

ORBITO-OCULAR MALIGNANCIES IN MAKURDI, NIGERIA

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ABSTRACT

Orbito-ocular malignancies represent a significant cause of morbidity and mortality in Africa. This work set as its objectives as analysis of 38 histologically confirmed malignant tumor of the eye and adnexae in Makurdi, Benue State in North central Nigeria using laboratory bench book of the department of Anatomic Pathology, Benue state University Teaching Hospital, Makurdi, Benue State Nigeria between September and December, 2019. Sixty specimen were from eye and its adnexae and only 38 (63%) were orbito-ocular malignancies. The male:female was 1:1 with a peak age of incidence in the first decade and age range of 1 month to 85yrs. Squamous cell carcinoma accounted for 21 cases (55%), retinoblastoma 8 (21%) and embryonal rhabdomyosarcoma 5 (13%) were the most common malignancies. No case of lacrimal gland malignancy was seen agreeing with its rarity. Orbito-ocular malignancies are not uncommon in Benue State of Nigeria. There seem to be an upsurge in the incidents of squamous cell carcinoma of the eye and adnexae region. This may be a reflection of the high incidence and high prevalence rate of HIV/AIDS in this environment. There is an urgent need for awareness to ensure early presentation.

KEYWORD: Orbito-ocular malignancies Makurdi.

INTRODUCTION

Orbito-ocular tumors are more common in the African than in Caucasian.^[1,2,3,4] and represent a significant cause of morbidity and mortality.^[5,6,7,8]

They are primarily from the orbital and ocular tissues or spread from contiguous anatomic structures like the paranasal sinuses, nasopharynx, brain, and as secondary from distant metastasis.^[9] Though orbito-ocular malignancies are unsightly giving rise to visual disables, the African patient still present at a very late stage for medical consultations often after seeking trado-medical consultation elsewhere.^[6,10] The variation in the incidence of different types of orbito-ocular tumors within tribes in a country and between racial groups is striking and may be of etiological significance.^[10] Histopathology still remains the mainstay of accurate diagnosis of neoplastic growth for accurately knowing the incidence and variations between different orbito-ocular malignancies.

This work then set as its objective an analysis of 38 histologically confirmed malignant tumors of the eye and adnexae in Makurdi, Benue State, in North Central Nigeria.

MATERIALS AND METHOD

This study was a 7 years 4 months retrospective histopathological analysis of orbito-ocular malignant tumor seen at Department of Anatomic Pathology, Benue State University Teaching Hospital, Makurdi-Nigeria between September, 2012 and December, 2019 using the laboratory bench book.

RESULT

Four thousand, nine hundred and ninety one (4991) specimen was received at the Anatomic Pathology Department of Benue State University Teaching Hospital, Makurdi Nigeria. Out of this, sixty (60) were from eye and its adnexae constituting 1.2% of the total specimen examined during the study period and thirty eight 38 (63%) orbito-ocular malignancies.

For the orbito-ocular malignancies, the M:F was 1:1, with a peak age in the first decade (Table 1) and age range of 1 month to 85 years. Squamous cell carcinomas which accounted for 21 (55%) was the most common malignancy, Retinoblastoma, 8 (21%) and Embryonal Rhabdomyosarcoma, 5 (13%) followed (Table 2).

The anatomical pattern of distribution is shown in table 3. The common site were intraocular 18(39%), conjunctiva, 9 (24%) and orbital, 6 (16%).

Table 1: Age and Sex Distribution.

Age	Male	Female	Total
0-10	5	7	13
11-20	1	0	1
21-30	5	2	7
31-40	4	2	6
41-50	1	3	4
51-60	1	2	3
61-70	1	1	2
71-80	1	0	1
81-90	0	1	1
Total	19	19	38

Table 2: Histological types of orbito-ocular malignancies in Makurdi.

S/N	Histological type	No	(%)
1	Embryonal Rhabdomyosarcoma	5	13
2	Retinoblastoma	8	21
3	Squamous cell carcinoma	21	55
4	Non Hodgkin lymphoma	1	3
5	Anaplastic carcinoma	1	3
6	Small round blue cell tumor	1	3
7	Alveolar rhabdomyosarcoma	1	3
	Total	38	100%

Table 3: Anatomical site of presentation of orbito-ocular malignancies in Makurdi.

