

## PATHOLOGICAL CONDITIONS OBSCURED BY PARAPLEGIA\*

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**Summary.** Underlying malignant conditions may be obscured in paraplegic patients and, similarly, cord damage may conceal deformity. Three patients illustrating this complication are described.

**Key words:** Spinal cord damage; Radiation deformities; Alcohol block; Para-neoplastic myelopathy.

### Introduction

It is necessary to be constantly on guard for underlying pathological conditions which may be masked by the absence of pain in those who are paraplegic. In 1860 the Dutch physiologist, Brondgeest, demonstrated the existence of tone, shown by reflex activity following division of the spinal cord in frogs. According to Granit (1966), this work was confirmed and developed by Sherrington, who was first to recognise that flexion action of the lower limb was related to posture and movement. Translated into the problem of the paraplegic patient with an additional pathological condition, the stretch reflex, maintaining posture and the general flexion reflex serving defence withdrawal, are reflex actions in response to a peripheral stimulus (Pool, 1980). This problem of reflex activity in the event of an abdominal catastrophe was mentioned by Dollfuss (1974) in relation to appendicitis, by Walsh and others concerning peptic ulcer (1974), and by Frankel reporting a case of perforation of the rectum (1974). The change in spasticity, and the balance between posture and movement was emphasised several times during this discussion.

Wanebo (1965) had previously summarised the literature regarding acute abdominal disease and stressed that the appearance of headache, changes in blood pressure and increased reflex irritability were warning signs.

If there is sufficient remaining cord activity the experienced paraplegic patient may appreciate the fact that he is ill, even though he cannot be specific about his symptoms.

Warning reflexes, such as a change in spasticity, are more helpful in those with acute lesions than in those with slowly progressive malignant conditions. In the latter the patient may well adapt to the gradual development of the new process.

In a paraplegic patient from malignant disease, and who has had radiotherapy the possibility of radiation myelopathy must always be kept in mind, if no other cause of the paraplegia is detected (Pallis 1961). To

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illustrate the problem that cord damage may obscure malignancy, and may also conceal symptoms of deformity, three examples are described:

**Case 1.** This patient was admitted with a complete transverse myelopathy at D1 level, 2 months after a routine course of irradiation radiotherapy to the right axilla and chest because of involved lymph nodes found at mastectomy for malignant disease. She became independent in a wheelchair and eventually returned home. Her condition later deteriorated and a swelling in the left axilla was found to be neoplastic. Neither hormonal nor radiation treatment was successful and she became progressively exhausted. The only other symptom was occasional vomiting. On examination there was flaccid paraplegia and an enlarged liver. At autopsy all internal organs except the kidneys were infiltrated by growth, the spinal cord being involved from D1 downwards (Fig. 1). The diagnosis was regarded as one of para-neoplastic myelopathy, the damaged spinal cord concealing the malignancy and preventing reflex responses.

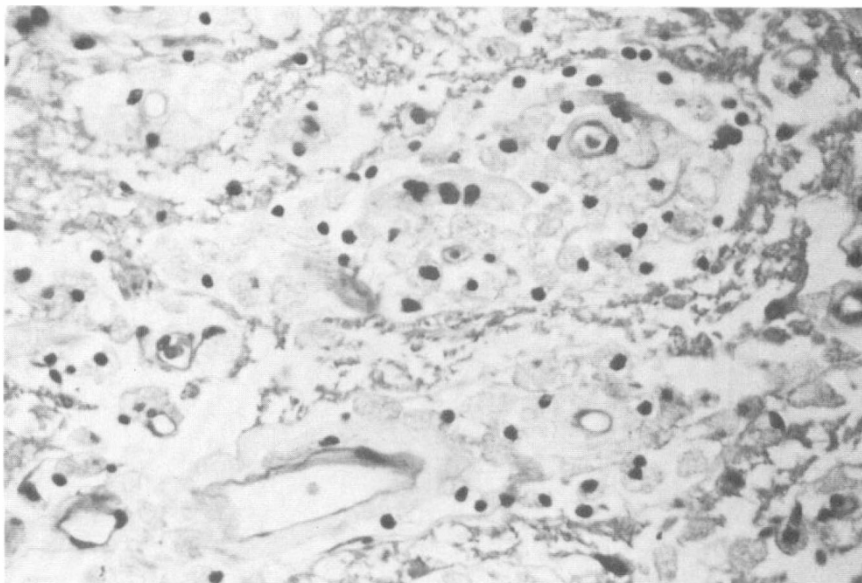


FIG. 1

*Case 1.* Photo micrograph of low thoracic cord, showing widespread disintegration.

**Case 2.** This young woman first received radiotherapy in Turkey before joining her family in Holland. Shortly after this she became wheelchair dependent because of a metastatic lesion at and below D8 spinal levels. A further course of radiotherapy was given for metastases in the lungs and the right pelvis. Now catheter-free, she has a flaccid paraplegia which is incomplete as she has some toe movements in the right foot.

