

fifty who was in the tertiary stage of syphilis, and whose body, with the exception of his head, was entirely denuded of hair.

### SARCOMA OF THE SPINE; PROBABLY EXTRADURAL.

By Dr. I. Abrahamson.

The patient was a male, thirty years old; married; a native of Russia and a painter by occupation. His family history was negative. The patient had pneumonia ten years ago. He denied venereal disease; there was no history of lead intoxication; he used alcohol and tobacco in moderation.

Seven years ago a mass was noticed in the spine, in the sacro-lumbar region. It had increased in size during the past two years. His present illness dated back two years, and was assigned to a fall from a scaffold, striking on his right shoulder and head. Four weeks after the injury he complained of a pain in the right lower ribs, posteriorly, burning in character; this was followed a week later by pain in the left lumbar region, in the axillary line; pains then occurred in the ball of the left foot, and soon afterwards in the ball of the right foot. He began to suffer from constipation and increasing difficulty in urination; *i. e.*, delay and interrupted flow; then a girdle sensation around the abdomen below the umbilicus, at first on the left side; at about the same time there was weakness and stiffness in the left lower extremity, together with numbness and a "dead" feeling over the same extremity; there was also diminished potency. He complained of no symptoms above the waist line excepting occasional dizzy spells, with blurred vision simulating diplopia. About this time the mass on the back began to increase in size, and the patient ascribed his symptoms to it. He remained in the hospital three months, and during that period his symptoms improved somewhat, his pain being less severe.

Examination showed the head, chest and upper extremities normal. There was no lead line on the gums. The pupils and reflexes of the upper extremities were normal. The abdominal reflexes were present, but the left lower abdominal reflex was much diminished. There was no clonus. The patient dragged the left lower extremity somewhat, and the foot was turned outward. Motor power was somewhat diminished. Tactile sensibility was normal. There was a belt of hyperalgesia on the right side from the umbilicus to the ribs anteriorly, and from the buttocks to the ribs posteriorly. There was hypoalgesia on the right side from the umbilicus to the groin, and sensibility was still more diminished over the right thigh, especially its outer surface. There was analgesia over the right upper outer leg and foot. On the left side there was hyperalgesia from the umbilicus to the groin. There was tenderness to percussion over the ninth dorsal spine, and upon moving the upper body from side to side the girdle sensation was increased. The electrical reactions were normal.

The mass over the spine was removed, and a microscopical examination showed it to be a spindle and giant celled sarcoma. The patient was given hypodermic injections of salicylate of mercury and increasing doses of iodide of potash, with very little improvement.

A study of this case, Dr. Abrahamson said, indicated the presence of a lesion of the spine involving from the tenth to the twelfth dorsal segments, mainly on the left side, probably posterior, and of extra-medullary nature. The likelihood was that the lesion was either extra-dural, and

large and flat, or else of the dura itself. It was sarcomatous. The case was of particular interest on account of the marked sensory symptoms, the Brown-Séquardian tendency and the minimum motor symptoms.

Dr. B. Sachs said that in view of the anatomical and pathological findings in this case, there could be very little doubt about the nature of the condition. He thought Dr. Abrahamson was right in suspecting a rather diffuse sarcomatosis rather than a small, localized tumor, on account of the extensive character of the motor and sensory involvement.

Dr. Sachs said there were a number of cases of spinal tumor on record in which pain was the most pronounced and for weeks and months the only symptom. The speaker said he was particularly interested in this subject, as he had within the past few years seen a number of cases of spinal cord neoplasm secondary to malignant disease elsewhere in the body. Within the past few months he saw two cases of carcinomatosis of the spinal cord which developed in a remarkably short period of time after radical operations for mammary carcinoma. In one instance, the spinal involvement occurred eight weeks, and in the other four months after the removal of a cancer of the breast.

Dr. Adolf Meyer thought it was questionable that a diffuse sarcomatosis, as the term is understood by Redlich and others, could produce such well-marked sensory disorders of so one-sided a character. Of course, it was probable that we had to deal with a tumor of fairly good size, but he could scarcely coincide with the view that the condition was a diffuse sarcomatosis.

