Paraplegia **22** (1984) 197–198

ABSTRACTS OF SELECTED PAPERS

The Cutano-anal Reflex: A Useful Index of Neuropathy? By D. C. C. Bartolo, J. A. Jarratt & N. W. Read. *British Journal of Surgery*, (1983), **70**, 660–663.

Electromyographical studies show latency of the cutano-anal reflex is prolonged in idiopathic incontinence, suggesting a neuropathic disorder. However the latency of both early and late components of the cutano-anal reflex in incontinent patients did not vary significantly from the findings in the controls. The data support the view that anal sphincter neuropathy is due to stretch injury to the pudendal nerve, and that the measurement of latency of the reflex may be an inadequate means of demonstrating a neural disease in patients with idiopathic faecal incontinence.

R. M. JAMESON

Antibody-coated Bacteria in Urine: Criterion for Positive Test and its Value in Detecting a Higher Risk of Treatment Failure. By R. A. Gergan, W. Brumfitt & H. M. J. Hamilton Miller. *Lancet*, **2**, 704–706.

The presence of more than 1 per cent antibody coated bacteria will identify by urine examination those patients with a high risk of treatment failure. The technique utilises immunofluorescence of antibody-coated bacteria. This indicates kidney invasion or more than a simple lower urinary tract infection. Usually it is the IgHA rather than IgG which coats the bacteria. Such techniques may be helpful in the follow-up of paraplegic patients.

R. M. JAMESON

Sympathetic Reflex Control of Subcutaneous Blood Flow in Tetraplegic Man During Postural Changes. By K. Skagen, K. Jensen, O. Henriksen & K. Knudsen. *Clinical Science*, (1982), **62**, 605–609.

The effect of head-up tilt on subcutaneous blood flow on the distal arm and leg in 12 complete tetraplegics was studied. Subcutaneous blood flow was measured by the use of local 133 Xenon washout technique. Heart rate, pulse, blood pressure and mean blood pressure were observed during five different situations: 1) supine, arm and leg at heart level (reference), 2) leg lowered 40 cm below reference level, arm remaining at heart level, 3) arm and leg at reference level, 4) passive head-up tilt at 45° with arm at heart level, and 5) supine, arm and leg at reference level. In 7 patients lowering of the leg and head-up tilting were accompanied by an increase in vascular resistance in the leg of 98 per cent and 70 per cent respectively. In the same seven patients it was shown that before and during local nervous blockade of the leg and proximal nervous blockade of the arm all measurements remained unchanged when the leg was lowered. However, head-up tilt caused a significant fall in systolic pressure and pulse pressure and increased heart rate, confirming previous observations. During proximal nervous blockade and head-up tilt no vasoconstrictions could be demonstrated in the arm, and there was no difference in the vascular response in the leg before and during proximal blockade. During local nervous blockade head-up tilt did not induce any significant decrease in blood flow.

The authors have demonstrated that by proximal nerve blockade vasoconstric-

tive reflex mechanism in the arm that follows head-up tilt can be blocked. This suggests the existence of a spinal sympathetic reflex mechanism leading to peripheral vasoconstriction in response to head-up tilt in tetraplegics. A humoral mechanism at that level can be ruled out since proximal nervous blockade prevented vasoconstriction. This reflex mechanism, in addition to the local vaso-arteriolar reflex, could explain why tetraplegics are eventually able to cope with orthostatic manoeuvres without fainting.

CARLOS G. TUN, M.D.

SUMMARY OF PAPER

DERMAL FIBROSIS SECONDARY TO AUTONOMIC DYSFUNCTION FOLLOWING SPINAL CORD INJURY

By S. L. STOVER, M.D., VINOD SAHGAL, M.D. and RENATE E. GAY, M.D.
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Spinal Cord Injury patients with injuries above T6 who have autonomic dysfunction have been observed to develop skin changes which appear clinically as brawny induration and pathologically show dermal fibrosis. Twenty patients were studied. There were no consistent changes in laboratory values. Histochemical studies of skin biopsies showed that aminergic innervation of the erector pili muscles and blood vessels were intact but the cholinergic supply to the Pacinian corpuscles and sweat glands was markedly decreased. Studies of the skin biopsies with indirect immunofluorescence for collagen typing showed a reduction in Type III collagen in the upper dermis with almost exclusive Type I collagen in the dermis and adipose tissue, resembling the late stage of progressive systemic sclerosis. It is hypothesised that autonomic dysfunction, with either an excess or deficiency of autonomic mediators, initiates cellular and/or vascular alterations which primarily or secondarily induce the observed fibroproliferative changes.