

EXTRA NERVOUS SYSTEM METASTASIS DUE TO MIDLINE DIFFUSE GLIOMA: CASE REPORT AND LITERATURE REVIEW

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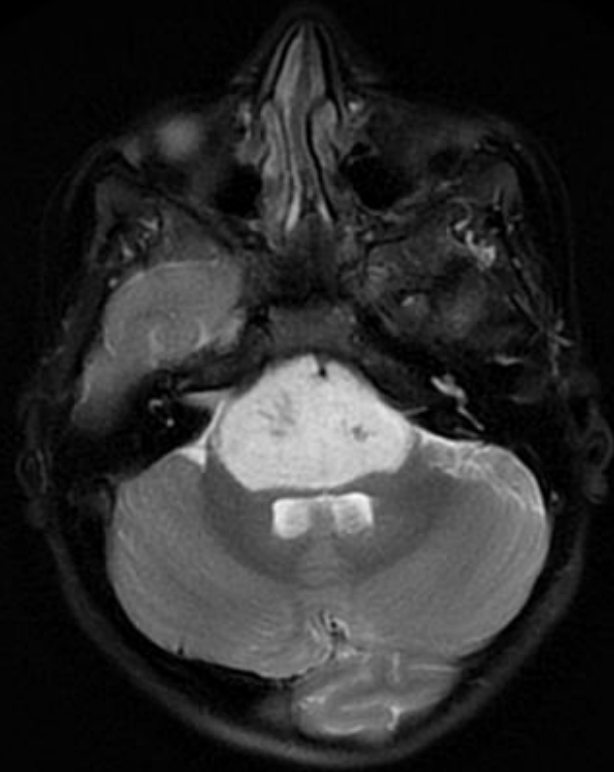
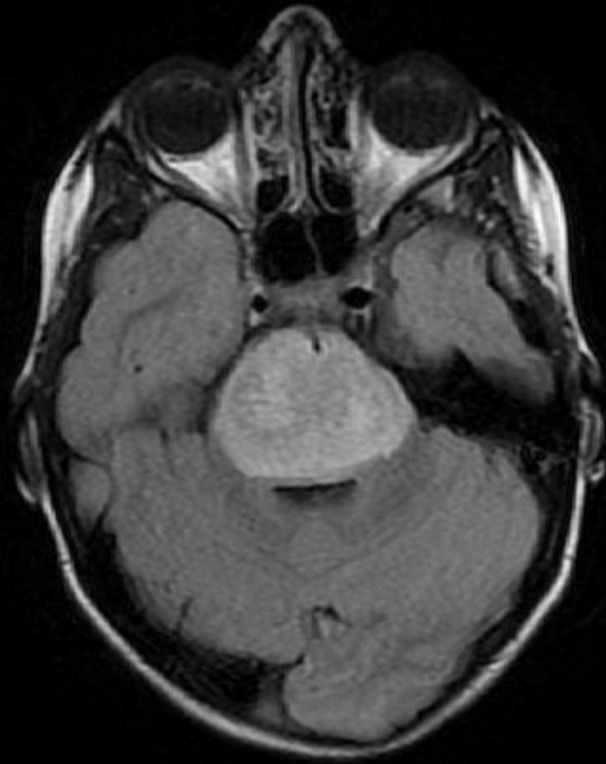
CASE PRESENTATION

HISTORY A 7-year-old girl who has a progressively worsening headache and vomits in the last 20 days. She complained about low visual acuity but the ophthalmological exam did not show any alterations. No other complaints.

PAST Nothing significant.