Anatomical site	No	%
Intraocular	18	47%
Orbit	6	16%
Conjunctival	9	24
Eyelid	9	13
Total	38	100%

DISCUSSION

Thirty eight malignant orbito-ocular tumors were analyzed during a 7 years 4 months period representing 1.2% of all specimens received at our hospital.

The equal sex distribution observed in this study is comparable to studies from Zaria,^[5] Ibadan,^[10] and Ile-Ife.^[11] but contrast with the male to female ratio of 3.4:1 from Maiduguri; North Eastern Nigeria,^[12] and 59.5% to 40.5% male to female subjects in Benin.^[13]

The first decade accounted for the occurrence of majority of malignancies of the orbito-ocular found in this study. This is in agreement with previous reports from Zaria,^[5] Ibadan,^[10] Ile-Ife,^[11] and Maiduguri.^[13]

While the first decade accounted for majority of the malignancies, another peak was noticed in the third to seventh decades. The early peak is for patients with Retinoblastoma and the second for patients with squamous cell carcinoma. These two peaks are also noted in studies from Kano.^[14] and Nepal.^[15]

The predominant site of occurrences of orbito-ocular malignancies were intraocular constituting 47%, followed by the conjunctiva 24%, orbital 16% and eyelid 13%. No case of lacrimal gland malignancy was seen. While this work agreed with the Zaria,^[5] study on intraocular site as the leading site for orbito-ocular malignancies, the conjunctiva, orbit and eye lid followed, in contrast to Zaria,^[5] with orbit, conjunctiva, eyelid and lacrimal gland. No case of lacrimal gland malignancy was seen in this study and agrees with its rarity.^[5]

Squamous cell carcinoma was the commonest tumor encountered which constituted 55% and this is followed by Retinoblastoma (21%) and Embryonal Rhabdomyosarcoma (13%). While this work agreed with the work done in Benin,^[13] with squamous cell carcinoma as the commonest orbito-ocular malignancy, followed by Retinoblastoma, it differed to several other studies from Nigeria where Retinoblastoma was reported as the most common ophthalmic malignancy.^[5,6,7,16] While all the works from Nigeria agreed that Retinoblastoma is the most common malignant tumor in children with squamous cell carcinoma, the most common malignant tumor in adults.^[7,16,17,18]

The finding in this work with squamous cell carcinoma as the commonest orbito-ocular malignancy may reflect a change due to increased incidence of HIV/AIDS.^[13] Some studies^[19,20] found HIV seropositivity in patients with squamous cell carcinoma to be 75%. The HIV status were not determined in this study, but 2 of the cases were found with HIV seropositivity.

The preponderance of Retinoblastoma, squamous cell carcinoma and Burkitt's lymphoma in that order has been reported in most Nigeria and Uganda works.^[5,10,21] and several reports from Ibadan^[18,22] as the most common orbito-ocular malignancies This work is similar to that of Ile-Ife and Zaria,^[23] where no case of orbito-ocular Burkitt's lymphoma was recorded in a ten-years study.

Rhabdomyosarcoma was the histological diagnosis 16% of cases with 13% in embryonal variant and 3% of its alveolar subtype. The average age for the embryonal type is 6 years and the only case of alveolar variant was in a 70 year old male. The 6 year average age of presentation

is similar to 7-8 years age of presentation in the Zaria work.^[23]

Unlike in most African series.^[7,18,22,24,25] the only orbital Non-Hodgkin lymphoma was non-Burkitts and of intermediate grade. There was no metastatic tumor in this work. This is contrary to reports from the US where metastatic tumors were the second commonest ocular malignancy with the breast and lungs as commonest primaries.^[23,26]

CONCLUSION

Orbito-ocular malignancies are not uncommon in Benue state of Nigeria. There seems to be an upsurge in the incidence of squamous cell carcinoma of the orbito-ocular region. This may be a reflection of the increased incidence of HIV/AIDS in this environment with a high HIV/AIDS prevalence rate. There is an urgent need for awareness to ensure early presentation.

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