

effect on the standard deviation of lateral position; they had a moderate or severe impairment in keeping a straight lane. The performance of 1 patient in particular with or without epileptiform discharges fell far short of what might ordinarily be regarded as acceptable in an experienced driver. The substantial medication he took could be accounted for this negative baseline effect. Two of the three patients who showed a significant negative effect on the standard deviation of lateral position were the only 2

not being seizure-free.

No other features appeared to be predictive of altered driving behaviour. It is not possible from this pilot study to sustain the claim that persons with subclinical EEG discharges should be prevented from driving, nor to offer an opinion as to whether these transitory cognitive impairments represent a greater traffic hazard than other risk factors not regulated by law as extreme fatigue or simply the common cold.

### **Scientific meeting of the Amsterdamsche Neurologenvereniging held in Amsterdam, 5th February 1987.**

#### **The cumulative vibratory index of the soleus H-reflex: a study in controls and spastic patients.**

B.W. Ongerboer de Visser, L.J. Bour, and J.D. Speelman (Amsterdam)

Suppression or abolition of the soleus H-reflex occurs in healthy subjects when vibration is applied to the tendon. This is due mainly to presynaptic inhibition exerted on Ia fibres and can be demonstrated by means of the H-reflex recruitment curve.

The classical vibratory index (Iv) (H-maximal (vibrated) divided by H-max (control) x 100%) is compared with a new cumulative Iv (Icv) by means of computer processing. Icv is defined as the ratio of the area under the H-reflex recruitment curve with and without tendon vibration. Icv has been studied at three intensity levels in the unvibrated state: 1, at the intensity yielding H-max; 2, at the intensity between threshold and H-max at which the H-reflex reaches half its

maximum value (0.5 H-max); 3, at supra-maximal intensity at which the H-reflex disappears or is hardly present in the recruitment curve (H-total). Recruitment curves of top-top and area values of the reflexes are computed. Reflex studies were performed in twenty controls and eleven spastic patients. Icv 0.5 H-max proved superior when compared to the remaining indices in the patient group, followed by H-max Ivc. The classical Iv has the least discriminatory value of the indices. At higher stimulus intensities vibration becomes less effective in suppressing soleus H-reflex responses. It is likely that loss of vibratory suppression in spasticity is to a considerable extent due to loss of an inhibitory factor linked with more easily activated motoneurons than with the more slowly depolarized motoneurons within a motoneuron pool.

#### **Cerebral palsy and stereotactic encephalotomy**

J.D. Speelman and J. van Manen (Amsterdam)

28 patients (between 8 and 51 years old) underwent stereotactic surgery in the period 1958 - 1983 for dyskinesias due to cerebral palsy. In 1986, 18 patients are still alive and have been re-examined. The post-operative follow-up ranged between 3 and 26 years. As parameters we have used: operation indication symptom, handfunction, ADL-scale profile (Kortbeek), disability, and judgment of the patient.

Results: The better results are obtained in patients with unilateral symptoms, hyperkinesias, and action-intention dyskinesia. Bilateral dystonic patients, with or without spasticity, show a poor result, due to their severe disturbance of motricity pre-operatively, and to complications due to the bilateral operation. Improvements that are brought about by the operation are stable in time. Target points, complications due to the operation, and the position of stereotactic surgery in the treatment of cerebral palsy patients are discussed.