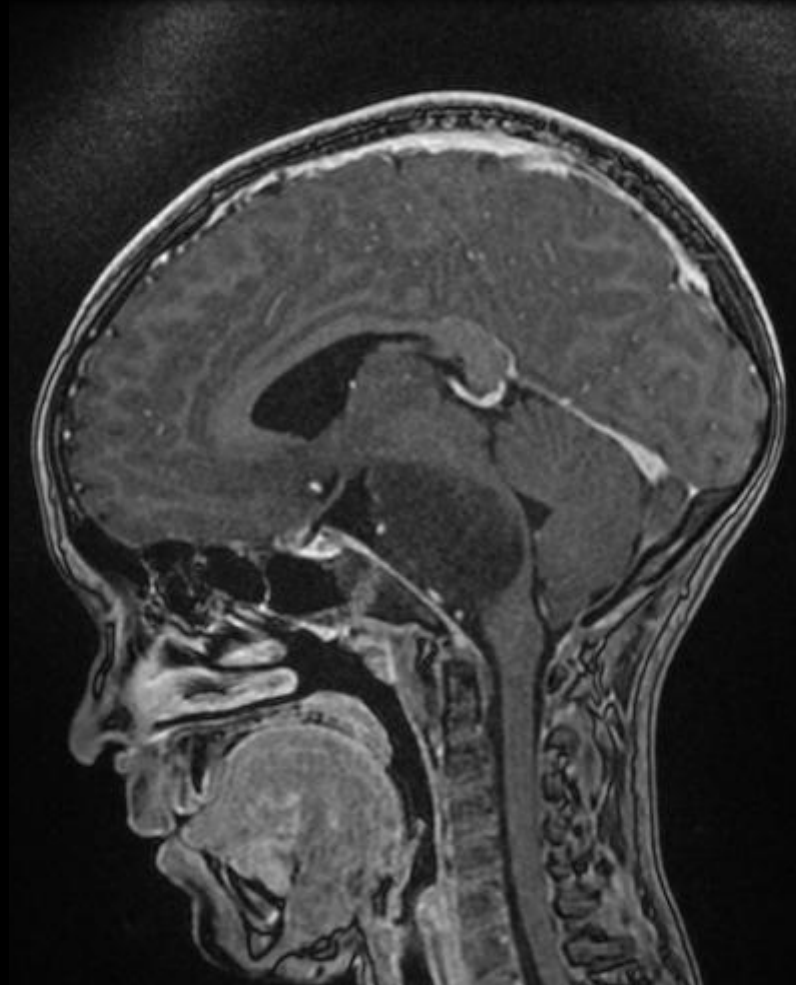
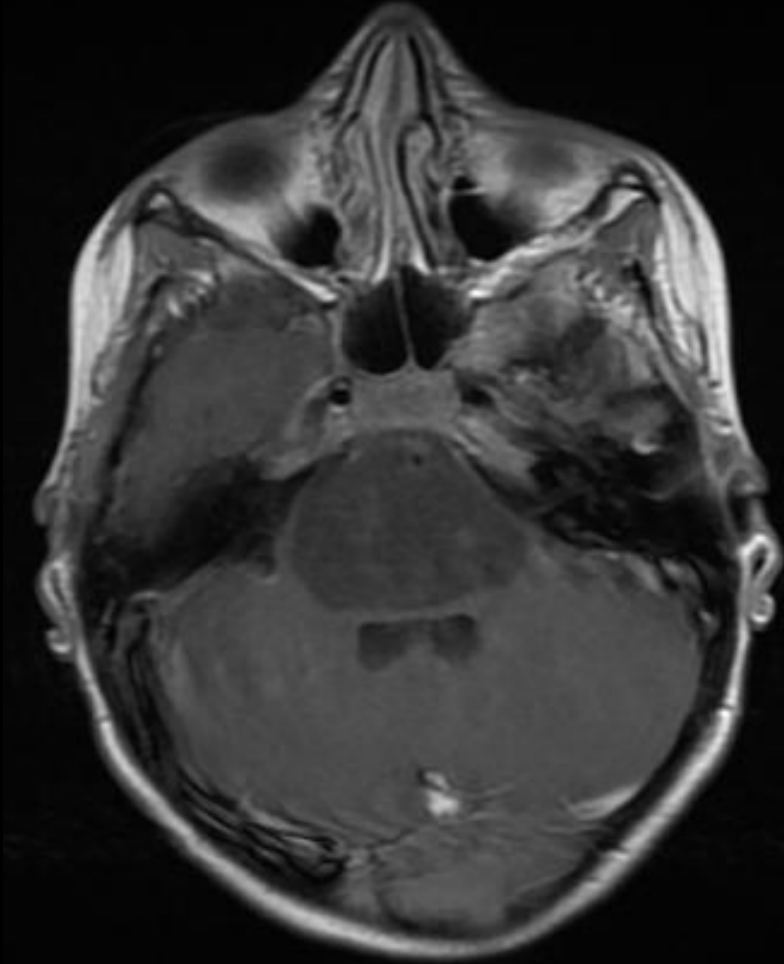
PHYSICAL EXAM Nothing Significant.

Imaging Exams



Initial MRI showing a diffusely expanded pons compatible with Diffuse Intrinsic Pontine Glioma (DIPG)

Imaging Exams



Initial MRI showing a diffusely expanded pons compatible with Diffuse Intrinsic Pontine Glioma (DIPG)

DIAGNOSIS

A magnetic resonance imaging (MRI) revealed a diffusely expanded pons compatible with Diffuse Intrinsic Pontine Glioma (DIPG).

