

Abstracts

Perineal Nerve and Transcutaneous Spinal Stimulation: New Methods for Investigation of the Urethral Striated Sphincter Musculature

S. J. Snooks and M. Swash

British Journal of Urology 1984, 56: 406-409

The authors describe two methods of investigation of the innervation of the pelvic floor and peri-urethral striated musculature, using intra-urethral surface electrodes.

The distal motor latencies in the perineal and pudendal nerves were measured in twenty normal subjects, with digitally directed pudendal nerve stimulation. The method used was adopted from Brindley using a rubber finger stall having two bare metal electrodes inserted into the rectum on the index finger.

Transcutaneous spinal stimulation was carried out by the method described by Merton, with saline-soaked pads placed with the cathode in the lumbar region and the anode more cranially.

They believe that these procedures will provide valuable information in the study of the external urethral sphincter and incontinence.

J. Cosbie Ross

Adverse Effects of the Management of Malignant Spinal Cord Compression

G. F. G. Findlay.

Journal of Neurology, Neurosurgery and Psychiatry 1984, 47: 761-768.

The author reviews a total of 1816 patients with metastatic spinal cord compression, dealt with at the Merseyside Regional Department of Medical and Surgical Neurology since 1960. Not only is the successful return to ambulation dealt with but also adverse effects occurring during management. It was found that while 35 per cent of patients treated either retained or recovered the ability to walk, at least a quarter became worse. The figures suggest that laminectomy may have adverse effects and should be reserved for patients without vertebral collapse and who have failed to respond to radiotherapy. Radiotherapy possibly associated with steroids, appears to produce greater benefits than laminectomy.

J. Cosbie Ross

Paraplegia following Saddle Embolism

A. P. Dickson, S. K. Lum and A. S. Whyte

British Journal of Surgery 1984, 71: 321.

Although paraplegia is a rare hazard of abdominal aortic surgery, the onset of paraplegia following a saddle embolus has not been previously reported. The great radicular spinal artery of Adamkiewicz is the most important segmental

vessel supplying the cord. It has its origin from the aorta from the levels T9-T12 in 75 per cent of cases but rarely the origin may be as high as T8 or as low as L4. When the great radicular artery has such a low origin from the lumbar level of the aorta a saddle embolus can occlude the vessel and cause paraplegia.

R. M. Jameson

Reflexes of the External Urethral Sphincter in Children

M. Hallett, S. Bauer, S. Khoshbin and F. Dyzo

Archives of Neurology 1984, 41, No 9

When the electromyographic responses of the external sphincter were analysed in a series of children, two components were identified which behaved similarly to a flexor reflex. The response produced by stretch was similar to the effect of electrical stimulation.

In patients with lesions of the spinal cord, it was found that the external sphincter was active during a flexor reflex and contracted on applying a pinprick to the sole of the foot.

The authors point out that the reflexes produced by electrical stimulation of the pudendal nerve are highly quantifiable, with the added advantage that the afferent and efferent conduction times can be determined. Stretch of the sphincter may occur naturally when a sudden increase of bladder pressure causes a bolus of urine to pass into the posterior urethra. This reflex may have an importance in maintaining continence.

They consider that this method tests the integrity of the entire reflex arc and the connections with the spinal cord. The authors suggest that their method would be useful in assessing diabetic neuropathy and multiple sclerosis.

This is an article on a complex subject, which merits detailed study.

J. Cosbie Ross

Incontinence, Intermittent Self-Catheterisation and the Artificial Genito-Urinary Sphincter

David M. Barrett and William L. Furlow

Journal of Urology 1984, 132: 268-269

The authors state that the artificial genito-urinary sphincter is ideal for incontinent patients who can empty the bladder completely. They now believe that the same method can be used even in patients who require intermittent self-catheterisation to complete voiding. A personal series of 11 patients is reported, observed over a period of 30 months, and in which there were no complications. The authors advise that in such patients the inflatable cuff should be sited around the bladder neck. In spite of their fears no cuff erosions developed, and they conclude that inability to completely emptying the bladder is not a contraindication to the artificial genito-urinary sphincter. Patients with detrusor hyper-reflexia and vesico-ureteric reflux were excluded.

J. Cosbie Ross

Experimental Evidence for a Central Nervous System Site of Action in the Effect of the Alpha-Adrenergic Blockers on the External Urinary Sphincter

J. Gajewski, J. W. Downie and S. A. Awad
1984, 132: 403–409.

The authors put forward the hypothesis that the alpha-adrenoceptor blocking drugs (phentolamine and prozosin), could influence the somatic control of the external urethral sphincter by means of action in the central nervous system. They point out that the constriction caused by stimulation of S1 & S2 ventral roots was completely resistant to the alpha blockage. The drugs had the anticipated effect against sympathetic stimulation of the urethra but had no peripheral effect on the somatic component. Their work involved recording urethral perfusion pressure responses, or combined action potentials on the central cut end of the pudendal nerve, evoked by stimulation of the contra-lateral pudendal nerve in the anaesthetised cat.

Both prozosin and phentolamine antagonised the urethral construction produced by stimulation of the end of the pudendal nerve. They found that prozosin had a direct effect whereas phentolamine produced a more variable blockage of the pudendal reflex. They conclude that the action of alpha adrenoceptor drugs influence pudendal nerve responses by means of the central nervous system and not by peripheral mechanisms.

J. Cosbie Ross

Long-Term Follow-Up in Patients with an Inflatable Penile Prosthesis

Bernard Fallon, Steven Rosenberg and David A. Culp
Journal of Urology 1984, 132: p 270–271

A series of 95 patients in whom an inflatable penile prosthesis was inserted between 1977 and 1984, was reported. The authors point out that, although patient satisfaction has been reported for 88 to 96 per cent of patients in some series, there is a high incidence of mechanical failure. In their group of patients in 48 per cent the prosthesis had to either be removed or revised. Several cases had multiple revisions. They state that the complication rate increases with the duration of the follow-up. It is hoped that the mechanical defects will eventually be overcome with a more reliable cylinder design.

J. Cosbie Ross