Kuwait

The relatively high frequency of primary brain tumors (PBT) observed in childhood and adolescence in Kuwait has necessitated a epidemiological study. It is based on the records of the Department of Pathology, Al-Sabah Hospital, which examined all brain tumor biopsies done in this age group in Kuwait between 1995 and 2011. During this period, 75 boys (49%) boys and 77 (51%) girls had histologically confirmed PBT. They comprised 122 children (0-14 years) and 30 adolescents (15-19 years). The boys/girls ratio was 1.03 in childhood and 0.76 in adolescence. The age-adjusted incidence rate was 11.2/ million person-years. Early childhood (0-4 years) had the peak frequency of tumors (33%), highest adjusted age-specific incidence rate (3.8/million person-years) of all tumors and the least boys/girls rates ratio (0.38) for astrocytic tumors. Low grade and high grade tumors peaked in 5-9 and 0-4 years respectively. Risk factors (hereditary syndromes or previous radio-therapy) were identified in three patients. Three (2%) tumors were congenital. High grade tumors comprised 47% of childhood and 23% of adolescence PBT. The most common tumors in childhood were astrocytoma (37%), embryonal tumors (31%), ependymoma (8%), and in adolescence astrocytoma (27%), pituitary adenoma (23%) and glioblastoma (13%). Embryonal tumors formed 44% of PBT in early childhood. Gliomas constituted 54% and 43% of all PBT, but 25% and 57% of high grade tumors in childhood and adolescence respectively. Most common tumor locations were cerebellum (47%), ventricles (19%) and cerebral lobes (17%) in childhood and pituitary (30%), cerebellum (27%) and 13% each for cerebral lobes and ventricles in adolescence. Approximately 57% of childhood and 23% of adolescence PBT were infratentorial. In conclusion, despite the high relative frequency of PBT before the age of 20 years in Kuwait, its incidence rate is apparently low. Compared with Western countries, Kuwait has a lower incidence of high grade gliomas, but a higher frequency of cerebellar and intraventricular tumors. Embryonal tumors are remarkably common in early childhood [1].

1)

Katchy KC, Alexander S, Al-Nashmi NM, Al-Ramadan A. Epidemiology of primary brain tumors in childhood and adolescence in Kuwait. Springerplus. 2013 Dec;2(1):58. doi: 10.1186/2193-1801-2-58. Epub 2013 Feb 18. PubMed PMID: 23519270; PubMed Central PMCID: PMC3601263.