Dr. B. Sachs said that by the term diffuse sarcomatosis he meant one or more flat tumors, and not a single compact one. A growth of the latter kind in the limited space of the spinal canal would doubtless by this time have given rise to very marked paralytic disturbances and of a more localized character than were shown in the case reported by Dr. Abrahamson. From that point of view the speaker said he would argue that the tumor was widespread in character and not limited, say, to one segment of the cord.

Dr. Edward D. Fisher said the symptoms in Dr. Abrahamson's case were rather characteristic of pressure on the spinal nerves, rather than on the cord itself. He did not see how such unilateral motor and sensory symptoms could be caused by pressure on the cord.

Dr. L. Pierce Clark asked Dr. Abrahamson how frequently tumors outside of the cord and extradural growths that had produced the Brown-Séquard syndrome were met with in literature. He understood that it was an extremely rare occurrence.

Dr. William M. Leszkynsky said that if the growth in this case was extradural, there might be some chance for its successful removal.

Dr. Charles L. Dana said that the immediate outlook for surgical intervention in extradural tumors of the cord was very hopeful. Quite recently he had had a growth removed from almost the exact region of that in the case reported by Dr. Abrahamson, and the result was very successful.

Dr. Abrahamson, in closing the discussion, said that as a rule, the extradural conditions did not give rise to the Brown-Séquard syndrome. The case he had shown was also particularly interesting on account of the comparatively little motor and the very marked sensory symptoms. The objective sensory symptoms were far in excess of the motor, and

indicated that the lesion was essentially one-sided, that it was most probably extradural, and rather diffuse.

### A CASE FOR DIAGNOSIS; POSSIBLY SYRINGOMYELIA.

By Dr. Edwin G. Zabriskie.

The patient was a boy of nineteen, a native of Silesia, and a baker by occupation. No satisfactory family history was obtainable, but he had apparently enjoyed good health up to the time of his present illness. He used tobacco and beer moderately. About a year ago he fell on the sidewalk, striking his left elbow and causing a fracture of the olecranon. Shortly afterwards, his left hand became emaciated and weak, beginning in the middle finger and extending across the hand to the thumb, the condition taking about two months to develop. Since then the hand had been growing progressively weaker, and a month ago the right hand became similarly affected. The electrical reactions showed complete loss of response to both galvanic and faradic stimulation. The reflexes were present in the biceps and triceps, but the wrist reflex could not be elicited unless the muscle was struck directly. The knee jerks were unequal, the left being greater than the right. There was a well-defined Babinski. The patient had a pronounced scoliosis. There was decided analgesia and thermo-anesthesia in a well-defined area about the elbows, and the temperature sense over the rest of the body was also impaired. There was no vesical nor rectal disturbance. The speaker said he was inclined to regard the case as one of syringomyelia.

Dr. L. Pierce Clark said he thought the case was undoubtedly one of syringomyelia. He thought the speaker was trying to involve the peripheral trauma as a cause of the syringomyelia, which he considered unlikely to be the case, although not a few neurologists held that view.

Dr. Fraenkel said that some years ago he saw a patient with marked chronic degenerative disease of the cord. The symptoms were reported to have come on about three weeks after an accident. The speaker was at that time already able to make a diagnosis of amyotrophic lateral sclerosis. Subsequently, the case came to court, the patient claiming that his disease was the result of the injury he had sustained. Dr. Fraenkel said that he did not coincide with that view, and testified to that effect, but other physicians testified to the contrary, and the jury took their view of the case.

Dr. Noyes said that last spring he showed a case of amyotrophic lateral sclerosis in which the symptoms developed two months after the patient had sustained an electric shock from a third rail, which severely burned his hand. There was a possibility, however, that the symptoms might have been the result of lead poisoning, though no symptoms of lead poisoning were obtained, and the patient gave an indefinite history of weakness of the muscles supplied by the posterior interosseous nerve prior to the accident. There was a scar of an old stab wound inflicted many years before directly over the nerve, and there had been no increase of the paralysis before the electric shock. The symptoms had grown progressively worse quite rapidly, the muscles of the legs and neck now being affected, together with some symptoms of bulbar paralysis. Dr. Noyes said he was still inclined to believe that the electric shock was the cause of the symptoms in this case.

Dr. Zabriskie, in closing, said that while he was inclined to look upon