PRIMARY EPIDURAL SPINAL LYMPHOSARCOMA

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"Round-cell sarcomas" of the spinal epidural space have been recognized for years. With further investigation it has become obvious that this term represents a variety of pathological conditions, including Hodgkin’s disease, leukemic infiltrations, chloromas, myelomas, malignant lymphomas that have metastasized from elsewhere, and primary lymphosarcoma. For the most part these are regarded as conditions likely to prove fatal rapidly or ones with poor prognoses for good recovery and a healthy existence for any considerable number of years. Studies that group several of these conditions together, as in the study by Williams et al., tend to perpetuate this depressing outlook. Our own experience with one of these conditions, primary lymphosarcoma of the spinal epidural space, extends over a period of more than 32 years and indicates that if the condition is treated promptly and properly the outlook in most instances is good both for recovery and for life.

We have had 8 cases which we believe can be classified properly as primary lymphosarcoma of the spinal epidural space.* We had hoped that we would be able to supplement a study of these with information gleaned from the literature to present a truly complete picture of the symptomatology, clinical course, proper therapy and prognosis of these tumors. Unfortunately an extensive review of the literature dealing with this subject has been disappointing. The majority of reports have been single-case studies. In most instances the diagnoses were not well documented and in almost no instance was the patient followed for a long enough period of time to make the report valuable in regard to prognosis. With the exception of a few points we are forced, therefore, to rely upon an analysis of our own material. This, too, is limited in amount and it is to be hoped that at some later date someone with a much more extensive experience will be able to provide a more complete survey of the problem.

Our attention was first attracted to this problem by the following case. Over the years we have watched for others that might confirm or deny the observations made on this first patient.

Case 1.† Samuel B., aged 63 years, was admitted to the University of Chicago Clinics on Oct. 8, 1929. In March 1929 pain had developed in his mid-thoracic region posteriorly, with a sense of constriction about his abdomen and pain in his groins. In the following months there developed difficulty in urination, numbness of his legs and difficulty in walking. About October he became unable to walk.

Examination. There was complete spastic paralysis of his legs with the usual reflex changes. The only sensory loss was a reduction in the perception of warmth and cold below the 9th thoracic dermatomes, and a loss of vibratory sensibility in his legs. He was unable to urinate. Roentgenograms of the chest and thoracic spine, and results of the usual studies of blood and urine were all normal. Lumbar puncture revealed a complete block of the spinal subarachnoid space. The fluid

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† This and the other cases cited here have been reported in greater detail elsewhere.
was xanthochromic and contained 201 mg. per cent of protein. Myelography disclosed a complete block at the 11th thoracic vertebra.

Operation. On Oct. 12, 1929 Dr. Percival Bailey and one of us (PCB) made a laminectomy of the 7th through the 11th thoracic vertebrae. A solid reddish extradural tumor was largely removed from the spinal canal where it surrounded the spinal cord. The dura mater was incised longitudinally and left open. The spinal cord was decompressed.

Microscopic examination at that time led to a diagnosis of “round-cell sarcoma.” At autopsy in 1940 and on recent re-examination of the material removed at operation a diagnosis of lymphosarcoma was made. This very cellular tumor looks like a highly abnormal lymph node (Fig. 1). Dense collagenous septa divide the tumor into nodules and strands. The cells vary in size and have well defined chromatin patterns in their nuclei. There are a few mitoses.

Postoperative Course. He was given roentgen-ray therapy from October 28 to December 20, and the following spring additional radiation therapy was administered by Dr. M. C. Sosman at the Peter Bent Brigham Hospital in Boston. The exact amount of roentgen-ray therapy is now unknown.

Improvement began shortly after the operation. On March 6, 1930 he wrote that he was walking with a cane and by May he was able to work in his garden. His condition soon was normal and remained so until October 1937 when there developed complete obstruction of his esophagus caused by an external constriction. This was assumed to be a lymphosarcoma. He was given 2,256 r of roentgen-ray therapy to the area of constriction and soon was well again. In February 1939 a chronic cough developed. His condition failed steadily and he died on Jan. 29, 1940, at the age of 73 years, of cardiac failure with pleuritic and pericardial effusions.

Autopsy revealed no evidence of recurrence of the former involvement of the spinal cord or of the esophagus. Lymph nodes from various parts of the body were involved with lymphosarcoma (Fig. 2). There were also fibrinous pericarditis and pleuritis, right empyema, ulcerative tracheobronchitis, bronchopneumonia, fatty degeneration of the heart and liver, prostatitis, interstitial nephritis and periportal cirrhosis.

Comment. This case was most instructive. It demonstrated clearly that a man suffering from spastic paraplegia caused by a primary epidural lymphosarcoma of the spinal cord could make a complete recovery and remain free from further involvement of the spinal cord for 11 years.

That this case was not unique was demonstrated by the following cases.

Case 2.* Theresa J., a teacher 42 years old, was referred by Dr. R. B. Jones of LaPorte, Indiana. To Dr. Jones’ credit it should be noted that he had urged hospitalization 2 months before she was admitted to our service at the University of Chicago Clinics on Jan. 6, 1936.

For 2 or 3 years she had noted a sense of pressure over the left shoulder blade after exertion. In

* This case has been briefly reported previously by Mullan and Evans as their Case 26.