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Conclusions: Our data confirm the relationship between age, cause of injury, injury severity, and outcome in relation to traffic accidents, and highlight the need for prevention as well as the importance of traffic accidents as a cause of long-term disability. In addition, this study again underscores the value of rehabilitation programs.

ID 308: Use of Treadmill for Gait Training in Patients With Cerebellar Ataxia

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Introduction/Objectives: Treadmill training for patient with hemiplegia due to stroke or head injury is widely accepted all over world as a modality of Rehabilitation since long; however, there are no such study in patients suffering from cerebellar ataxia. An attempt is made to improve the gait of the patients suffering from cerebellar ataxia with the treadmill with harness.

Participants, Materials/Methods: Two patients one due to post Viral infection and other from Cerebrotendinous xanthomatosis with cerebellar ataxia were treated with Treadmill training for 15 minutes three times a week for 6 months. Patient was trained in all directions on treadmill—forward, backward and sideward with the waist support. The routine balance exercises were continued.

Results: Patients with cerebellar ataxia showed improvement in their walking at end of 6 months. They were able to walk independently as compare to needing support on both side before training. Patients were able to walk with out body support after 3 months and could achieve a speed of 3km in forward walking and 1 km/hr in sideways and backward walking at end of 6 months.

Conclusions: The treadmill training in patients suffering from ataxia has shown improvement in gait, balance and overall ADL. It is task specific and gives continuous sensory feedback on moving belt. Forward backward and sideway training improves balance by stimulating vestibular system and can be an effective tool in promoting rhythmical task related training which is symmetrical and economical. Large study are required to establish the effect of treadmill training in Cerebellar ataxia.

ID 310: Clinical Outcome of Inpatient and Outpatient Rehabilitation in Subjects With Multiple Sclerosis. A Prospective and 3 Months Follow-Up Study

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Introduction/Objectives: Aim of this study is to evaluate differences in clinical and functional outcome of inpatient and outpatient rehabilitation in two different cohorts of patients with Multiple Sclerosis (MS) and to detect how this treatment could impact in these outcomes after a 3 months follow-up evaluation.

Participants, Materials/Methods: Starting from November 2007 we selected a group of 21 consecutive patients with both relapsing-remitting (RRMS) and secondary-progressive (SPMS)

course of disease in two different region of Italy. All patients should have had worsening of their neurological condition of at least 1.0 point at Expanded Disability Status Scale (EDSS) in the last 12 months without superimposed relapses in the previous 3 months. Moreover they should be able to walk and with EDSS score between 3.5 and 6.5. A total of 9 subjects (3 RRMS, 9 SPMS) underwent to inpatient intensive rehabilitation programme in a Neurorehabilitation Dept in Northern Italy and 12 patients (6 RRMS, 6 SPMS) followed the same programme in a outpatient clinic in Southern Italy. As outcome measure we evaluated EDSS, Barthel Index (BI), time to walk 15 feet (t15F) and 9-Hole-Peg-Test (9HPT). Both groups are similar in basal data such as age, sex, duration of disease, EDSS, BI, 9HPT; we evaluate outcome at the end of rehabilitation programme and after 3 months of follow up in which outpatient group continued its rehabilitative programme.

Results: At now we have complete data about first phase of our work for both groups. We found that inpatient and outpatient rehabilitation gave a significant improvement in EDSS score ($p < 0.0001$), 9HPT (right hand $p < 0.02$, left hand $p < 0.0001$), BI ($p < 0.02$) while seems to be no effective in t15F ($p = 0.09$). If we compare inpatient versus outpatient outcome, we found that first group have more significant improvement in EDSS, 9HPT and BI respect of outpatient group at the end of the intensive rehabilitation programme, but preliminary analysis of 3 months follow-up seems to demonstrate that this benefit falls down in the inpatient group. We did not find any differences in outcome measures considering the course of disease.

Conclusions: Our data demonstrate that both inpatient and out patient rehabilitation gave significant results in terms of clinical and functional improvement in MS patients regardless their clinical course. Moreover, intensive inpatient rehabilitation give to our patient more benefit than outpatient rehabilitation, but this effect seems to diminish during follow-up if the rehabilitative treatment is interrupted.

ID 311: Outcomes of Early Rehabilitation After Neurosurgical Clipping of Aneurysm Patients

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Introduction/Objectives: A cerebral aneurysm is a weak or thin spot on a blood vessel in the brain that balloons out and fills with blood. The bulging aneurysm can put pressure on a nerve or surrounding brain tissue. It may also leak or rupture, spilling blood into the surrounding tissue. In order to prevent the aneurysm from hemorrhaging (bleeding) or re-bleeding, the neurosurgeon places a clip across the neck of the aneurysm. The aim of this study was to analyze the demographics and outcomes of patients receiving early rehabilitation treatment after surgical repair of ruptured and unruptured cerebral aneurysms.

Participants, Materials/Methods: The results of 101 patients (68 patients with subarachnoid hemorrhage and 33 patients with unruptured cerebral aneurysm) who were treated with neurosurgical clipping and enrolled in the early rehabilitation program after the surgery at Hacettepe University Neurosurgery Rehabilitation Unit between 2001 and 2007 were investigated and compared to each other. The demographics, length of stay (LOS), and rehabilitation duration of the patients were determined. All patients were examined using the Glasgow Outcome Scale (GOS), Glasgow Coma