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ABSTRACTS OF SELECTED PAPERS

Influence of atropine and isoprenaline on detrusor hyperactivity in children with neurogenic bladder, by A.-S. Naglo, A. Nergårdh and L. O. Boures. *Scand. J. Urol. Nephrol.* (1981), **15**, 97–102.

Bladder hyperactivity was investigated in nine children with myelodysplasia and incontinence. Bladder hyperactivity was defined as unconscious, involuntary detrusor contractions of at least 15 cm H20 and 15 sec duration. The hypothesis to be tested was that hyperactivity was dependent upon uninhibited short parasympathetic neurones, which release acetylcholine (ACh) which in turn would contract the detrusor. Accordingly, atropine was utilised to block cholinergic receptors and isoprenaline was used to achieve maximal beta-receptor muscle cells relaxation. Atropine was shown to have a dose-related inhibiting influence on both frequency and amplitude of detrusor contractions. Conversely, isoprenaline administration did not result in reduction of either frequency or amplitude of uninhibited waves in spite of marked effects on heart rate and blood pressure. The present work seems to indicate that cholinergic receptors are involved in incontinence secondary to neurogenic hyperactivity and that atropine and other anticholinergic drugs should be of value in treating incontinence of selected cases with detrusor hyperactivity of neurogenic origin.

ALAIN B. ROSSIER

Spinal cord glucose utilization after experimental spinal cord injury, by S. E. Rawe, W. A. Lee and P. L. Perot. *Neurosurgery* (1981), **9**, 40–46.

Utilising a modification of the Allen weight-dropping technique 18 monkeys were submitted to a posterior contusion injury at the sixth thoracic cord level. Metabolic alterations were evaluated by determining qualitative spinal cord glucose utilisation (SCGU) by the 2-deoxy-D-(^{14}C) glucose technique which makes use of pictorial viewing of the optical density (OD) on autoradiographs. In all nontraumatised sections of the spinal cord the grey matter was found to have a greater OD pointing at a greater glucose utilisation in the grey than in the white matter. An increase in SCGU occurred at the site of maximal impact in the white matter after an injury causing paraparesis and in near trauma regions after an injury causing either paraparesis or paraplegia. These findings are most probably due to anaerobic glycolysis secondary to a reduction in blood flow that still allows delivery of substrate to tissue. Although an increase in OD was observed in the white matter at the site of maximal impact at 1 hour after a paraplegic injury, SCGU demonstrated a progressive deterioration by 4 and 8 hours after injury. This finding is most likely the result of the severity of ischaemia causing an inability to deliver substrate.

The results of this study confirm that the somatosensory evoked potentials are a very sensitive indicator of remaining functional axons in the presence of major metabolic alterations at the site of injury.

ALAIN B. ROSSIER

Acrylic fixation in displaced dens fractures, by S. Oh and C. Bösiger. *Acta Neurochirurgica* (1981), **46**, 95–98.

The authors present the case of two elderly patients with displaced odontoid process fractures which did not consolidate with conservative treatment. A plea is made that in elderly patients the treatment of these fractures by external immobilisation does not result in union, and such patients should be treated by an operation.

ALAIN B. ROSSIER