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Hydrocephalus Communicating Associated to Primary Spinal Primitive Neuroectodermal tumor Perhaps Extraneural Metastases and Intracranial Seeding in a Child: A Case Report

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Abstract

The primary spinal - primitive neuroectodermal tumors (PS-PNET) is rare and intracranial seeding and/or extension extraneural perhaps had association in a child for development hydrocephalus communicating for evidence from neuroimaging in different times.

Key Words: primitive neuroectodermal tumor; spinal tumors; intracranial seeding extraneural metastases; magnetic resonance imaging

Introduction

In 1973, Hart and Earle [2] defined primitive neuroectodermal tumors (PNET) as a distinct clinical and pathological entity; primary spinal (PS)-PNET is rare [4, 6-9]. We describe a case of a 6-year-old child with a PS-PNET, intracranial seeding and extension extraneural.

Case report

A 6-year-old child presented with a 4-month history of progressive paraplegia. Neurological examination revealed spastic paraplegia and hypoesthesia. Magnetic resonance images (MRIs,Figure.1)

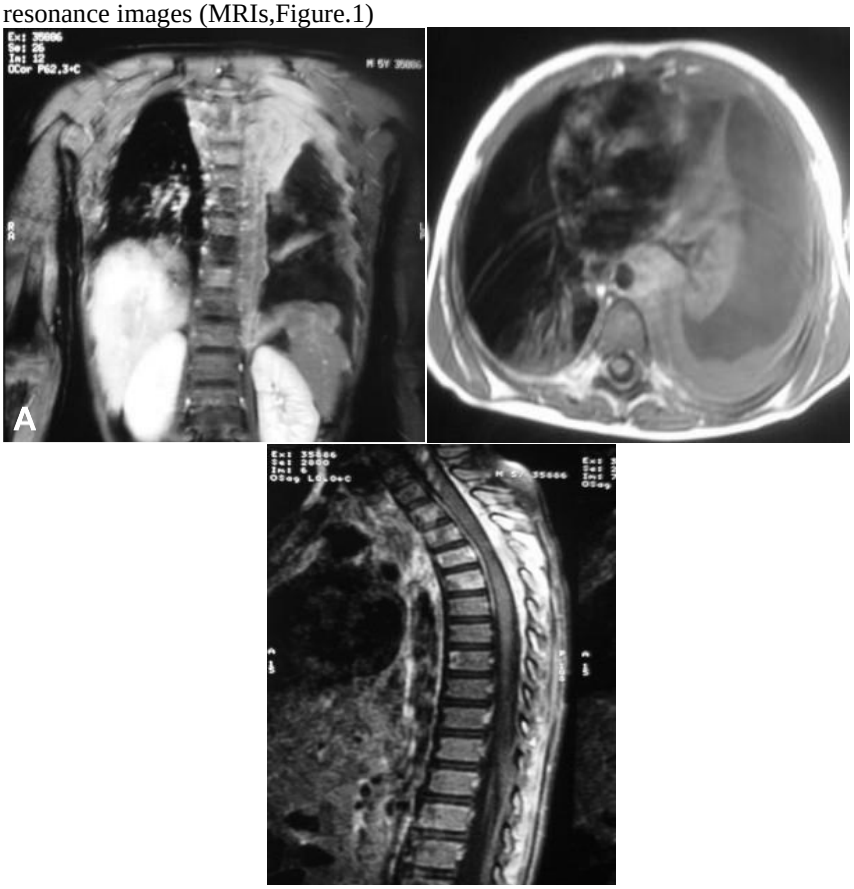


Figure 1: Thoracic and Spinal MRI, T1-Weighted Images with Gadolinium, Revealed left
Paravertebral Mass, Superior neuroforaminal Thoracic, Posterior Mediastinum, and Pleural Effusion (A,B) and Extension to Vertebral bodies T4-T5 and Enhanced Dorsal Dural (C).

Revealed left paravertebral mass, superior neuroforaminal thoracic, posterior mediastinum, and pleural effusion. Biopsy at thoracic mass by tomography guide was performed; on microscopic examination, was PNET, and use the inmunohistochemistry (IHC) was positive CD99 (Figure.2).

