

Clinical and Histopathological Features of Pediatric Space Occupying Central Nervous System Tumors in the Ardabil Bou'Ali Hospital, Northwest of Iran in a 12 -Year Period

ABSTRACT

Background and Objectives: Pediatric central nervous system (CNS) tumors are the second most common childhood malignancy after leukemias 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 in one hand, the potentially threatening nature of involving a developing system and quite vague symptoms particularly in younger children in the other hand make them more noteworthy.

Methods: We performed a case series study of space occupying tumors with the neuronal origin in Ardabil Bou' Ali children's hospital, north west of Iran. A total of 20 confirmed 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 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. Evidences 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. The two cases, one brain and one spinal tumor had not been confirmed pathologically for the parental dissent to biopsy. 8 out of 10 intracranial tumors had revealed intracranial hypertension and the 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 careful evaluating for a child with these signs or symptoms specially in the youngers who cannot probably communicate.

Keywords: Pediatric, Central nervous system tumor, Intracranial hypertension, Abducent palsy