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Extensive brain tumor in a pediatric patient: A Case Report

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Abstract

Medulloblastoma is the most common brain malignant in childhood that frequently metastasize. In this report, we presented an important clinical case of pediatric patient diagnosed with poorly differentiated medulloblastoma with unsatisfactory neurological evolution even after surgery and chemotherapy.

Keywords: Medulloblastoma; Children; Clinical evolution.

Introduction

Medulloblastoma (MB) is the most common malignant brain tumor in children [1]. MB in children and young adults has a high clinical variability, with the majority of patients being cured, but with a high rate of therapy-related comorbidities [2].

We presented an important case report of pediatric patient diagnosed with poorly differentiated MB with unsatisfactory neurological evolution even after surgery and chemotherapy.

Case report

A Pediatric patient, 1 years old, weighing 7.5 kg, ectoscopically showing a bulky skull and bulging anterior fontanelle. On magnetic resonance imaging, a massive expansive neoplastic lesion was found, located in the midline, a region with some areas of calcification in between, extending superiorly through the third ventricle, occupying the frontal lobes bilaterally and left temporal, and, also, extending inferiorly through the brain stem to the plane of the bridge, measuring 10.3x9.0x9.6 centimeters (Figure 1A and 1B).

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A dilation of the lateral ventricles was observed due to obstruction in the plane of the third ventricle. Deviations from the midline were not identified. As a therapeutic approach, neurosurgery was performed with the intention of biopsy and lesion hemostasis externally. Intra-tumor embolectomy was ruled out due to the heterogeneity of the lesion and the caliber of the vessels. In the histopathological report, a poorly differentiated MB was diagnosed.

In the postoperative period, the patient presented complications of hematoma and meningitis. Chemotherapy was attempted. However, one month after resection surgery, there was further intra-tumor hemorrhage, bradycardia and cardiac arrest. The patient did not show a good neurological evolution, later confirming brain death.

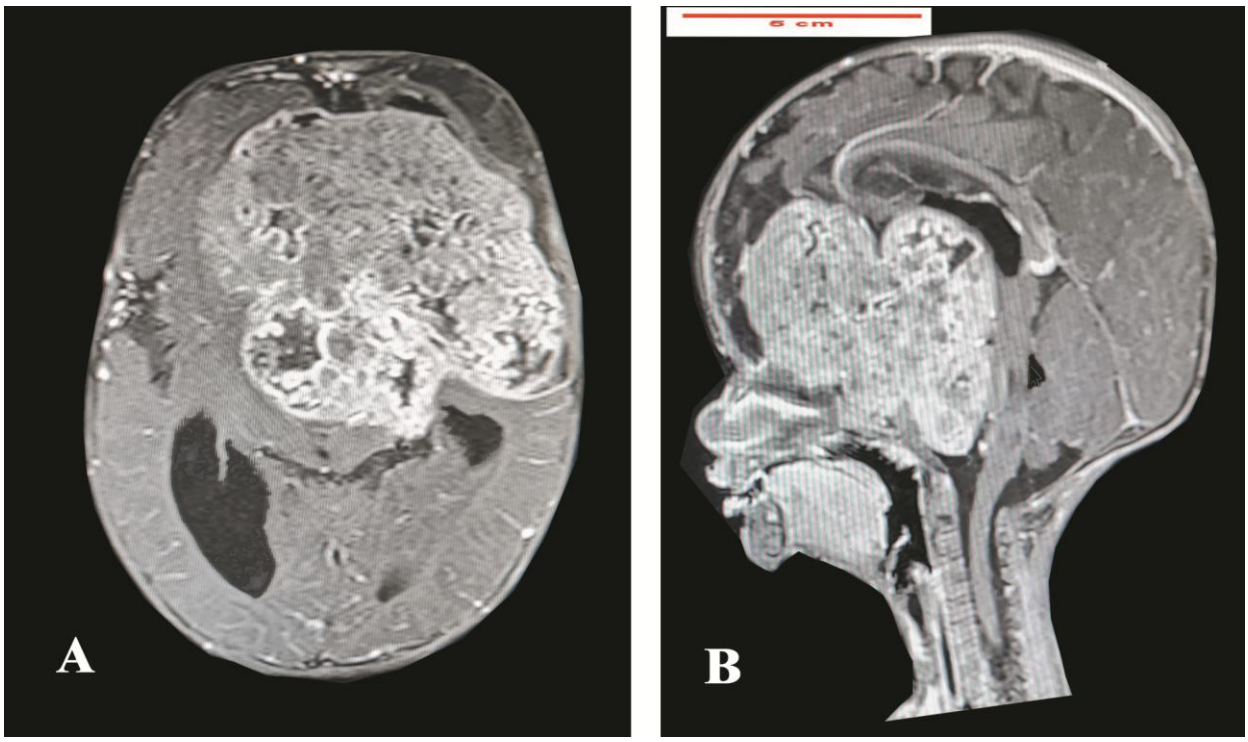

Figure 1. Nuclear Magnetic Resonance showing a T1 image in coronal section (A) and a T1 image in sagittal section of a pediatric patient with a diagnosis of poorly differentiated Medulloblastoma.

Discussion and Conclusion

Medulloblastoma is the main pediatric malignant tumor, with subgroups of a high group, of anaplastic or poorly differentiated forms which have the highest lethality rate. Total resection surgery remains the main form of therapy. However, in recent years, there have been advances in radiotherapy and chemotherapy

treatment for this neoplasm added to surgical treatment [3].

It is known that the effects of radiotherapy become fearsome in children below three years of age, being associated with an accumulative risk of cerebral hemorrhage close to 2% per year for survivors, being prohibitive at this age [4]. Regarding the chemotherapy protocols, it is seen that they do not seem to modify the patients' survival curve, not allowing a curative therapy, only extending survival a little.

For these therapeutic approaches, typically, in the long term, sequelae such as mutism, hearing loss, metabolic changes, and cognitive deficits are due [5].

For the patient presented here, it was found that the excess of tumor mass prevented the effectiveness of the best surgical therapeutic approaches and the palliative alternatives would also be diminished by the great risk of intra-tumor bleeding. Thus, poorly differentiated Meduloblastoma proved to be a pathology with little chance of survival.

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