

renal failure related to infection. The average survival was 11 years, 9 months; and the average annual mortality was estimated to be 3.5 per cent. more than for normal expectancy.

Brock carried out a radiological survey in 284 spinal cord injury patients, and concluded that incidence of upper gastro-intestinal disease was no greater than in the general population. However, some may feel that certain gastro-intestinal disturbances are not uncommonly found, at least clinically, in patients in the early stages of spinal cord (especially cervical) injury.

An incidence of peptic ulceration in paraplegics in the region of 14 per cent. is reported in a paper by Mihaldzic and Frederick, and they stress the relationship between this condition and associated vesico-ureteral reflux.

O'Hare points out the usefulness of excision of the femoral head in the management of certain patients with intractable trochanteric ulcers, and much useful discussion followed this contribution.

In two papers by Comarr, a brief description of techniques useful in the closure of pressure sores is given. Emphasis is made of wide undermining of the skin so that the wound edges can be approximated without tension. He advises the removal of projecting bony prominences, haemostasis by diathermy, the introduction of retention mattress sutures of stainless steel wire tied over buttons and the insertion of Penrose drains. Scarred skin is excised wherever possible but in two patients damaged skin was preserved to permit closure of the wound by approximation; sound wound healing was achieved. Many surgeons would prefer to use rotation skin flaps in these circumstances but there are occasions when the excision of all scar tissue is impossible, and this paper shows that good results can be obtained even in the presence of damaged scarred skin.

A patient who was admitted for treatment of a urethral fistula communicating with a long-standing ischial pressure sore which had resulted in a self-induced ischiectomy, is described by Comarr. A surgical ischiectomy on the other side had been performed several years previously. Dr Comarr has never seen a urethral fistula from a unilateral ischiectomy but only after a bilateral ischiectomy.

This paper by Strohhofer, correlates the incidence of anaemia in 45 patients under treatment for traumatic paraplegia with the patient's age, the site of the lesion and the presence of pressure sores on renal tract infection. The highest incidence of anaemia was in patients with a complete cervical lesion. The anaemia was normocytic in type and iron deficiency was not considered a factor although the available data did not exclude iron deficiency in all cases. The well-known relationship between anaemia and renal tract infection was confirmed and the latter may play a predominant role. The author suggests that there may be a disturbance in the fundamental regulation of normal erythropoiesis in the early stages of paraplegia, but no evidence in support of this hypothesis is presented.

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ABSTRACTS FROM OTHER JOURNALS

SPONTANEOUS SPINAL EPIDURAL HAEMORRHAGE DURING ANTI-COAGULANT THERAPY: JACOBSON, I., MACCABE, J. J., HARRIS, P. & DOTT, N. M. (1966). *Br. Med. J.*, **1**, 522-523.

The authors describe three patients who developed severe progressive quadriparesis or paraparesis associated with sudden severe spinal pain, each of whom was having anti-coagulant therapy for vascular or cardiac disease. Such a clinical syndrome occurring

in a patient on anti-coagulant therapy should cause the clinician to consider a spinal epidural haematoma. Vitamin K should be given and also fresh blood intravenously and surgical treatment in the form of laminectomy with evacuation of the clot is urgently required. Lumbar puncture and myelography may be omitted. Certainly the sooner the clot can be evacuated the better will be the prognosis. The authors point out that spinal epidural haemorrhage giving rise to a significant degree of neurological disturbance, is a very rare complication of spinal injury or of spinal surgery.

SPONTANEOUS SPINAL EPIDURAL HAEMATOMA: The Syndrome of Spontaneous Spinal Epidural Haematoma. MARKHAM, J. W., LYNGE, H. N. & STAHLMAN, G. E. B. (1967). *J. Neurosurg.* **26**, 334-342.

The authors describe three patients and refer to 46 others in the literature, and mention that the syndrome may resemble that of an acute rupture of an intervertebral disc or some other acute spinal catastrophe. It may be precipitated by minor trauma and there is rapid involvement of motor, sensory and bladder functions. Plain radiographs of the spine are usually negative, but myelography, which was carried out in 33 of the patients, was positive in 30. The authors recommend the performance of myelography immediately prior to surgical treatment which involves laminectomy and evacuation of the haematoma.

