the stroke unit and on the other hand, to help the neurologist to discharge the stroke patients by organizing their inpatient or outpatient rehabilitation. To optimize this organization, we are trying to develop a Clinical Pathway.
During this round table, I will share our daily clinical practice experience in this field.

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TR04-003-e

Stroke rehabilitation and early supported discharge in Ireland

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Introduction.– Ireland is currently analyzing the implications of developing the preferred pathway of Early Supported Discharge (ESD) through a national research project.
Materials and methods.– The research team have reviewed the randomized control trials literature and studied cost benefit analysis in ESD.
Results.– The literature suggests that there may be a trend towards cost reduction associated with ESD compared with centre-based rehabilitation. Length of stay for stroke patients is shorter and internationally the clinical outcomes appear equivalent to conventional centre based care. Review of the available literature suggests that ESD is feasible and comparable to or superior to conventional care. The research team are currently reviewing the outcomes from a year-long ESD initiative at a large urban general hospital. The objective is to present a case for facilitating the appropriate discharge of suitable stroke patients from acute hospitals to home by supporting them with a well coordinated community rehabilitation team.