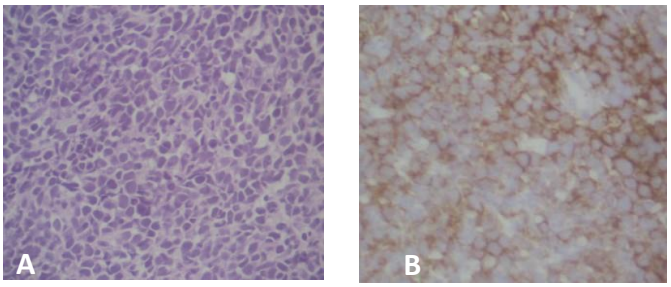
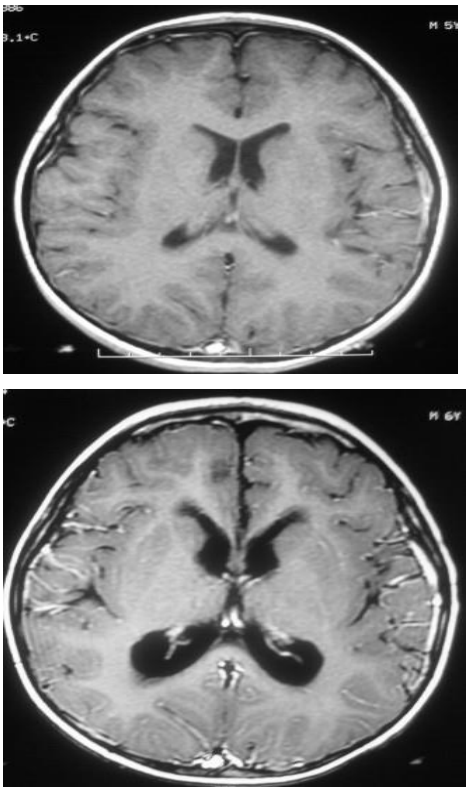


Figure 2: Histopathology. Microscopic Examination with "Small Dark Cell" Tumor, H & E 40x (A) and IHC Positive for CD99 (B).

He received chemotherapy with vincristina, carboplatino, isofosfamida, etoposido, doxorubicina.
After 6-month the diagnosis, he presented paraparesia 3/5 and hypertension intracranial, by hydrocephalus; at neuroimaging with intracranial seeding (Figure.3).



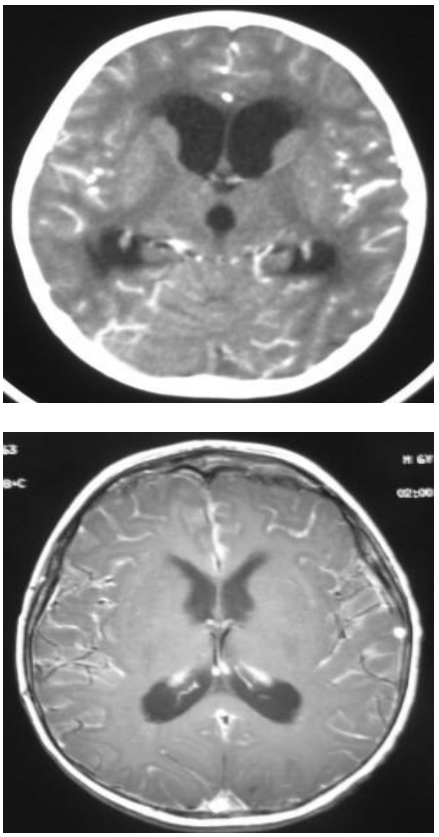


Figure 3: Neuroimaging. MRI T1-Weighted with Gadolinium (A,B,D) and Tomography with Contrast (C); at Diagnosis, 6-Month, 6-Month one Week, and 9-Month with Subarachnoid Enhanced, Respectively.

Frontal ventricular peritoneal derivation was performed and neurologic improvement; three months after, he presented convulsive syndrome, arrest cardiorespiratory and dead.

Discussion

PNET arising in both central and peripheral nervous systems, occur predominantly in children, and spread along cerebrospinal pathways is common [9]. PS-TNEP is rare entity [4,6,7,9,10]. at present case PS-PTEN with intracranial seeding as metastatic, because enhance subarachnoid space, without significant parenchymal involvement of brain, besides no symptoms and signs of intracranial lesion and use of MRI, as report previously [1,5,8]. The patient died 9-month after at diagnosis; the prognosis for patients with metastatic central nervous system tumors is poor [3,9].

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