"PSEUDOHUNTINGTON"-PATTERN OF SPECT IMAGES IN A PATIENT WITH HYPERKINETIC SYNDROME

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A 70 year old woman with a history of hyperkinesias in both legs during night was investgated with CT- and SPECT-scanning. CT showed atrophic changes mainly in frontal regions, the intercaudate distancy was enlarged, but caudate area was regular on both sides and clearly to define. Surprisingly, on SPECT images caudate nuclei were completely missing as found in patients with definite Huntinton's chorea (HC) (Leblhuber et al, Psychiat Res 1989); family history for HC was negative. Follow up studies will demonstrate, whether this is a "late onset" of form hereditary chorea or a benign form of chorea with moderate choreatic movements, in which earlier studies have demonstrated normal striatal metabolism (Kuwert et al, J Neurol 1990).

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Sciatic nerve lesions: electrophysiological and neuroimaging findings

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Sciatic mononeuropathies are rare. Lesion of the nerve occur in traumatic conditions, as the sequel of hip operations, local haematomas, injection injuries and due to local neoplastic conditions in the pelvic region difficult to distinguish from sacral plexus lesions. Clinical diagnosis is supported by nerve conduction velocities, although evaluation of the proximal nerves is difficult and unreliable and can be improved by EMG of pelvic muscles. Neuroimaging techniques, particularly CT , aid in detection of local processes.
Three patients with sciatic mononeuropathy are presented: one patient who developed a local haematoma in the dorsal proximal portion of the thigh due to a fall in intoxication, one patient who had a traumatic luxation of the hip due to a traffic accident and a woman who suffered atypical S1, S2 pain in one leg 2 years after a uterus carcinoma. At first clinical examination and EMG were negative, within a few months she developed neurogenic EMG in all sciatic nerve muscles with sparing of glutei. A lesion in the infrapiriform region was suspected , identified in CT and surgically removed.
Differentialdiagnostic consideration of sciatic nerve lesions, electrophysiologic findings and neuroimaging results are discussed.

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MR-IMAGING OF BILATERAL POSTTRAUMATIC OLIVARY HYPERTROPHY

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The inferior olivary nucleus is known to show a hypertrophic degeneration attributed to transneural degeneration from interruption of the dentatorubro-olivary pathway. This somatotopic pathway leaves the controlateral dentate nucleus, passes through the superior cerebellar peduncle, and crosses the posterior commissure before joining the central tegmental tract and descending to the ipsilateral inferior olive.
Pathologically neuronal loss, cytoplasmic vacuolation, loss of myeline and gliosis were found. This condition is assumed to be related to an anterograde transneural degeneration, whith an increase of mobile water protons may be responsible for the MR signal abnormalities. A variety of etiological agents have been reported in olivary hypertrophy before, it often has been observed unilaterally in brain stem or cerebellar infarction or hemorrhage. It has rarely been reported as a sequel to trauma. In the last 3 years 140 patients with severe closed injury were investigated by magnetic resonance imaging in our department using a 1.5 Tesla Magnetom (Siemens, Germany). 6 of these patients had a bilateral olivary hypertrophy, a MR-feature which has never been reported before. In 3 of these patients palatal myoclonus combined with "up beating nystagmus" and "wing beating" in addition to other symptoms as a sequel of severe brain stem injury were observed.

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TOPOGRAPHY OF VISUALLY EVOKED POTENTIALS AND NYSTAGMUS

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Visually evoked potentials (VEP) are a well established diagnostic tool to detect lesions of the optic pathway. The latency and the amplitude of the P2 peak are influenced by the type as well as by the retinal localisation of the stimulus. Brain mapping proved topographically the occipital localization of the P2 peak. Specific patterns of retinal stimulation (foveal, hemiretinal) resulted in specific changes of P2 peak lokalization, corresponding to the anatomically known topography of the visual cortex.
Fixation has also been known to be of importance for the latency and the amplitude of the P2 peak, but the impact of nystagmus has been doubted yet.
Our study shows the variability of latency and topography of the P2 peak in correlation to vestibulary evoked nystagmus
Twelve healthy young voulunteres were examined. 21 electrodes were placed according to the 10/20 system with linked earlobes as reference. Monocular stimulation was performed by checkerboard reversal in baseline conditions and after caloric stimulation of one vestibular organ. Compared to the baseline conditions there was an interocular difference in P2 latency as well as a topographical shift after caloric stimulation. The results may represent the different retinal localization of the visual stimuli secondary to nystagmus. We hypothezise that the topography of VEP gives additional information in pathologically prolonged P2 responses.

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