volvement of the cortex distinguished it from the cases of thalamic tumour described by Nevin. The pure intracortical type of spread of this tumour is one of the modes of growth of a glioma named by Scherer a secondary structure. The extensive infiltration of the cortical grey matter produced widespread dysfunction with little distortion of the gross appearance of the cerebrum, and this is the reason why such profound disability could be present with normal air studies and arteriogram. This case emphasizes the fact that a glioma may kill its host without producing pathological changes demonstrable by the ancillary methods of investigation in use today. The most constant diagnostic feature in the natural history of such tumours remains their relentless progressive course.

SUMMARY

There is reported a case of brain tumour which produced hemiparesis, hemi-hypaesthesia and dysphasia in which carotid arteriography and air encephalography disclosed no abnormality and which at necropsy showed no displacement of the ventricular system.

The authors are indebted to Dr. E. Arnold Carmichael for permission to report the clinical aspects of this case.

REFERENCES


TORULA GRANULOMA OF THE CERVICAL SPINAL CORD*

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In their recent paper on the infection of the central nervous system by the Cryptococcus hominis, or Torula histolytica, Carton and Mount* presented an exhaustive review of the literature. They found only 10 instances in which either the spinal cord or its membranes showed involvement by Torula. In most of these cases the infection was widespread, also affecting the brain or its meninges. In only 3 instances was the infection confined to the spinal cord, the cauda equina or their

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coverings. Of these 3 cases, 1 presented no clinical symptoms of involvement of the spinal cord (Freeman\textsuperscript{6}); in 1 the vertebral column and the thoracic cavity were also invaded (Heinrichs\textsuperscript{13}); and only in the case reported by Carton and Mount were the lesions confined to the neural structures with the expected neurological symptoms. In their case the granuloma involved the roots of the cauda equina so extensively that no attempt at its removal was made. This conservative attitude was further dictated by their knowledge of the etiological agent. Mosberg and Arnold,\textsuperscript{14} in a review of the literature of torulosis of the central nervous system since 1946 (172 cases), found another instance of involvement of the spinal cord (and of the brain and kidney) which was reported by Jones and Klinck.\textsuperscript{12}

In the case to be reported here the granuloma involved the cervical spinal cord and produced the typical symptoms of compression of that structure, without any signs of meningeal irritation. A diagnosis of a tumor of the spinal cord was made, the patient was operated upon and the extramedullary mass was removed. Its true nature was not recognized until the microscopical studies were made. To our knowledge this is the first reported case of human infection by \textit{Torula histolytica} in Spain.

CASE REPORT

\textsuperscript{\#}P-4304. Maria-Dolores P.U., an 8-year-old white girl from Tarrasa, Catalonia, Spain was first seen by us in consultation with Dr. F. Duran and Dr. Claveria on Nov. 3, 1949. She was the eldest of 6 healthy children. Her birth and subsequent development had been uneventful until the present illness.

In August 1949 she was first taken ill with a severe pain in the back of her neck which occasionally radiated into the right arm. The pain was most severe on arising in the morning. It was aggravated by exertion. It gradually increased in frequency and in severity. On Sept. 12 the spinous process of the 6th cervical vertebra was found to be tender and the muscles of the back of the neck were strongly contracted. Roentgenograms of the cervical spine were negative. The pains lessened when the neck was immobilized in a plaster cast, but a progressive paralysis of the upper extremities developed in the next 8 days. During the following week the lower extremities became spastic and paralyzed and were the seat of painful involuntary spasms. The upper extremities were hypotonic. She was constipated and had occasional urinary incontinence. She was afebrile throughout her illness.

\textit{Examination.} The child was well-developed for her age, but very undernourished. T. was normal. She was quite uncooperative, crying and complaining whenever she was touched. There were almost continuous painful involuntary contractions of her legs. There was a complete lack of voluntary power in all extremities (Fig. 1). The upper extremities were hypotonic and markedly atrophic, particularly distally. She complained bitterly whenever her arms were moved. The biceps reflexes bilaterally and the stylo-radial and pronator-ulnaris reflexes on the right were abolished. The triceps reflexes, and the stylo-radial and pronator-ulnaris reflexes on the left were present but very weak. There was complete paralysis of the lower extremities with marked spasticity and hyperactive tendon reflexes, more marked on the right. Ankle clonus and Babinski's sign were present bilaterally. There was some difficulty with respiration but the diaphragm seemed unaffected.

Sensory examination was far from satisfactory but there appeared to be a zone of hyperesthesia just above the C5 dermatome. From C5 to T1 pain and temperature sensibility seemed to be decreased; while below that level they were lost. Tactile sensibility seemed to be preserved everywhere. Position sense was impaired in the toes.

The cranial nerves were intact.

X-rays of the cervical spine revealed some erosion of the pedicles and widening of the spinal canal from C4 to C6 (Fig. 2). The vertebral bodies and the intervertebral discs appeared normal.