HODENPYL (E.)

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ADENO-SARCOMA

OF THE

DURA MATER SPINALIS,

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A CASE OF

ADENO-SARCOMA OF THE DURA MATER SPINALIS.

For the clinical history of this case I am indebted to Dr. C. R. Hexamer, House Physician, St. Francis Hospital, New York.

H. K., aged thirty-eight years, a native of Canada, a salesman, was admitted into the hospital July 18, 1887.

Family history: Negative.

Previous history: Patient said that up to the time of his present illness he had never been ill a day, except that he had had gonorrhœa once. He was a moderate drinker.

Present illness: About six months before admission he began to suffer from pain and soreness in the right side, which he located at a point one and a half inches above the anterior superior spine of the ilium; this he attributed to heavy lifting, to which he was unaccustomed. During the next three or four weeks the pain passed entirely around the body, causing the sensation of constriction, "as if I were wearing a belt." The pain was more marked while sitting than while standing. He now began to complain of "soreness" over the lower half of the spinal column. This sensation was apparently one of weakness rather than of actual pain. The pain in the right side gradually became more severe and constant, and finally extended to the left side.

Patient had been in a number of hospitals, but was regarded as a malingerer.

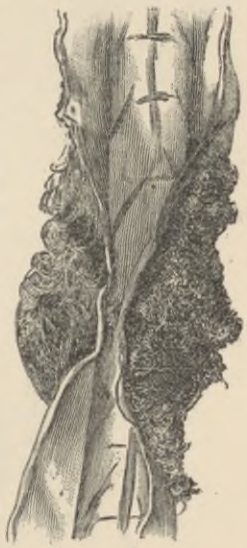
On admission he walked into the hospital, and from his gait and carriage appeared to be perfectly well. He stated that two days before, he first noticed a sensation of weakness in both legs; but, as he was able to walk, no especial attention was paid to it.

Physical examination of heart and lungs was negative, and there were no evidences of syphilis. Examination of urine was negative. Six days after admission he complained that he was no longer able to stand, and examination at this time showed that he was unable to place his feet without looking at them, and that on closing the eyes the body would sway, and he was liable to fall. There was neither cremasteric nor abdominal reflex. Patellar reflex was diminished on the right side, and on the left was about normal. The voluntary movements were slightly irregular in the legs, and he had no definite conception of their position, *i. e.*, when crossed, spread apart, etc. There was diminished sensation in the legs, and the capacity for voluntary movement became more and more diminished in the lower extremities until about the middle of August (or about seven months from the commencement of the symptoms), when both sensation and the power of movement became entirely lost.

He gradually lost control of the bladder and rectum. Throughout the course of the disease the mental condition remained good. Toward the end bedsores developed and spread rapidly in spite of treatment. During the last two weeks delirium was often present. Respiration and deglutition became difficult, and he died September 21st, exhausted.

Autopsy: Examination of the spinal cord only was permitted. The cord and its membranes were removed together. There were no gross lesions observed except at the level of the eighth and ninth dorsal vertebræ. Here was a new growth on the external surface of the dura mater which encircled the cord except on its anterior aspect. This tumor was somewhat rough on its external surface, and the contiguous vertebræ were roughened and eroded. The internal surface of the dura mater was of normal appearance. The spinal cord at that part, enclosed by the tumor, was narrowed to about two-thirds of its normal diameter. (See Fig. 1.)

FIG. 1.



Tumor of dura mater spinalis with cord *in situ*. Natural size.

Microscopical examination: The dura mater at the seat of the growth was moderately thickened, but was not unusually cellular. A large part of the tumor was composed of small spindle and small round cells closely packed together. Between the cells was a delicate connective-tissue stroma. This part of the tumor had the characteristics of a moderately dense sarcoma.

Some scattered portions of the tumor, making up at least one-third of its bulk, presented an entirely different structure. A series of tubules or long, narrow, irregular branching and occasionally anastomosing spaces were irregularly lined with polyhedral, cuboidal, or distinctly cylinder cells. A variable amount of rather loose, moderately cellular, connective tissue separated these gland-like structures from one another. (See Fig. 2.) Although distinctly glandular in type, there was, in places, an irregularity in the shape of these pseudo-acini which often rendered the interpretation of the pictures presented by the sections exceedingly puzzling. On the whole, however, the constant presence of a lumen and the irregularity, in many places, in the shape of the cells which surrounded it, stamped these parts of the growth as adenomatous.

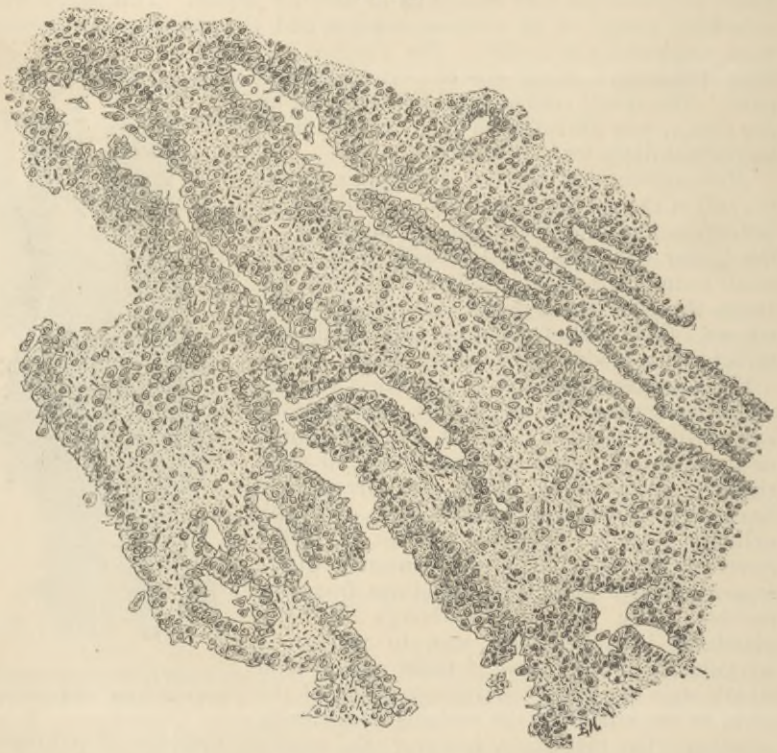
Small irregular masses of osteoid tissue were scattered throughout the sarcomatous parts, especially in places where fibrous tissue was more abundant.

The tumor included one of the posterior spinal ganglia, which showed an increased amount of connective tissue in and about it, but the ganglion cells did not appear to be altered.

From the situation and condition of this tumor, as above described, it is difficult to say with certainty what its exact origin was; whether the external layer of the dura mater, the periosteum of the vertebræ, or the loose connective tissue which joins them. The tendency to forma-

tion of bone in the tumor would not be strongly indicative of its periosteal origin, since bone formation in the dura mater is not so very infrequent, and since, on the other hand, the periosteum was either primarily or secondarily involved. Aside from the practical importance which attaches to all tumors of the spinal canal, this one seems to be of especial interest on account of the epithelial structures which so largely compose it.

FIG. 2.



A section from the adenomatous part of the tumor.

It is difficult to account for the occurrence of a tumor of this character in this situation, except by Cohnheim's hypothesis of aberrant embryonic remains. The plausibility of this hypothesis is, in this case, enhanced by the occurrence of the tumor in a situation liable to irregularities in development during the formation and closure of the neural canal.

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