

## Magnetic Resonance Imaging in Children with Brain Tumors

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**Abstract :** Diagnosis of brain tumors is one of the challenges, as several central nervous system diseases run the same symptoms. Modern diagnostic techniques such as CT, MRI helps to significantly improve the surgery in the operating period, after surgery, after allowing time to identify postoperative complications in neurosurgery. Purpose: To study the MRI characteristics and localization of brain tumors in children and to detect the postoperative complications in the postoperative period. Materials and methods: A retrospective study of treatment of 62 children with brain tumors in age from 2 to 5 years was performed. Results of the review: MRI scan of the brain of the 62 patients 52 (83.8%) case revealed a brain tumor. Distribution on MRI of brain tumors found in 15 (24.1%) - glioblastomas, 21 (33.8%) - astrocytomas, 7 (11.2%) - medulloblastomas, 9 (14.5%) - a tumor origin (craniopharyngiomas, chordoma of the skull base). MRI revealed the following characteristic features: an additional sign of the heterogeneous MRI signal of hyper and hypointensive T1 and T2 modes with a different perifocal swelling degree with involvement in the process of brain vessels. The main objectives of postoperative MRI study are the identification of early or late postoperative complications, evaluation of radical surgery, the identification of the extended-growing tumor that (in terms of 3-4 weeks). MRI performed in the following cases: 1. Suspicion of a hematoma (3 days or more) 2. Suspicion continued tumor growth (in terms of 3-4 weeks). Conclusions: Magnetic resonance tomography is a highly informative method of diagnostics of brain tumors in children. MRI also helps to determine the effectiveness and tactics of treatment and the follow up in the postoperative period.

**Keywords :** brain tumors, children, MRI, treatment

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