Usefulness of plain abdominal radiography in stroke patients with bowel dysfunction
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Keywords: Bowel dysfunction; Stroke; Plain abdominal radiography; Colon transit time

Objective.– To evaluate the usefulness of the plain abdominal radiography as a diagnostic value of bowel dysfunction in stroke patients.

Method.– A total of fifty nine stroke patients were recruited. Patients were interviewed about the clinical information, constipation score and Bristol stool form scale. The total and segmental colon transit time (CTT) were measured by using radio-opaque markers. The degree of stool retention was evaluated by the plain abdominal radiography and were scored by two different methods, such as Star-reveled score and Leech score. For each bowel segment stool stasis is scored as 0, 1, 2, 3. We examined the relationship between the clinical aspects, CTT and the degree of stool retention of plain abdominal radiography.

Results.– Constipation scores ranged from 1 to 11, average 4.59 ± 2.16 and Bristol stool form scale ranged from 1 to 6, average 3.86 ± 1.13. There were statistically significant correlations between the total CTT and constipation score.

Conclusion.– Plain abdominal radiography was a simple and convenient method as a evaluation method of the bowel dysfunction in stroke patients.

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Brain areas for thalamic pain. A preliminary brain F-18 FDG PET study
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Keywords: Central post-stroke pain; Thalamic stroke; Brain metabolism

Introduction.– Central post-stroke pain (CPSP) is one of the most refractory pain syndromes following stroke. However, the pathogenic mechanism has not been clearly clarified. In this study, we aimed to elucidate the underlying mechanism for CPSP by investigating the brain metabolism in patients with CPSP after thalamic stroke (TSt).

Materials and methods.– Eight patients with CPSP after TSt were enrolled in this study. We measured brain metabolism by F-18 FDG PET and the pain severity by VAS. Statistical analysis of brain metabolism for all patients was performed by SPM2 compared to 15 healthy controls. Additionally, we investigated the brain area correlated with the pain severity using covariate analysis.

Results.– SPM analysis showed that decreased brain metabolism was in left anterior cingulum, right insula, right superior temporal cortex, both cerebellum and increased brain metabolism was in left orbitofrontal, right superior temporal, right calcarine, both inferior temporal cortices in patients with CPSP. The severity of CPSP was correlated with the brain metabolism of right precentral, right superior parietal cortices.

Discussion.– Our findings suggested that brain area in anterior cingulum, insula, orbitofrontal gyri which are parts of neural network for affective pain processing, may be relevant structure for underlying mechanism of CPSP after TSt.

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Activity level of post-stroke patients when leaving the PRM department
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Keywords: Stroke; Activity; Recommendations; Sensor

Objective.– To evaluate the daily activity of stroke patients to determine if they meet the 30 minutes of moderate daily activity recommended by the HAS [1], preferably by performing sessions of 10 consecutive minutes [2].

Methods.– The activity level of 15 walking subjects (mean age: 64.7 ± 18.1 years, Barthel Index (BI): 85.2 ± 13.1/100, stroke time: 36.5 ± 22.5 days) was estimated using a sensor armband SenseWea (BodyMedia) carried two consecutive days during the period of rehabilitation (9am to 4:30pm).

Results.– In all patients, the mean was 38.0 ± 33.3 minutes of moderate activity daily, on average activity sessions of 4.2 ± 5.3 minutes. However on a case-by-case, 5 patients (mean age: 59.4 ± 21.8 years, IB: 83.1 ± 16.7/100, stroke time: 29.0 ± 22.4 days) did not meet the recommendations and conducted an average of 5.8 ± 4.4 minutes daily moderate activity.

Discussion.– This study shows that two out of three patients reach the recommendations when leaving the PRM department. However they fail to comply with sessions of 10 consecutive minutes.

References

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Upper-limb recovery after stroke for patients during rehabilitation
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Keywords: Stroke; Rehabilitation; Mobility

Introduction.– Majority of stroke patients (pts) have upper-limb dysfunction [1]. The aim of this study was to evaluate recovery of hand function in stroke patients during rehabilitation.

Material and methods.– Study sample was 24 pts, 12 pts were with right hemispheric stroke, 12 pts – with left hemispheric stroke, who underwent the multidisciplinary rehabilitation. Rehabilitation effectiveness was evaluated by Functional Independence Measure test (FIM), the muscles strength – by dynamometer and Lovett test.

Results and discussion.– The change of FIM score was 30 ± 3.1 points, P < 0.001: I group – 29.6 ± 4.8 and II group – 30.4 ± 4 points (P = 0.7).

The improvement of muscles strength of paralytic hand was: wrist flexors – 0.8 ± 0.2, wrist extensors – 0.8 ± 0.2, digit-flexors – 0.9 ± 0.2, digit-extensors – 0.7 ± 0.2, digit-adductors – 0.8 ± 0.2 points (P<0.05). The change of muscles strength of paralytic hand was 2.9 ± 0.8 kg (P<0.05): I group – 2.9 ± 1 kg and II group – 2.8 ± 1.2 kg, (P = 0.9). The upper-limb function for stroke pts during rehabilitation get better (P<0.05), the side of stroke location in the brain has no statistically significant findings.

Reference

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Resumption of driving after a stroke, descriptive study
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Keywords: Stroke; Rehabilitation; Driving

Objective.– To determine if patients are able to drive alone after stroke, taking into account the opinion of their doctor.

Method.– Study sample was 34 patients: 24 pts with right hemispheric stroke, 10 pts – with left hemispheric stroke, who were referred to the rehabilitation department. Rehabilitation doctors were asked if the patient could drive alone.