TREATMENT

Stereotactic Biopsy

Radiotherapy

DIAGNOSIS

Histological Analysis: Astrocytoma

ImmunoHistochemistry: p53 negative

Ki 67 10-15%

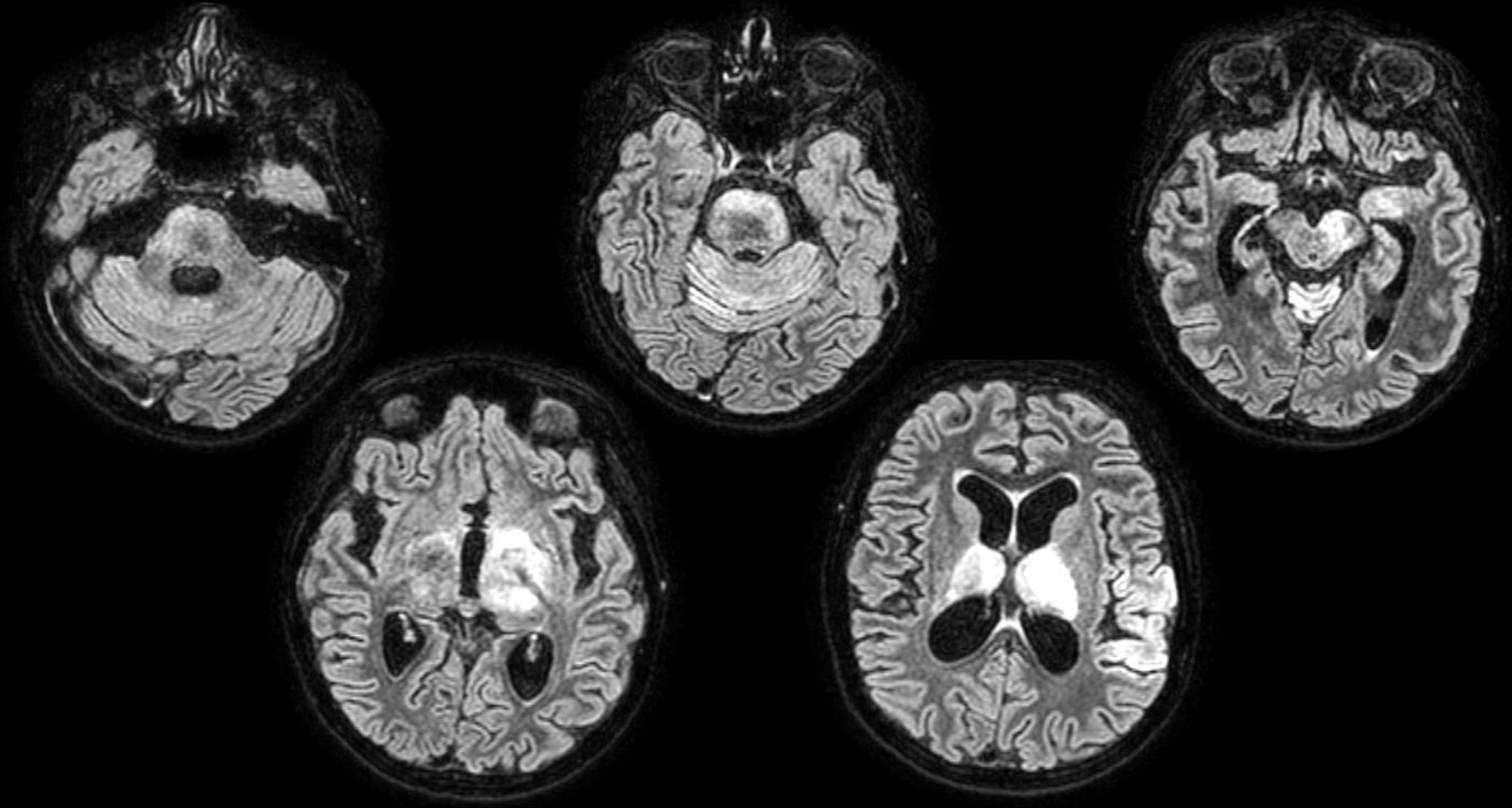
NGS: HIST1H3B c.83A>T; p.Lys28Met(6p22.2)

OUTCOME

The patient followed up with progressive neurological deterioration. A new MRI showed hyperintense lesions on midbrain, both thalamus and cortex of cerebrum.

