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Pontine tumor in a neonate: case report and analysis of the current literature.

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Tumors of the central nervous system represent the largest group of solid tumors found in pediatric patients. Pilocytic astrocytoma is the most common pediatric glioma, mostly located in the posterior fossa. The majority of brainstem tumors, however, are classified as highly aggressive diffuse intrinsic pontine gliomas (DIPGs) and their prognosis is dismal. The authors report on the case of a neonate in whom MRI and neuropathological assessment were used to diagnose DIPG. Before initiation of the planned chemotherapy, the tumor regressed spontaneously, and the newborn exhibited a normal neurological development. Meanwhile, Illumina Human Methylation450 BeadChip analysis reclassified the tumor as pilocytic astrocytoma of the posterior fossa. In conclusion, the authors advocate not initiating immediate intensive therapy in newborns with brain tumors, even with classical appearance of a DIPG; rather, they would like to encourage a biopsy to define the best individual therapeutic approach and avoid ineffective chemotherapy.

KEYWORDS: DIPG = diffuse intrinsic pontine glioma; PA = pilocytic astrocytoma; biopsy; newborn; oncology; pontine tumor; spontaneous regression

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