SPONTANEOUS SUBARACHNOID HEMORRHAGE IN INTRADURAL TUMORS OF THE LUMBAR SAC

A CLINICAL SYNDROME*

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This is a neurosurgical postulate in which there is an abrupt onset of intractable sciatica, a concomitant violent headache and the presence of a liberal amount of fresh blood in the spinal fluid. The total experience on which this study is based is perhaps insufficient for finality. The clinical parallelism in these cases, however, is so striking as to suggest that with a few additional contributions one may confirm the clinical characterization of certain tumors within the dura of the lumbar limits of the spinal canal. The diagnosis of these tumors is completely dependent on contrast myelographic studies of this spinal area. Unless these investigations are inaugurated early, intermittent attacks of radicular distress and cephalalgia can be expected. With present-day attention centered on the “ruptured intervertebral disk” in accounting for lumbago-sciatica handicaps, and the enthusiasm for cerebral angiography in spontaneous subarachnoid hemorrhage, it seems apropos that attention be given this possible syndrome for certain lumbar intradural tumors.

The first case of meningeal hemorrhage caused by a tumor of the cauda equina was reported by André-Thomas et al.* in 1930. The only other case in the literature was chronicled by Abbott† in 1939. It is of passing historical interest, as pointed out by André-Thomas, that Vigneras was in error in his interpretation that “the existence of a yellow fluid on spinal puncture” in 3 of his cases indicated meningeal hemorrhage caused by medullary tumors of the spinal cord. André-Thomas likewise directed similar criticism to Elsberg’s report of bleeding tendencies in spinal cord tumors, for Elsberg also thought the xanthochromic spinal fluid was of hemorrhagic origin. So it stands that André-Thomas recorded the first experience of a true recurrent spinal hemorrhage associated with a verified tumor of the cauda equina. The fluid withdrawn in his case was “the color of port-wine . . . withdrawn easily and abundantly . . . when centrifuged the fluid remained colored showing an extensive hemolysis.” Cisternal puncture was performed on André-Thomas’ patient on the day following a lumbar puncture, and the “cerebrospinal fluid withdrawn was slightly colored but infinitely less bloody than that from the subarachnoid lumbar spaces.” Abbott’s case

represents the extreme frequency with which the symptomatology of such a spinal cord tumor may recur. His patient bled spontaneously on more than 25 occasions. His experiences further illustrate the practical clinical considerations that may be the more evident explanations for these patients' complaints. The primary objective neurologic evidence is likely to be directed to the cerebrum as the site of origin of the spontaneous bleeding.

CASE REPORTS

There are 5 cases on which this study is based. Three of these are from the author's records. Four of the patients were operated upon by other neurosurgeons.


1st Attack, April 1923. Severe pain, acute in onset, more severe at night; included "the whole pelvis and thighs." Necessitated several injections of morphia. Patient had had some pain in sacral region and down the posterior thighs since 1918.

2nd Attack, March 1927. "Had to be hospitalized twice for three weeks for pain," of the same character and in the same areas of the attack of 1923. Improved spontaneously and "on dismissal returned to his job."

3rd Attack, April 1929. This necessitated hospitalization. Again severe "pain in the sacrum, perineal pain radiating into the thighs and up to the shoulders." Recovery was after a short interval and he returned to work. "Some sphincter dysfunction persisted. Permanent stiffness of his spine."

4th Attack, April 1930. "Sacro-lumbar pains radiating to the lower limbs." For this attack he was hospitalized and on May 2, 1930 there were motor, sensory, reflex and sphincter disturbances adequate to suspect a lumbar or sacral neoplasm. Lumbar punctures (May 2, 6, 10) showed "still quite bloody cerebrospinal fluid." Pressure and manometrics were not reported.

Myelography, May 12, 1930. Lipiodol. Obstruction "at upper edge of the second lumbar vertebra."

Laminectomy by Dr. de Martel, May 24, 1930. Intradural tumor "somewhat to the right of the midline, completely extracted from the lumbar 1-2 level."

Histology. Neuroglioma.

Results. "Incomplete paralysis of extensors of the right foot (improving) and diminution of knee reflex."

Comment. It is to be noted in Case 1 that André-Thomas recorded the positive statement that on the day of his examination of the patient "he does not complain of headaches." He did state, however, that his patient suffered radicular irritations remote from the site of the spinal root compression by the tumor. With bloody spinal fluid obtained from the cisterna magna it is quite likely that his patient had had adequate meningeal irritation to produce a cephalalgia of some degree, if not that particular day, at least in previous attacks. The other 4 patients' records indicate headaches as dominant complaints.

In Woodhall's3 patient (Case 4 of this report), headache "developed a week later than the appearance of severe pain in both legs," and was accompanied by nausea and vomiting. This patient had had headaches as a