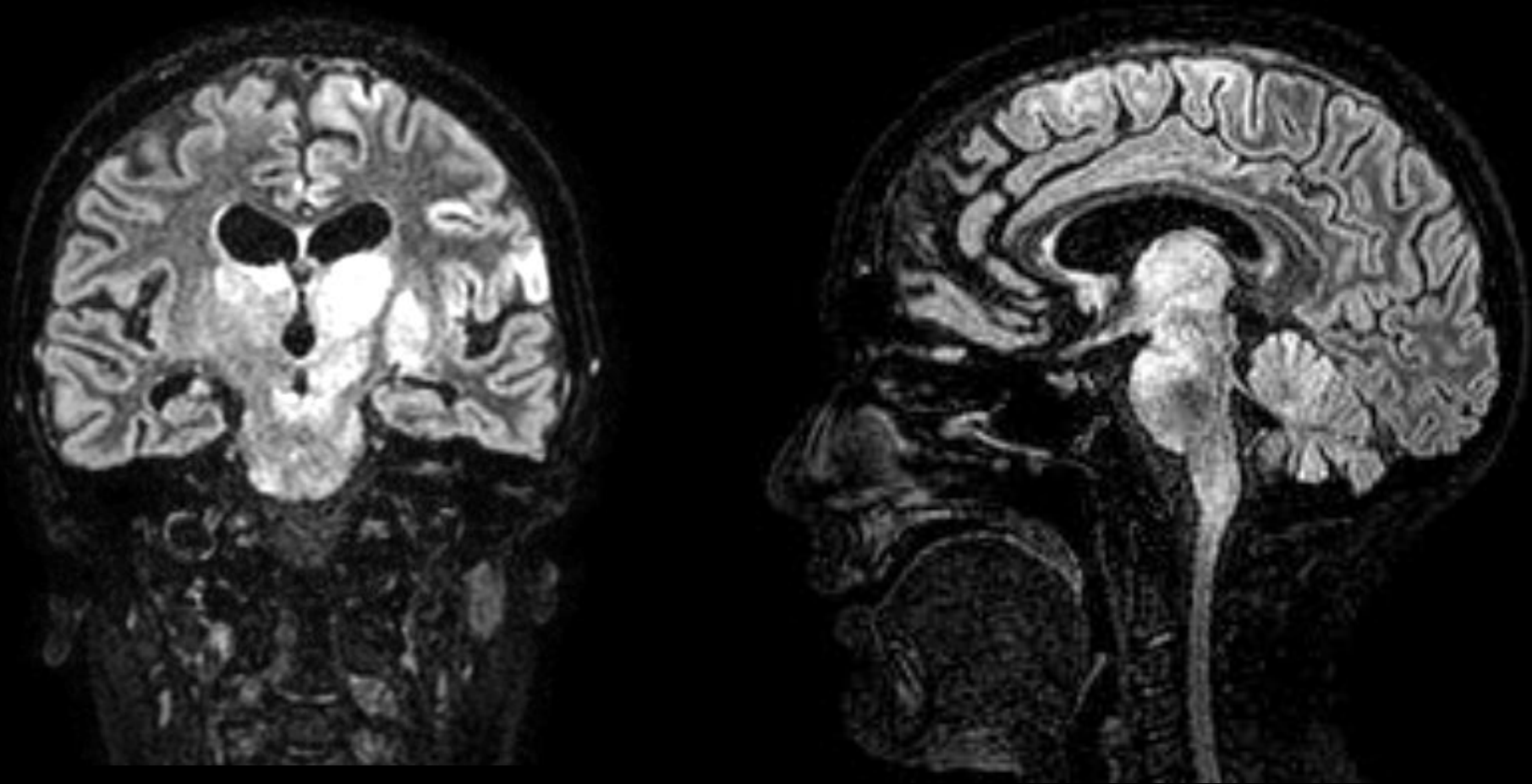
Another treatment with radiation therapy and chemotherapy was performed.

