CASE REPORTS

INTRADURAL EXTRAMEDULLARY PLASMACYTOMA

CASE REPORT

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Extrasosseous involvement in cases of multiple myeloma, as an isolated finding or as part of diffuse disease, has been documented in at least 182 cases in the world’s literature up to 1950, with from 3 to 5 cases being added each year. The most frequent sites of involvement are the lymph nodes, liver and spleen. Other organs such as the respiratory tissues, genital tract and nasopharynx are involved with lesser frequency. Intramedullary involvement of the spinal cord has not been reported. There are, however, numerous references to a variety of neurological signs and symptoms related to dysfunction of the spinal cord. The most common finding in this group of cases is an epidural growth arising usually as an extension from an adjacent bony focus. Occasionally, however, an epidural tumor may originate in the epidural tissues without evidence of a lesion in the adjacent bone. Nine such cases have been found in a review of the literature from 1930. However, no case was found in which a discrete myelomatous growth or a plasmacytoma was located intradurally without involvement of the epidural tissues.

It is the purpose of this paper to report such a case.

CASE REPORT

I.K., a 45-year-old, white male machine operator, was admitted with the chief complaints of pain in the region of the left hip, progressive impairment of gait, inability to maintain an erection and increasing paresthesia of the feet for about 3 months. Five years previously he had been seen at another hospital because of pain in the left hip and the lower back. At that time a biopsy of an area of rarefaction in the left ischium demonstrated the presence of multiple myeloma (Fig. 1). The patient was treated with radiotherapy and urethane. One year prior to admission, he complained of tenderness in the right 4th and 5th ribs and roentgenograms demonstrated areas of rarefaction in these regions. It is of interest that during the 5 years the patient was followed, Bence-Jones protein was never found in the urine and repeated aspirations of bone marrow gave normal findings. Blood globulin was also not increased during this interval although there was a slight gamma spike on electrophoretic studies.

Examination. He was a well developed white male in no distress. There were changes in the skin over the spine caused by previous radiotherapy. Neurological findings consisted of a somewhat unsteady gait, positive Romberg sign, moderate weakness of both lower extremities and decreased ankle and knee jerks bilaterally, more marked on the right. Hemoglobin was 10.9 g/m., count of white blood cells was not remarkable, and urine was normal, with no evidence of Bence-Jones protein. Aspiration of bone yielded negative findings for myeloma. Protein was 7.2 g/m., with albumin 4.1 and globulin 3.1. Alkaline phosphatase was 7.6 King-Armstrong units. Wassermann and Kahn reactions were 2 to 5 plus. Electrophoresis revealed a marked increase in the slow-moving gamma-globulin component—"compatible with gamma myeloma." Roentgenograms of the thoracic spine revealed wedging of the mid-thoracic vertebrae with no definite evidence of discrete destruction of bone. Skeletal survey revealed several...
cystic lesions in the right humerus, the left 5th rib, the right 4th rib, the right 8th rib, the right ilium and ischium, the left femur and tibia and the left 2nd metacarpal bone.

Lumbar puncture was done shortly after admission and indicated a partial block. Pantopaque myelography revealed a partial block to the flow of the opaque material at the level of the 5th thoracic vertebra. At this site, there was a sharply demarcated hemispherical filling defect on the right side of the subarachnoid space which extended throughout the entire anteroposterior diameter of this space (Figs. 2 and 3). The myelographic impression was that of an intradural extramedullary tumor.

Operation. At laminectomy, the external aspect of the dura mater appeared intact. After incision of the dura mater, however, a dark reddish firm tumor was seen compressing the spinal cord from the ventral and right aspect. This mass was attached to the inner aspect of the dura mater and appeared to arise from the nerve root. It looked like a typical meningioma or neurofibroma and the 5th thoracic nerve root was resected with the tumor.

Postoperative Course. The patient made an uneventful recovery with considerable improvement of his neurological symptomatology for the next few months.

Microscopic examination revealed that the tumor was a plasmacytoma histologically identical with the lesion found previously in the left ischium (Fig. 1).

SUMMARY

1. Plasmacytoma in the epidural space associated with compression of the spinal cord is the usual cause of neurological findings in multiple myeloma. In most instances, there is an adjacent bony focus.

2. The case reported is that of a plasmacytoma in the thoracic region located entirely intradurally. No similar case has apparently been reported previously.

REFERENCES
