

## The cervicolumbar syndrome

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### Summary

*A series of 24 patients presenting with features of both cervical and lumbar spondylosis and disc disease has been studied in order to evaluate the results of surgical treatment. Myelography is essential for confirmation of multifocal lesions. In all but 4 cases beneficial results were obtained after decompression of the predominantly involved region of the spinal canal. These 4 patients were improved after both lumbar and cervical laminectomy in two stages with an interval of 3-6 months. Morbidity was insignificant.*

### Introduction

Degenerative disc disease and spondylosis are very common, especially over the age of 50 years. Although often diffuse, the changes are more pronounced in the cervical and lumbar regions because of their mobility. Only in relatively few people, however, do symptoms arise from involvement of the nerve roots and spinal cord in addition to pain in the neck and lower back. Myelopathy and radiculopathy may involve both upper and lower limbs in varying degree. Plain radiographs of the spine and myelography usually show prominent changes in the affected region.

This communication concerns the clinical study of 24 patients who presented with symptoms of both cervical and lumbar spondylosis and disc disease. Plain radiographs of the spine showed various changes, including disc-space narrowing, resolution, minor listhesis, and spondylosis. Myelography was carried out in all cases and invariably showed narrowing of the oil column, sometimes to total obstruction, in both lumbar and cervical regions of the spinal canal.

Wide decompressive laminectomy and removal of disc herniae when present was carried out in all cases in that part of the spine most affected, the choice being made on clinical grounds. Beneficial results were obtained in all cases. A group of 4 patients suffered progression of symptoms derived from the other affected region and subsequently underwent a second decompressive laminectomy with good results.

We have named the symptom complex from which all these patients suffered 'the cervicolumbar syndrome' and we hope to show that the results of surgical treatment may be beneficial in multifocal degenerative disc disease.

### Patients and methods

Between July 1975 and June 1978 we admitted and treated 24 consecutive cases of multifocal degenerative disc disease. Uniformity of the criteria for selection of patients for operation was carefully maintained and a similar surgical approach was applied in every case. There were 18 men and 6 women, their ages ranging from 40 to 72 years with the majority (20) between 50 and 72 years. Length of history varied from 3 to 15 years. Patients presenting with symptoms relating to the lumbar or cervical region alone, although with radiological evidence of involvement of both regions, are not included. Similarly, patients treated for lumbar disc disease who at a later date developed symptoms of cervical disc disease are not included.

### SELECTION OF PATIENTS FOR OPERATION

Although myelography is necessary to establish the extent of multifocal involvement of the spine, the decision to operate and the site of

operation do not depend upon myelographic appearances alone but on the clinical evaluation of the patient. Low back pain and neck pain were the most constant clinical features and were present in all cases. The most prominent neurological symptoms and signs were always found to be related to the site of severest pain.

**CLINICAL GROUPS**

On the basis of symptomatology the patients have been divided into three groups as follows :

- 1) Fourteen patients with predominantly lumbar features, all suffering from severe low back pain and less severe neck pain. This group includes :
  - a) Four with severe unilateral lower-limb radiculopathy and, occasionally, less severe contralateral lower-limb pain.
  - b) Six patients with the same features but in addition unilateral upper-limb radiculopathy.
  - c) Four patients with severe paraparesis and bilateral upper-limb radiculopathy.
- 2) Six patients with predominantly cervical features, all suffering severe neck pain and less severe low back pain. This group includes :
  - a) Three patients with cervical myeloradiculopathy in addition to intermittent lower-limb radiculopathy.
  - b) Three patients with cervical myeloradiculopathy alone.
- 3) Four patients with equally prominent lumbar and cervical features; these suffered from severe pain in both low back and neck. They all demonstrated severe paraparesis associated with cervical cord and root involvement and underwent laminectomy, first in the lumbar region and then, 3-6 months later, in the cervical region.

**SURGICAL PROCEDURE**

In those cases (Group 1) in which decompression of the lumbar spinal canal is needed, we carry out a wide laminectomy with excision of the overhanging facet joints. The nerve roots are then explored bilaterally and adhesions, which are commonly found, are released. In the present series disc spaces were explored and midline disc herniae were found at one level in 3 patients and at two levels in 1 patient; a lateral disc hernia was found in 1 case and a 'ganglion' arising from a facet joint was found in 1 case. These lesions were removed.

In patients requiring decompression of the cervical spinal canal (Group 2) wide laminectomy alone is sufficient to provide adequate decompression. The facet joints are not excised as a routine because they are lateral to the canal; facetectomy is carried out when required for root decompression. No disc hernia was present in this group.

Group-3 patients undergo both lumbar and cervical laminectomy in two stages. Arthritic spurs and ridges are frequent but no attempt is made to remove them.

**Results**

All the patients have been followed up for 6 months to 4 years. The early and late results in the various clinical groups are summarised in the table, evaluation being made on the basis of clinical improvement, capacity to work, and residual disability. 'Good' results include only those patients who have returned to their previous employment with minimal or no neurological features referable to the operative site although suffering symptoms from the other affected site. This was achieved in 14 cases (58%), 11 being in Group 1 and 3 in Group 2. The number of good results diminished to 12 after 2 years because of the de-

*Early and late results of operation in 24 patients with cervicolumbar syndrome*

Clinical group	No of cases	Good		Fair		Poor	
		Early	Late	Early	Late	Early	Late
1a	4	4	4	0	0	0	0
1b	6	4	3	2	3	0	0
1c	4	3	2	1	2	0	0
2a	3	1	1	2	2	0	0
2b	3	2	2	1	1	0	0
3	4	0	0	4	4	0	0
<i>Total</i>	<b>24</b>	<b>14</b>	<b>12</b>	<b>10</b>	<b>12</b>	<b>0</b>	<b>0</b>

velopment of lumbar arachnoiditis in 2 patients.

'Fair' results were achieved in 10 patients (42%), 3 in Group 1, 3 in Group 2, and all 4 of those in Group 3. These last patients were able to work after the operation, though with some restriction because of paretic disability. The other 6 patients, who had been chair-bound before operation, improved to such an extent that they became independent. The 'fair' group increased by 2 cases after 2 years.

There were no 'poor' results and early morbidity was insignificant.

### Discussion

Although water-soluble contrast myelography is commonly employed, we continue to use oil myelography because of its better demonstration of the cervical spinal canal; moreover, it can be used for rescreening at a later date. All of our patients had been incapacitated by intractable symptoms and had not responded to other therapeutic measures. The surgical pro-

cedures used have produced gratifying results in relieving not only neurological features but also back and neck pain. As has been our experience in the past, no instance of post-operative spinal instability has occurred in this series (1-3).

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