Imaging Exams



MRI showing the progression of the disease

Imaging Exams

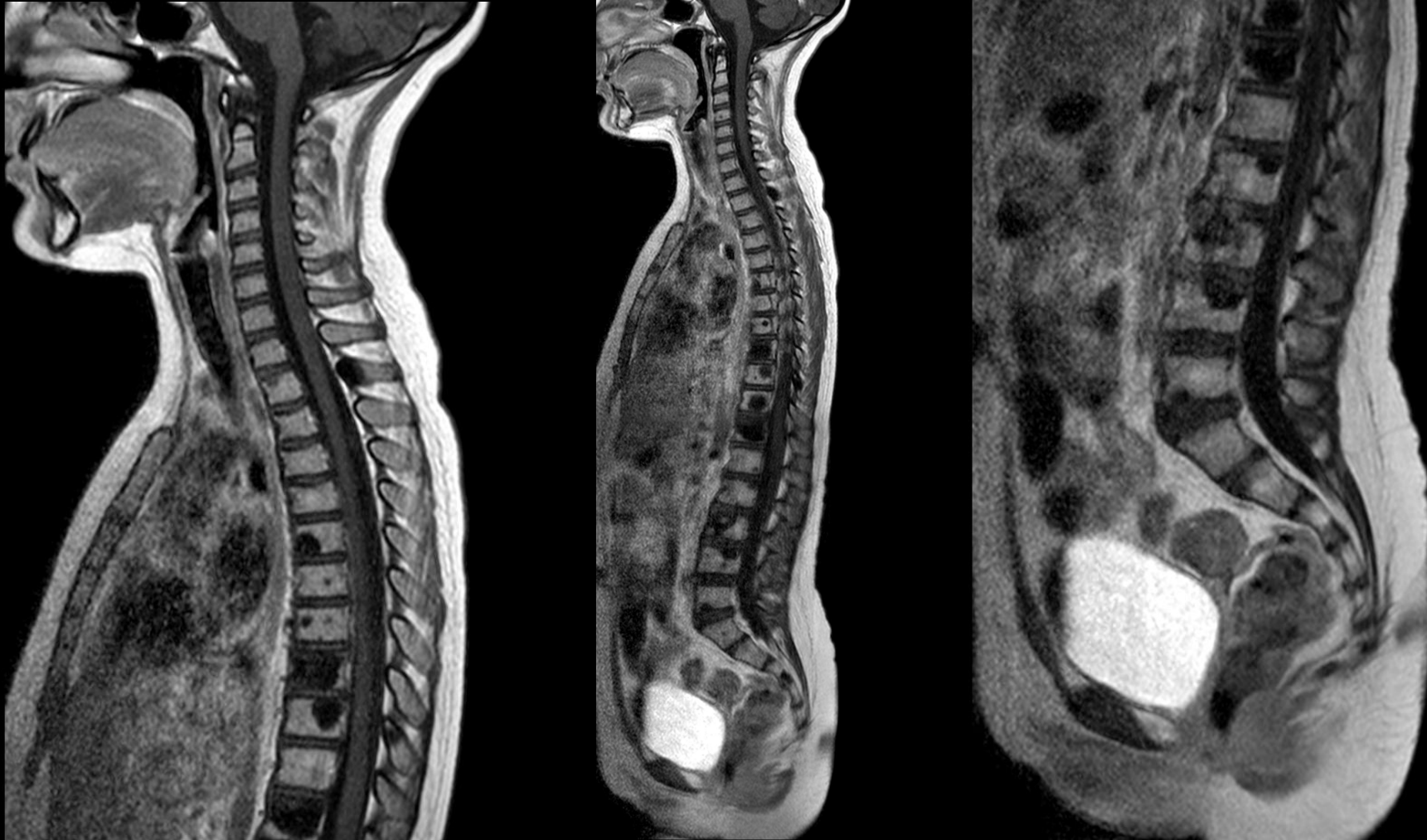


MRI showing the progression of the disease

OUTCOME

During an outpatient consultation, a new MRI was evaluated, which revealed the presence of multiple lesions in the spine, ischio and sternum.

Imaging Exams



MRI revealing the presence of multiple lesions in the spine, ischio and sternum

OUTCOME

It was performed a transpedicular biopsy guided by CT in one of this vertebral lesions.

Histopathological analysis revealed that they were metastasis due to glial neoplasia.

DISCUSSION

DIPG is an aggressive tumor of the brainstem and extraneural metastases are rarely reported and poorly characterized. DIPG most commonly affects the pediatric population. The mean age at diagnosis are 6-7 years. It represents approximately 20% of all pediatric CNS tumors (1). Unfortunately, DIPG has a poor prognosis, and the median survival is generally less than 1 year independently from the treatment received.

DISCUSSION

These tumors are not surgically resectable due to their anatomic location, which limits tissue available for diagnosis and molecular study. However, recent studies have revealed molecular characteristics of diffuse midline gliomas that are distinct from hemispheric pediatric and adult gliomas (2, 3).

FINAL COMMENTS

Patients with appropriate age and typical image in MRI of DIPG allow treatment without biopsy, but in reference centers the histopathological and genetic study warrant the development of other treatments. Despite of all the development in neurosurgical technology, DIPG continues to be a disease with small progress in overall survival. This uncommon presentation of metastatic dissemination of midline diffuse glioma is important to be presented due to the need to better understand its behavior.

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