It is probable that, because of the cord damage by the metastatic process and also on account of the radiation myelopathy, her bladder troubles and hip deformity remain concealed by the paraplegia (Fig. 2).

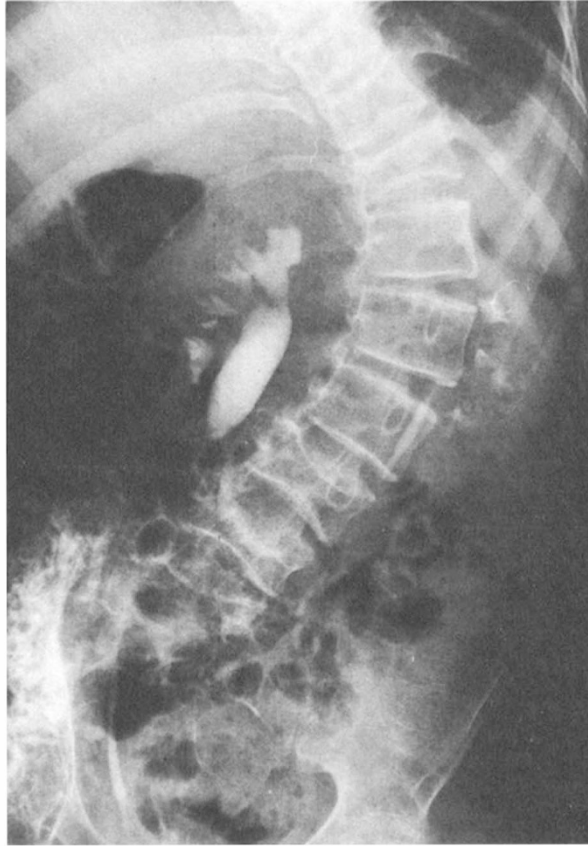


FIG. 2

*Case 2.* Hip and pelvic deformities with delay in passage of the contrast medium down the right ureter.

**Case 3.** This man was admitted with gross deformity of the hips caused by radiotherapy for Hodgkin's disease Grade III. The deformity was so severe that the slightest movement of his bed caused severe pain and there was also defective lymphatic drainage from his lower limbs. When it was established that epidural anaesthesia rendered him pain-free, an alcohol block (Guttmann 1973), was given. For some time after this he became more independent and could use a wheelchair, being treated as a caudal paraplegic. Six months later he died as a result of lung complications from the Hodgkin's disease (Fig. 3).

### Discussion

Spinal reflex actions are difficult to interpret in a paraplegic patient suffering from an additional pathological lesion. Similarly the paraplegic's reactions to additional malignant disease are difficult to predict and may well vary from day to day.

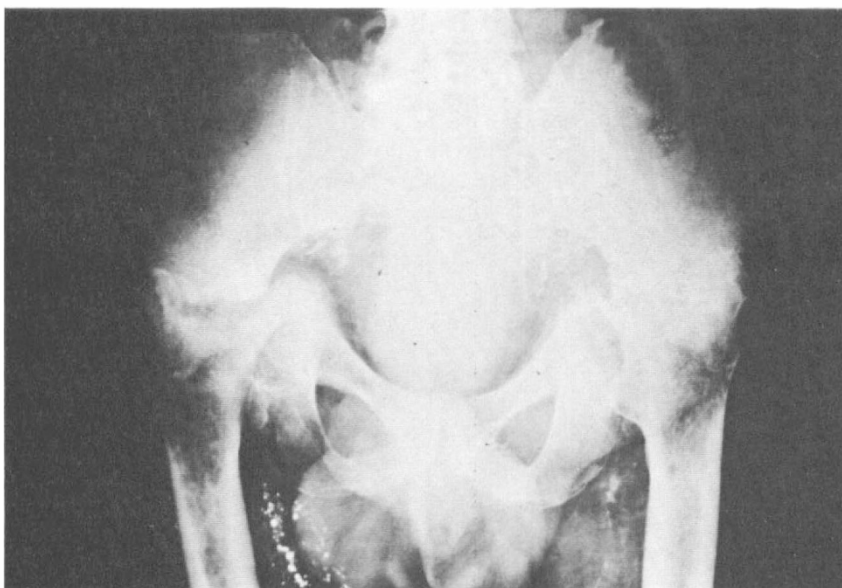


FIG. 3

Case 3. Hip and pelvic deformity after radiotherapy for grade III Hodgkin's disease.

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### RÉSUMÉ

Illustré par trois cas avec une myélopathie chronique après irradiation de la moelle épinière, l'importance de l'absence de la réflexibilité est discuté.

### ZUSAMMENFASSUNG

Die Krankheitsgeschichten von 3 Patienten die mit Radiotherapie behandelt werden und daher Rückenmarkschade bekamen werden vorgestellt.

Die Wichtigkeit der Reflexologie wird genent und besprochen.

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