2. NEURILEMMOMA OF THE SPINAL CORD

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This case report is being presented because of the remarkable difference of opinion that exists among various authorities about the rarity or otherwise of neurilemmomas of the spinal cord.

CASE REPORT

A 49-year-old married housewife was admitted to Barclay Ward, Somerset Hospital, on 19 July 1961, with progressive weakness of the legs. This had become so severe for the past 3 months that she was practically bedridden. There were no urinary symptoms.

The blood pressure was 180/100 mm. Hg. A gross spastic paraplegia was present, with bilateral extensor plantar reflexes, increased tendon jerks, and ankle clonus. The only definite objective sensory abnormality was defective sense of position in the toes.

Performance of a lumbar puncture was technically difficult. The cerebrospinal fluid was clear, colourless and without a clot. It contained 400 mg. per 100 ml. of protein, and 3-plus globulin. There were no cells.

Spinal-cord compression was suspected in view of the history and physical examination, and the abnormalities in the cerebrospinal fluid. Lumbar myelography showed an almost complete block at the level of the 9th dorsal vertebra, and the filling defect had a smooth, rounded edge (Fig. 1).

Laminectomy was performed at the Somerset Hospital by Mr. J. P. van Niekerk on 8 August 1961. After opening the dura, a tumour was found compressing the cord from behind. It did not arise from a nerve root or from the dura, but had several arachnoid attachments. The tumour was carefully separated from the cord and removed. It was a well-circumscribed, oval mass measuring up to 2·5 cm. in length (Fig. 2).

Histological examination showed 'regimentation of ovoid nuclei of tumour cells with pale cytoplasm. The cells were compactly placed, making up the features of a *neurilemmoma*' (Fig. 3).

By 8 September 1961 the patient could walk without assistance, and by 21 June 1962 she was walking normally. Apart from increased tendon jerks, no significant neurological abnormalities remained.

DISCUSSION

A review of several authoritative articles shows a large measure of agreement on 4 aspects, viz.:

1. Neurilemmoma is usually solitary, but it is occasionally multiple and may be accompanied by neurofibromas, which are tumours that have a much greater tendency to be multiple.

2. Recurrence following excision of a neurilemmoma is a very rare event. Thorsrud[1] found a recurrence rate of 3%. Neurofibromas are more liable to recurrence following excision.

3. A neurilemmoma is invariably benign; malignant change occurs extremely rarely. Malignant change is somewhat commoner in a neurofibroma, the incidence being 8 - 15% according to Speed,[2] and 13% according to Hosoi.[3]

4. Anderson[4] stated that the characteristic histological feature of a neurilemmoma is the interlacing network of wavy strands of cells in which the nuclei palisade prominently (as in Fig. 3), and other authorities concur with this description.

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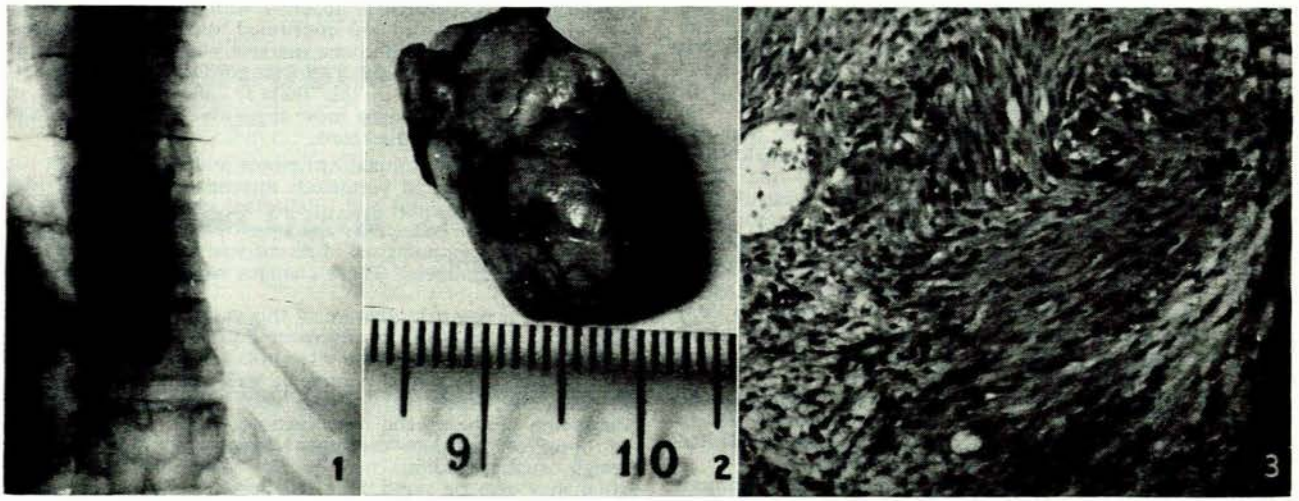

Fig. 1. Lumbar myelogram showing almost complete block at level of T9.
Fig. 2. Macroscopic appearance of the tumour (scale in cm.).
Fig. 3. Histological appearance of the tumour.

With regard to histogenesis, Willis[5] and other authors agree that the neurilemmoma is a specific tumour arising from the cells of Schwann.

The interest in this case arose from finding a remarkable discrepancy in views concerning the incidence of neurilemmomas of the spinal cord. According to authoritative views expressed by Willis,[5] and by Anderson[6] and MacGregor[7] in personal communications, it is an extreme rarity. Some could not recall having seen a single case. This is confirmed by a survey of publications during the past few years, which contain numerous reports of neurilemmomas of the gastro-intestinal tract, but none of the spinal cord.

On the other hand, Thorsrud[1] described 35·2% of his cases of spinal and cranial 'neurinomas' as having the precise histological appearances associated with the descriptions of neurilemmomas. Kernohan and Sayre[8] produced similar evidence on the incidence of neurilemmomas of the spinal cord. They found that these were the commonest tumours of the cord. Of their series of spinal-canal tumours, 266, or more than 30%, were neurilemmomas.

Accordingly, through the courtesy of Mr. J. P. van Niekerk, I was able to obtain access to the case reports of 5 other patients with neurilemmomas of the spinal cord treated surgically at Groote Schuur Hospital since 1951; this finding, in conjunction with the above case, leads inescapably to the conclusion that neurilemmoma of the spinal cord is not the great rarity it has been considered.

Perhaps the different views regarding incidence depend on different histological criteria, but it seems that the characteristics appear distinct enough. It may be that those authors who only describe 'neurofibromas' of the spinal cord, and never neurilemmomas, are in fact including in their series tumours with the characteristic histology mentioned above, whatever name is attached to them.

SUMMARY

1. A case of neurilemmoma of the spinal cord causing spastic paraplegia is presented. The patient recovered following excision of the tumour.

2. Attention is drawn to the discrepancy in the views concerning the incidence of neurilemmoma of the spinal cord.

3. Local investigations in Cape Town indicate that this tumour is by no means the extreme rarity some authors consider it to be.

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