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## Clinical Manifestations and Pathologic Findings of Pediatric Tumors with Neuronal Origin in Ardabil, Northwest of Iran

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**Background and Aim :** Pediatric central nervous system (CNS) tumors are the second most common childhood malignancy after leukemia and the most common solid tumor. The incidence rate of childhood primary CNS tumors in the United States is approximately 5.67 per 100,000 person-years. Their comparative prevalence among other cancers, on one hand, the potentially threatening nature of involving a developing system such as nervous system and quite vague symptoms particularly in younger children, on the other hand, make them more noteworthy.

**Methods :** We prepared a case series study of space-occupying tumors with the neuronal origin in Bou' Ali children's center in Ardabil province, northwest of Iran. A total of 20 proven cases according to the revised WHO histological types since the foundation of our hospital for 10 years were collected. All the cases were then classified and analyzed for the relative frequency, the initial symptoms, and the detailed location of tumors. The primary manifestations were placed in the 3 main categories: symptoms suggesting raised intracranial pressure, focal neurological deficits, and nonspecific ones. Pieces of evidence of abducent nerve palsy and hospitalization for chemotherapy adverse effects were the other instances.

**Results :** The most frequent type of CNS tumors was optic glioma, followed by medulloblastoma, and neuroblastoma beside 5 PNETs. We did not have an accurate diagnosis for a brain and a spinal tumor for the parental dissent to biopsy. 8 of 10 intracranial tumors had revealed intracranial hypertension and all 6 cases of optic gliomas had signs of 6th cranial nerve palsy. Cytopenia, pneumonia and oral ulcers were the commonest causes of hospitalizations without chemotherapy.

**Conclusion :** The relative frequency of our tumors corresponded to international reports. Moreover, symptoms due to intracranial hypertension and esotropia representing abducent palsy were predominant which warns carefully evaluating for a child with these signs or symptoms especially in the youngsters who cannot probably communicate.

**Keywords :** Pediatric, Nervous system tumors, Intracranial hypertension, Brain, Spinal cord