

but others need neurological surveillance after living the hospital, so we send them to follow up.

**Objective:** The purpose of this work is to present the need for special attention to out patients until they are stable and can be send to his family doctor.

**Methods:** We review 789 clinical processes.

**Results:** From 789 patients, 225 failed the follow up and two of them died (massive intracerebral haemorrhage and motor neuron disease), 368 have been seen for the first time coming directly from emergency the department and 196 have been seen for the second time which means that more than a half of patients have been seen twice and some for three times before they can be send to the family doctor.

**Conclusions:** This results shows that we need to work more with patient families because most of the cases that failed the follow up have problems with alcohol.

#### **P0482** Spontaneous Intracranial Hypotension with Cervicothoracic Junction Leak Diagnosed with MRI

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**Background:** Spontaneous intracranial hypotension is a syndrome of headache due to low CSF pressure (<6 cm water) in the absence of a precipitating event. It is thought to be due to a tear in the delicate arachnoid surrounding a nerve root with continuous leakage of CSF.

Cases. Three young women have recently presented to our department, each with several week histories of severe postural headache. None had abnormal neurological signs. In all cases, MRI brain showed symmetrical thickening of the dura without involvement of the leptomeninges, with thin subdural fluid collections supratentorially and infratentorially. One case had a normal meningeal biopsy. Cervical spine MRI of this patient showed moderate thickening of the ventrolateral dura at C2-4 with fluid in the spinal canal ventral to the subarachnoid space at C6-T1. MRI of the cervicothoracic spine of one of the other patients showed a fluid void at the cervicothoracic junction with a subdural collection anterior to the cord at and above this level.

**Conclusions:** Usually more invasive procedures such as radionuclide cisternography or CT myelography are used to demonstrate the leak in SIH, the commonest site for which is the cervicothoracic junction. Our cases illustrate that MRI imaging alone can accurately diagnosis the site of CSF loss. This condition is increasingly recognised and requires specific management to avoid complications such as progressive subdural haemorrhage and cranial nerve palsies. All of our patients recovered with a period of prolonged and absolute bed rest, but other cases may require epidural blood patches, epidural saline infusion or surgical intervention. Confirmation of the diagnosis by such a simple test as cervicothoracic junction MRI is helpful in the further management of these patients.

#### **P0483** Sensory-motor Deficits After Mild Closed Head Injury

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**Background:** The primary consequence of closed head injury (CHI) is diffuse axonal damage resulting from rotational shearing forces within the brain at the time of injury. As even mild head injuries can cause extensive neural damage in the brain it is likely that this will include areas and pathways concerned with planning and execution of sensory-motor functions.

**Objective:** This study was undertaken to determine the extent of upper-limb sensory-motor deficits at up to 2 weeks following mild CHI.

**Methods:** 30 patients (15-40yr, GCS 13-15, alteration of consciousness < 20 min, PTA < 4h) and 30 matched controls were compared on computerized tests of sensory-motor function (visual perception, ballistic movements, steadiness, and several 1D-tracking tasks).

**Results:** The CHI group were impaired on static visual perception (errors: CHI mean: 1.36 vs control mean: 1.01, difference 34%,  $p=0.011$ ), acceleration/speed (821 vs 949 mm/s, 13.5%,  $p=0.033$ , two-tailed Wilcoxon matched-pairs test) and eye-arm accuracy/coordination as evidenced by larger errors on several tracking tasks: sine (6.96 mm vs 5.78 mm, 20%,  $p=0.003$ ), random (6.96 mm vs 6.18 mm, 13%,  $p=0.017$ ), sine with preview (8.45 mm vs 7.25 mm, 16.5%,  $p=0.021$ ) and step tracking (11.34 mm vs 10.37 mm, 9%,  $p=0.002$ ). The CHI group also had a higher lag on step tracking (642 ms vs 588 ms, 9%,  $p=0.013$ ) and a marginally higher lag on sine tracking (68.6 ms vs 57.8 ms, 19%,  $p=0.051$ ). Reaction time and steadiness were not impaired.

**Conclusions:** These results indicate that mild CHI can cause widespread neural damage to the sensory-motor system. They also suggest that these abnormalities can be a sensitive marker of impaired neurophysiological functioning in the brain. It remains to be established whether there is a correlation between these deficits and overall recovery of patients.

#### **P0484** A New Classification of Brain Injury

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**Background:** A new classification based on comparison of clinical data, neuroimaging findings and neuropathological knowledge are established for a better diagnostic evaluation of traumatic brain damage.

**Methods:** The study population includes 150 patients (112 male, 38 female), with a mean age of 24,2 years (5-69). Inclusions criteria were suspicion of inner cerebral Trauma on CCT or discrepancy of CCT-findings and clinical symptoms. Clinically, acute midbrain syndrome (MS) was present in 22 patients, prolonged MS in 25, apallic syndrome in 52 patients, and a post-apallic stage in 51 patients. All patients underwent a CCT examination in the acute stage, MR-imaging (1.5 T, Magnetom, Siemens Erlangen) was performed in 22 patients within one week after the accident, in 28 patients between one week and one month, in 60 patients within one month and one year and in 60 patients later than one year post-trauma.

**Results:** From neuroradiological point of view we differentiate between linear external brain injury with coup and contre-coup lesion, linear internal brain injury, subdivided into upper and lower internal brain injury and a rotation trauma.

Contrary to the diagnostic system of brain contusion and concussion, we differentiate four clinical categories of severity of brain injury.

This new system of classification permits a rapid detailed diagnosis of brain injury and its sequelae and a more early establishment of prognosis.

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