

Clinico-Pathologic Presentation of Malignant Orbito-Ocular Tumors in Kano, Nigeria: A Prospective Multi-Centre Study

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Background: Malignant orbito-ocular tumors are major causes of morbidity and mortality in the developing countries. They can easily be misdiagnosed without histo-pathological testing. Their presentation, morphologic type and management are challenging and earlier reports were mostly retrospective surveys. In this study, we determined the clinical presentations and histo-pathologic types of malignant tumors in Kano, Nigeria.

Methods: We conducted a prospective cross-sectional multi-centre clinical and pathologic study in four hospitals in Kano, northern Nigeria between June, 2012 and May, 2013. All the patients that presented to the hospitals and consented were enrolled for the study. Surgery was performed on all patients and histological diagnoses were obtained. Data was analyzed with STATA version 11.0.

Results: Sixty-one (61) patients comprising 43 males and 18 females (M: F= 2.4: 1) aged 6 months to 70 years were managed for malignant orbito-ocular tumours during the period. The mean was 13.4 years while median age was 4.0 years. Patients in age groups 0-4 years, 30 years and above constituted 52.5% and 21.3% respectively giving a double peak. The most common features were visual loss (90.2%), leukocoria (59%), proptosis (55%) and fungating mass (49.2%). More than 50% of the patients had a duration of symptoms for \geq 6 months before presentation to the hospital. There was unilateral involvement in fifty-five (90.2%) patients and bilateral involvement in six patients. Of the study population, 47 (77.1%) were HIV seronegative while 8 (13.1%) declined consent to do the test. All the 6 (9.8%) HIV seropositive patients were adults and had

conjunctival squamous cell carcinoma. Other tumors included: fibrosarcoma, astrocytoma and lacrimal gland tumor. The clinical diagnosis in 61 (91%) eyes correlated accurately with the histological diagnosis.

Discussion: There were more males than females in the study which is similar to other studies from Northern Nigeria^{1,2,3,4} Two peaks were observed in the age distribution, similar to a study by Sunderraj *et al* in India⁵. The early peak was due to retinoblastoma and the second peak was related to conjunctival Squamous cell carcinoma (SCC). The commonest clinical features were visual loss, leukocoria, proptosis and fungating

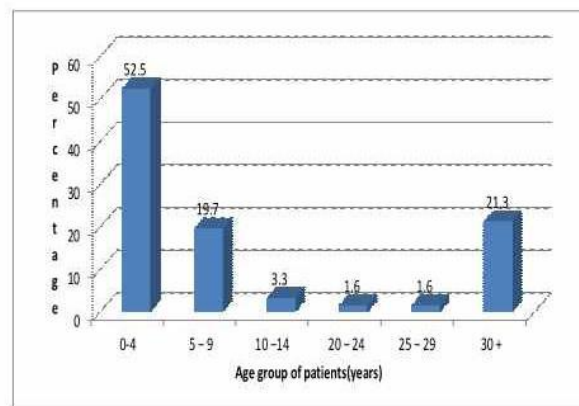


Fig. 1: Age distribution of patients with malignant orbito-ocular tumor.

Table 2: Comparison of Clinical Diagnosis with Histological Diagnosis in 67 eyes

Clinical diagnosis	Frequency (%)	Histological diagnosis	Frequency (%)
Retinoblastoma	38 (56.6)	Retinoblastoma	38 (56.6)
Squamous cell carcinoma	11 (16.4)	Squamous cell carcinoma	11 (16.4)
Rhabdomyosarcoma	6 (9.0)	Rhabdomyosarcoma	6 (9.0)
Burkitt's lymphoma	3 (4.5)	Burkitt's lymphoma	3 (4.5)
Basal cell carcinoma	2 (3.0)	Basal cell carcinoma	2 (3.0)
Metastatic tumors	2 (3.0)	Metastatic tumors	0
Neuroblastoma	2 (3.0)	Neuroblastoma	2 (3.0)
Other Tumors	3 (4.5)	Other Tumors	5 (7.5)

mass. Similar findings were reported in a study by Abdu *et al* in Kano⁶ and Fonhip *et al* in Thailand.⁷ Majority of the patients (>50%) had symptoms for six or more months before presentation. This is

similar to an earlier study in Kano ⁸. Late presentation to the hospital could be due to lack of awareness, poverty, socio-cultural belief and poor accessibility to eye care services. There is a strong association between conjunctival SCC and HIV positivity. Retinoblastoma was the most common tumor. Similar findings have been reported in studies^{1,2,9,10,11,12}. from South-West, North-East, North-West zones of Nigeria, as well as Singapore and Nepal. The second commonest tumor was conjunctival SCC; similar to studies^{2,9} from other parts of Nigeria and Singapore ¹¹

Conclusion: Retinoblastoma was the most common malignant orbito-ocular tumor observed in this study. Patients often present late to the hospital with visual loss. The clinical diagnosis correlated with histology in 91% eyes.

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