Abstract

NEUROEPIDEMIOLOGY OF BRAIN TUMOURS KENYA

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Gliomas account for more than 70% of brain tumours. Gliomas are associated with some rare inherited tumour syndromes such as Li-Fraumeni, Turcoit, von Hioppel-Lindau, Gardner and basal cell syndromes, multiple endocrine neoplasia type 1, tuberous sclerosis, neurofibromatosis 1 and 2. Gliomas have also been associated with environmental, occupational and life style factors. Irradiation has been confirmed to be a definite risk factor. Previous studies have reported lower brain tumour incidence among populations in Africa compared to Europeans.
This may be related to under-diagnosis and under-reporting in Africa. Annual global age-standardized incidence of primary malignant brain tumours is approximately 4 per 100000 for males and 3 per 100000 for females. These rates are higher in developed countries (males 6 and females 4 per 100000) than in less developed countries (3 males and 2 females per 100000).
While under diagnosis may account for lower incidence of brain tumour in developing countries, ethnic differences in susceptibility to development of brain tumours may also play a role. There are differences in the epidemiology of brain tumours in children compared to adults.
Medulloblastoma and low grade glioma are the most common type of tumours in children compared to adults where high grade glioma and meningioma are the most common type of brain tumour. In this paper, the authors review the neuroepidemiology of brain tumours in Kenya by analyzing data obtained from previous studies by the senior author and his colleagues at the Kenyatta National Hospital, between 2000 and 2011. Data from 400 patients with brain tumours who underwent surgery is presented. A comparison is done with data from similar studies done elsewhere in Africa and the rest of the world.