Results.– All patients were able to drive alone, except one patient who was not able to drive any more.

Discussion.– The resumption of driving after stroke is a serious concern for doctors. The results of this study show that the resumption of driving after stroke is a serious concern for doctors. The results of this study show that the resumption of driving after stroke is a serious concern for doctors.
**P430-e**

**Stroke in the very elderly: Characteristics and outcome in patients over 90**

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**Keywords:** Stroke; Elderly; Disability; Rehabilitation

**Introduction.**– The very old are expected to become a growing part of the stroke population in the developed countries, but related information is limited.

**Materials and methods.**– Retrospective hospital-base population analysis of patients discharged from hospital with a principal diagnosis of acute stroke (ICD-10: 160–164) from 2003 to 2007. Patients over 90 were compared with the group of 85–89 regarding demographic data, stroke type, risk of disability, length of hospital stay and discharge destination.

**Results.**– Among 898 patients 42 (4.6%) were ≥ 90 (69% female), and 87 (9.6%) 85–89 (56.0% female). Ischemic stroke represented 83.3% and 77.0% respectively. Seven-day case fatality was 14.3% and 13.8%, and 30 day case fatality 26.2% and 26.4%. However severe disability (m-Rankin ≥5) was observed among the eldest group, from 71.1% pre-stroke to 35.7% after stroke, increasing by 28.6% vs. 13.8% (P < 0.01), 14.3% of nonagenarians and 27% of the younger attended rehabilitation. LOS > 30 days and discharge to long-term care facilities were more frequent among the eldest: 9.5% and 14.2% vs. 6.5% and 8.0%, whereas discharge to prestroke residence was less common: 59.5% vs. 63.2%.

**Discussion.**– Stroke patients ≥ 90 showed higher disability at discharge, longer hospitalization, limited access to rehabilitation, and lower home return.

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**P431-e**

**Correlation and recovery of balance according to evoked potentials in hemiparetic stroke patients**

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**Keywords:** Stroke; Evoked potential; Balance

**Introduction.**– This study was undertaken to investigate correlation and recovery of balance ability according to motor evoked potentials (MEPs) and somatosensory evoked potentials (SSEPs) of lower extremity in sub-acute hemiparetic stroke patients.

**Material and methods.**– Thirty-seven hemiparetic stroke patients (average age, 66.7 ± 12.6 years) were enrolled for this study. All subjects performed motor evoked potentials (MEPs) of tibialis anterior muscle and somatosensory evoked potentials (SSEPs) of tibial nerve at baseline. Two groups were classified as response of evoked potentials (MEPs (+): presence of MEPs response, MEPS (-): absence of MEPs response, SSEPs (+): presence of SSEPs response, SSEPs (-): absence of SSEPs response). Patients were evaluated for balance ability using the Bio rescue posturography. Among several parameters, we used weight distribution indices expressed by surface area (WDI-Sa) and pressure (WDI-Pr). Parameters were checked during eye open (EO) and eye closed (EC) state.

**Results.**– In comparison of posturographic parameters according to EPs response, WDI-Sa (EO) (0.83 ± 0.14 vs. 0.97 ± 0.22, P = 0.04), WDI-Sa (EC) (0.81 ± 0.17 vs 0.95 ± 0.21, P = 0.04), WDI-Pr (EO) (0.69 ± 0.25 vs 0.90 ± 0.29, P = 0.03) and WDI-Pr (EC) (0.69 ± 0.25 vs 0.98 ± 0.35, P = 0.01) scores were significantly lower in MEPs (-) group than MEPS (+) group.

**Discussion.**– Our findings suggested that MEPs response was significantly correlated with balance ability at baseline in sub-acute hemiparetic stroke patients.

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**P432-e**

**Prevention of falls among patients with recent vascular hemiplegia at a physical medicine center: Assessment of a specific prevention program**

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**Keywords:** Hemiplegia; Stroke; Fall; Prevention; Risk factors

**Objective.**– Analyse the effectiveness of a protocol for the prevention of falls in hemiplegia.

**Methods.**– A descriptive and retrospective study, performed over a period of 24 months of 114 patients older than 16 years of age, all victims of a recent stroke. Two groups were evaluated: one “fall prevention program” (presence of fall risk predictors), the other without these factors. The prevention program decided and followed by the medical team includes: magnetic belt, supervision during transfer, secured facility on toilet.

**Results.**– There was 42.98% of hemiplegics who fell down. In the group “prevention program” (n = 35), 15.79% fell, this rate increases in the other group (n = 79) up to 27.19%. Serious lesions occurred only in the group “without prevention program”. A breach of protocol was noted in 55.81% of cases.

**Conclusion.**– The fall prevention program seems to reduce falls. A good identification of fall risk predictors and respect of the prevention program by caregivers are advisable.

**Further reading**


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**P433-e**

**Prognostic value of motor evoked potentials in the locked in syndrome**

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**Keywords:** Locked in syndrome; Motor evoked potentials

**Introduction.**– Motor evoked potentials obtained (MEP) distally after stimulation of the motor cortex early after stroke, provides arguments for motor recovery. There is little information in the literature about MEP as a predictive factor in the Locked in Syndrome (LIS).

**Case report.**– The case of a patient with an incomplete LIS following a pontic infarct the 26 of May 2013 is reported. After 4 months of follow-up, the beginning of an active motor control of the elbow flexors on both side and in finger flexors in the only right hand was observed. MEP were obtained on both upper limbs