NEUROFIBROMATOSIS WITH CONGENITAL MALFORMATION OF THE SPINAL CORD: BARSON, A. J. & COLE, F. M. (1967). *J. Neurosurg. Psychiat.* **30**, 71-74.

In this very interesting paper the authors give a useful survey of the embryological and pathological features of neurofibromatosis, and describe a 63-year-old female patient with spinal cord dysraphia and a localised overgrowth of nervous tissue. The patient died from an unassociated condition, and autopsy examination showed a mid-thoracic hamartoma having at one level three spinal canals, and three posterior and four anterior horns. The authors conclude that this patient's pathological features support the idea of an overgrowth of embryonic neuro-ectoderm causing spinal dysraphia, and in their interesting discussion they bring out possible linkages with other abnormalities of neuro-ectodermal development such as spinal bifida and diastematomyelia.

SPONTANEOUS SPINAL EPIDURAL HAEMATOMA: COOPER, D. W. (1967). *J. Neurosurg.* **26**, 343.

In a case report the author describes a 14-year-old girl who developed severe neck pain and arm numbness during micturition and a rapidly progressive quadriplegia. Plain X-rays of the spine were negative and the myelogram showed what appeared to be an intra-medullary lesion at the C3-C6 level. At operation an epidural haematoma was removed. The author states that myelography is necessary in these patients and should be followed by immediate laminectomy.

Regarding aetiology, he feels that 'significant' trauma plus some other cause are the likely aetiological factors; he mentions the possibilities of a bleeding diathesis, a vascular anomaly, and in some patients arteriosclerosis or hypertension.

PHILIP HARRIS.

LUMBO-SACRAL LIPOMAS: LASSMAN, L. P. & JAMES, C. C. M. (1967). *J. Neurol. Neurosurg. Psychiat.* **30**, 174.

The authors have discussed 26 cases out of 100 cases of spina bifida occulta, in whom they had performed laminectomy. These included 4 female adults and 22 children, aged 8 months to 12 years, including 4 males. In all cases there was a superficial fatty tumour of various size in the lumbo-sacral region on or near the midline. Nineteen had clinical abnormalities, in whom the lipoma was in continuity with the conus medullaris, cauda equina or filum terminale. Mostly one lower limb was affected but occasionally both, as a result of progressive myelopathy or neuropathy producing muscular weakness, or spasticity, foot deformity, often with sensory changes and trophic ulceration as well as abnormal bladder function. Microscopic and macroscopic appearance and result of surgical exploration are described. Some tumours contained meningo-coele or meningo-myelocoele.

The operation consisted of laminectomy, exposure and opening of the dura mater and exploration of the spinal cord and cauda equina; adoption of this procedure is stressed. In patients whose lipomas were only superficially excised at an earlier age and who later developed neuropathy, secondary exploration is both difficult and dangerous.

Because of the nature of the congenital abnormality and the risk of late onset of symptoms, it is wiser to operate in early infancy. Results of operation and period of follow-up are given in the table below:—

RESULTS AND LENGTH OF FOLLOW-UP

Clinical State before Operation	Present State	Follow-up (yr.)
Uncomplicated lipoma . . . 7	All normal	1-6
Discharging sinus . . . 1	Normal	4
Discharging sinus with incontinence . . . 1	Unchanged	3
Incontinence . . . 2	Improved	5
Progressive neuropathy . 15	One worse as a result of operation	3
	One worse 4½ years later	5
	Six unchanged	2 5
	Seven improved	1-5

No correlation could be found between clinical findings and abnormalities seen at laminectomy.

SPINAL INCLUSION DERMOID CYST IN A PATIENT WITH A TREATED MYELOCYSTOCOELE: BRYANT, H. & DAYAN, A. D. (1967). *J. Neurol. Neurosurg. Psychiat.* **30**, 182.

Spinal epidermoids and dermoid cysts are rare, but recently epidermoids have been reported relatively often in patients who have had multiple lumbar punctures. A case of a male infant, who developed epidermoid, is described: He was born at full term,

had hydrocephalus, left torticollis and a myelocystocele in the thoraco-lumbar region, with petulous anus and flaccid paralysis in both legs. Myelocystocele was repaired on day of birth. His hydrocephalus continued to increase. He developed staphylococcus septicaemia four days before he died, aged 14 weeks.

