Malignant Lymphomas and Spinal Cord Compression

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Introduction

Extradural compression of the spinal cord is the most frequent neurological complication of malignant lymphomas (10). It also occurs in other hematoblastomas and can cause a rapidly progressive neurological deficit. Although these tumors are mostly radiosensitive (8, 9) and chemotherapy has made remarkable progress (2, 6, 7, 10, 13), surgical excision often remains absolutely necessary. Probably nowhere is palliation more justified than in malignant spinal cord compression, in order to relieve intolerable pain and to avert the catastrophic consequence of threatening paraplegia (12).

The aim of this retrospective study in cooperation with hematologists and neurosurgeons is to demonstrate the possibilities as well as the limits of combined surgical and conservative treatment.

Clinical Material and Methods

Between 1973 and 1984 we operated on 44 patients with spinal cord compression due to malignant hematoblastomas. This represents about 17% of all patients operated on by us for malignant epidural tumors. The sex distribution was 1:1, with an average age of 54 years (19 – 77).

In 61% of our patients the disease was diagnosed before the occurrence of neurologic deficit; in 39% the spinal involvement was the initial manifestation, and in some cases it was the sole manifestation.

Clinical Features

Local pain – sometimes radiating over the dermatome level – was almost invariably the first complaint, occurring months before spinal cord or cauda equina compression (1, 3, 10). The subsequent course was rapid, many patients losing ambulatory function within days. On neurosurgical admission 66% of the patients were unable to walk, whereas the average duration of motor deficiency was only 4.8 days (and less than 24 h in three patients). In one patient complete paraplegia followed a lumbar puncture (3, 4, 5).

Diagnostic Investigations

On admission emergency myelography was carried out, through lumbar puncture in the event of simple lumbar symptoms or through descending
myelography when signs of spinal cord compression were present (5), in order to avoid spinal impaction. The most common localization was the thoracic spine, followed by the lumbar and cervical regions (Fig. 1).

Space-occupying lesions in the cervical and thoracic area were seen as a complete block; however, in the lumbar region they sometimes caused incomplete obstruction. To enable prompt surgery, further preoperative diagnosis (tomography, osteoscintigraphy, sternal puncture, etc.) was only done in exceptional cases.

**Treatment**

Of all patients, 54% (62% with complete myelographic block) were operated on within hours of admission (5). In each case a dorsal decompressive laminectomy was carried out. In only four patients was a total removal possible (simple epidural spreading (11). In two other patients anterior vertebral body extirpation with spinal stabilization was performed in a second session.

Histological findings showed 15 Hodgkin's lymphomas, 13 non-Hodgkin's lymphomas, 13 plasmacytomas, and 3 leukemias. Depending upon the histological findings and the preoperative therapy, almost all patients then received chemo- and/or radiotherapy.