sympathetic skin response (SSR) in 10 normal subjects. Two recording points were selected: palm-dorsum and the ventro-dorsal tip of the third finger. The SSR was elicited by electrical stimulation of the median nerve in basic conditions (32–34°C) and after local cooling (20–22°C) of only one proximal recording site, while the distal temperature was stable. In all the subjects a delay of latencies and a reduction of amplitudes, particularly of the early negative phase, only from the cooled skin area were observed, without a significant variation in distal and contralateral SSR parameters. In the experimental conditions skin temperature appeared to affect only the peripheral sweat effectors. In detecting SSR parameters routinely, cooling has to be considered.

140. Thoraco-abdominal pain in diabetes: a case complicated by spontaneous fracture. – M. Baratti, E. Manicardi [a], N. Marcello, C. Spacca [a], S. Davoli [a], I. Iori [b], F. Solimè and I. Portioli [a] (Divisione Neurologica, [a] II Divisione di Medicina, and [b] I Divisione di Medicina, Arcispedale S. Maria Nuova, Reggio Emilia)

Thoracic root pain in diabetic neuropathy is not well known. This syndrome is characterized by intense pain and dysesthesia over vast areas of abdomen and thorax, associated with a marked reduction. Clinical diagnosis is confirmed by electromyographic detection of fibrillations and sharp waves in the paraspinal muscles of multiple myotomes. We describe here an unusal clinical case of thoracic root pain in which radiculopathy is complicated by spontaneous fracture in the involved area (IV costa).

141. Electrophysiologic evaluation of the effectiveness of L-acetyl carnitine in the management of diabetic neuropathy. – U. Morino, L. Vivalda, D. Leotta, M. Nobili, M. Caccia [a], G. Ressia [a], P. Griseri [a] and P. Primus [a] (Servizio Neurologia, and [a] Centro Antidiabetico, Hosp. Martini, Turin)

The aim of our study was the electrophysiologic evaluation of the effectiveness of L-acetyl carnitine (LAC) in improving the painful symptoms of diabetic neuropathy. Twenty-eight patients (aged 34–68 years) with stable diabetes who showed clinical signs of symmetric distal neuropathy were divided into 2 groups. The first group was treated with LAC for 3 months, while the control group received no therapy. At the beginning and at the end of the study we surveyed the following electrophysiological data: motor nerve conduction of deep peroneal and median nerves, sensory nerve conduction of sural and median nerves. We considered the amplitude of MAP and SAP, latency and conduction velocity. After 3 months the variations of ENG values were not statistically significant for either group, although 9 patients in the treated group reported a considerable reduction of painful symptoms. This subjective report should certainly be taken with much caution. We could safely conclude that although LAC does not seem to be effective in restoring nervous fibers of larger diameter, it helps the functional recovery of C fibers, whose damage was proved to be reversible in other neurological diseases.

142. Alteration of the blink reflex during paroxysmal ataxia with dysarthria and diplopia in multiple sclerosis. – F. Morello, L. Silvestri and A. Franciosi (Servizio di Neurologia, Arzigano (VI))

A 23-year-old secretary had tonic seizures and afterwards only paroxysmal bouts of dysarthria, ataxia and diplopia as the first manifestation of multiple sclerosis. These paroxysmal symptoms occurred about every 1.5 min and lasted 15–20 sec. The EEG was normal. During the bouts R2 duration of the blink reflex increased. Cerebrospinal fluid examination and MR were abnormal. Carbamazepine 600 mg daily markedly reduced the attacks, but gave skin allergy. Five months later the attacks are spontaneously decreasing. Damage of the brain-stem is hypothesized.

143. Hand dystonia secondary to cervical demyelinating lesions: an electrophysiological study. – A. Uncini, A. Di Muzio, A. Thomas, A. Lugaresi and D. Gambi (Institute of Clinical Neurology and Behavioral Sciences, Chieti)

Dystonia is generally considered a disease of basal ganglia. Two patients with definite multiple sclerosis developed acute hand dystonia with athetoid movements. MRI showed lesions of the posterolateral cervical spine but no involvement of basal ganglia and thalami. In these patients (1) dystonia was electrophysiologically demonstrated by the lack of reciprocal inhibition between antagonistic forearm muscles; (2) after median nerve stimulation of the affected side SEPs showed a delayed cervical N13 with absent frontal and parietal components, and the long latency response was abnormal; (3) motor evoked potentials from transcranial cortical stimuli were not significantly different on the affected and normal sides. On follow-up all electrophysiological abnormalities reverted to normal when dystonia and athetosis had disappeared. We suggest that, in these cases, dystonia and athetoid movements could be ascribed respectively to the involvement of descending pathways regulating reciprocal inhibition of motoneurons and to the involvement of large diameter afferents due to the demyelinating lesion at the cervical level.

144. Electrophysiological evaluation of erectile disturbances in diabetes mellitus. – F. Sartucci, G. Tognoni, L. Sagliocco, L. Bonfiglio, A. Piaggesi [a], R. Navatesi [a] and I. Murri (Department of Clinical Neurophysiology, Institute of Clinical Neurology, and [a] 2nd Medical Clinic, Univ. of Pisa, Pisa)

In this study 40 patients (mean age: 51.5 ± 9.1 years) with diabetes mellitus (DM), complaining of impotence (24 type I, 16 type II) were investigated through pudendal (pnSFP) and posterior tibial nerve (ptnSFP) somatosensory evoked potentials. In addition neurovegetative tests (deep breathing, Valsalva ratio, postural hypotension, lying to standing) were performed in 18 patients to evaluate autonomic system involvement. PnSEPs were abnormal at lumbar level (L1) in 19 patients, delayed at Cz′ in 31 patients, with prolonged central condudion time (CCT) in 27 patients. Similar findings were obtained using ptnSEP: at L1 abnormalities were found in 14 patients, at Cz′ in 34 and CCT was prolonged in 28. Neurovegetative tests were impaired in 10 patients matching with either pnSEP or ptnSFP alterations. On the basis of our data sexual disturbances in DM seem to be caused by central pathway involvement, spinal and/or supraspinal, contrary to what is usually believed. Moreover, the dissociate abnormality detection of the two modalities of SEP enhance the hypothesis of different sensory pathways and the possibility of their independent involvement.

145. Multisystem integration of neurophysiological data: a preliminary application. – A. Suppiej, P. De Cosmo [a] and P. Cogato [a] (Paediatrics Department, Padua University, and [a] Noise Software Engineering, Padua)

The achievement of data exchange among instruments for neurophysiological diagnosis needs the solution of problems related with differences in commercial equipment, features of neurophysiological signals and method. Furthermore, some data are not DOS compatible and need special conversion. Useful integration depends on a common concept of format and content of data. We report our experience in the integration of evoked potential (EP) data from our old, not DOS compatible (Multibasis, Ote Biomedica) and new (Neuroscan) equipment. To avoid conversion problems from one data format to another, we use different software loaders for each data format; this allows display of EP traces on any personal computer. To overcome problems related with differences in data content we integrate the traces with a special file describing equipment parameters, EP features and methodology. This method can be easily expanded to other instruments and neurophysiological signals. Preliminary applications are a data base collection and data transfer to