Necropsy findings: Typical Arnold-Chiari malformation, cerebral micropolygyria, lateral ventricles greatly dilated. Corpora quadrigemina had grown backwards in a cock-comb deformity. Aqueduct stenosed. From inferior margin of cerebellum extended a tongue of abnormal tissue, containing glial tissue, blood vessels and fragments of choroid plexus, extended for 5 cm. dorsal to cervical cord. The cervical and upper thoracic cord showed hydromyelia at various levels, forking of central canal and a syringomyelia-like cavity extending into both dorsal horns. From lower thoracic to lumbar region neural arches had not developed properly. At the site of repair of spinal defect the dura was absent posteriorly for 6 cm. in the thoraco-lumbar region and was replaced by a cylindrical keratin filled dermoid about 5 cm. \times 0.5 cm. embedded in dense fibrous tissue. The cyst was composed of a basal stratum, several layers of cornifying cells, flaking keratin, hair follicles and sweat glands. The neoplasm probably arose from epidermis implanted during the repair, analogous to epidermoids found after multiple lumbar punctures.

Dr MEHRA.

ZUR PSYCHOLOGISCHEN SITUATION DES QUERSCHNITTSGELÄHMTE
(On the Psychological Situation of Paraplegics): PAMPUS, I. (1966). *Fortschr. Neurol. Psychiat.* **34**, 305-330.

In 1965 H. Wahle reported about the fate of paraplegics from the medical and social points of view (*Paraplegia* **4**, 59, 1966).

In the present paper Pampus reports on the same material (35 female and 65 male) paraplegics, on the psychological problems and comes to the conclusion that a 'Paraplegic-Psychology' does not exist. Conventional psychiatric treatment is indicated extremely seldom. Deep psychological discussions are as much unnecessary as psycho-analytic treatment. Reactive depression, indolence, resignation, compensatory reactions, psychogenic responses, paranoid development, resentment and aggressiveness-egocentric attitudes are considered in the majority of cases as the result of inadequate management of paraplegics in Germany. Apart from resignation and, on the other hand, overcompensation which sometimes leads to aggressive attitudes, a great number of the patients examined showed an appropriate attitude to their disability after a 4½-year duration of their paralysis. Pampus did not find sexual disturbances so much in the foreground as other authors. The paper also contains other important findings and also gives a number of references of the literature. The paper stresses a multitude of psychological situations of the paraplegic and his surrounding world. One can readily agree with the author that this problem deserves further investigations.

ZUM KRANKHEITSBILD DER QUERSCHNITTSLÄHMUNG' (On the problem of Paraplegia): PAESLACK, V. (1966). *Deutsche Schwesternzeitung*, **19**, 534-543.

DIE PFLEGE QUERSCHNITTSGELÄHMTER (The Management of Paraplegics): BORSTELMANN, G., DORR, CH., GAUSS, E. (1966). *Deutsche Schwesternzeitung*, **19**, 534-543.

KRANKENGYMNASTISCHE FRÜHBEHANDLUNG BEI QUERSCHNITTS-
GELÄHMTE PATIENTEN (Physiotherapy in the early stages of Paraplegia): ROLF, G. (1967). *Deutsche Schwesternzeitung*, **20**, 2-15.

DIE BESCHÄFTIGUNGSTHERAPIE INNERHALB DER BEHANDLUNG QUERSCHNITTSSELÄHMTER (Occupational therapy as part of the treatment of paraplegia): GUCKES, E. M. (1967). *Deutsche Schwesternzeitung*, 20, 2-15.

AUFGABEN DES SOZIALDIENSTES BEI DER REHABILITATION QUERSCHNITTSSELÄHMTER (The tasks of social welfare in the rehabilitation of paraplegics): HAMMER, H. (1967). *Deutsche Schwesternzeitung*, 20, 2-15.

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This is a report on the daily work of a team of a spinal centre. The various authors are well aware not only of their own special task, but also of the limitations of their work. Thus the reader sees the whole rehabilitation plan in all details. The contributions contain many practical suggestions resulting from personal experiences, some of which are well illustrated. Hammer's paper is of special interest in Germany through the systematic organisation. Moreover, it also gives a good insight into the legal problems of rehabilitation in West Germany. One can hope that these reports will find wide interest. The Publisher, W. Kohlhammer, Stuttgart, intends to publish these papers in a special booklet.

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