SPINAL ANGIOMA PRESENTING DURING PREGNANCY*

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Spinal angioma, with symptoms occurring during pregnancy and with remission beginning prior to delivery, has not been reported previously. For this reason the following case is presented.

CASE REPORT

N.S., an 18-year-old white female, noted tingling in her right leg when she was in the 4th month of her 1st pregnancy. In the 5th month similar paresthesias developed in the left leg. By the 6th month weakness of the right lower extremity was observed.

She was admitted to the Good Samaritan Hospital, Cincinnati, on July 2, 1957. In addition to the above symptoms, she complained of aching pain in the lower cervical region.

In retrospect, the patient recalled that periodically during her teens she had had unusual cramping in both legs.

Examination. The patient was a well-developed, well-nourished young white female, whose uterus was enlarged to just above the umbilicus. Fetal heart tones were heard.

There was tenderness to pressure over the spinous processes of C7 and T1.

There was complete paralysis of the right leg with marked weakness of all muscle groups in the left leg. Patellar and ankle reflexes were symmetrically hyperactive. Ankle clonus was present bilaterally. There were bilateral pathological toe signs. Below T3 there was poor appreciation of all sensory modalities bilaterally, and marked hypesthesia, dysesthesia and reversal of temperature distinction were found in the right lower extremity. Dissociation of sensation was not present.

Rectal sphincter tone was poor, and there was urinary retention.

Diagnostic Procedures. Roentgenograms of the spine revealed a small area of translucency in the pedicle of T4 (Fig. 1).

Spinal puncture yielded clear, colorless fluid under pressure of 120 mm. cerebrospinal fluid and with sluggish rise and fall on bilateral jugular compression. Total spinal fluid protein was 48 mg. per cent.

Myelography demonstrated a partial obstruction to the flow of dye between C7 and T4, with the typical worm-like defects of a vascular anomaly at this level (Fig. 2).

Operation. On July 3, 1957 laminectomy was performed in the sitting position under general anesthesia. The laminae of C7 through T4 were removed, during which procedure venous and arterial bleeding was profuse. The extradural fat was replaced by tough, exceedingly vascular fibrous tissue, a portion of which was excised for biopsy. The dura mater was not pulsating and therefore was incised throughout the length of the exposure. Upon opening the dura mater, a pulsating mass of dilated, tortuous vessels was seen on the posterior surface of the cord and dipping into the posterior longitudinal sulcus of the cord. It appeared to consist of both arteries and veins. The arachnoid was opened to afford complete decompression, but no attempt was made to obliterate or excise the angioma. The dura mater was left widely open; the rest of the wound was closed in layers with black silk.

Pathology. The epidural tissue removed for biopsy was described by Dr. Louis Z. Gordon, pathologist, as follows:

"Vascular adipose tissue interlaced by fibrous tissue septa. The vascular tissue shows a

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significant change in the form of degeneration of the walls. A number of vessels show only basophilic degeneration of the adventitia and muscularis. In other areas the entire wall of the vessel is involved in such a degenerative process. At one end of the specimen the vascular channels can be identified as such only because of their characteristic shape and are arranged in a noncommunicating network. Both arterial and venous channels appear to be involved in this process. Impression: Arterial angioma."

Postoperative Course. The patient’s course was complicated. On the 2nd postoperative day she had three grand mal convulsions. She had not been in shock and was not toxic. Postictally neurological findings were unchanged. She had no further seizures. One was led to wonder whether she might not also have an intracranial vascular anomaly.

The wound continued to drain spinal fluid, which eventually grew *Pseudomonas aeruginosa* on culture. The organism was sensitive *in vitro* only to dihydrostreptomycin and Polymixin. The patient was placed on penicillin and dihydrostreptomycin, and by July 15, 1957 the wound was clean enough to permit secondary closure to seal off the spinal fluid leak.

On July 23, 1957, 20 days after operation, the patient could move the right leg slightly, and strength in the left leg had improved. The sensory level had fallen to T9 on the right and L1 on the left. An indwelling urethral catheter was still necessary. From that time on she continued to improve and when discharged from the hospital on Aug. 17, 1957 could stand unassisted.

She was readmitted on Aug. 24, 1957 because of a large collection of fluid beneath the incision, with fever. Fluid containing *Pseudomonas aeruginosa*, sensitive only to Polymixin, was aspirated.

At the time of this admission she was still further improved neurologically. She was able to