

Orbito-ocular malignancies in Maiduguri, North Eastern Nigeria: A Histopathologic Review

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Citation

B Askira, H Nggada. *Orbito-ocular malignancies in Maiduguri, North Eastern Nigeria: A Histopathologic Review*. The Internet Journal of Ophthalmology and Visual Science. 2006 Volume 5 Number 1.

Abstract

Purpose: To review the histopathologic pattern of orbito-ocular malignancies in University of Maiduguri Teaching Hospital, Maiduguri between January 1991 and December 2005.

Methods: A retrospective study of surgical pathology of 39 histologically confirmed orbito-ocular malignancies seen over a period of 15 years were done.

Results: There were 28 males and 11 female. The male to female ratio was 2.5:1. The most common orbito-ocular malignancy seen was retinoblastoma accounting for 48.71%. The vast majority (94.7%) of retinoblastoma cases seen were in the age group 5 years and below.

Conclusion: The number of orbito-ocular surgical pathology seen over the period of study (15 years) was relatively small. However, the pattern of orbito-ocular malignancies compares very well with other studies in Nigeria and other parts of the world.

INTRODUCTION

The eye as an organ of vision when lost confers a severe disability. Left untreated, orbito-ocular malignancies threaten not only a person's vision, but his life as well. Prompt diagnosis and appropriate intervention modalities are mandatory if life and vision are to be saved. The relative prevalence of these malignancies varies in different age groups and populations. The purpose of this study was to review the histopathological pattern of orbito-ocular malignancies in our institution.

MATERIALS AND METHODS

This is a retrospective study of 39 cases of orbito-ocular malignancies in the University of Maiduguri Teaching Hospital between the periods of January 1991 and December 2005. The medical records of all the patients who had orbito-ocular malignancies were retrieved and reviewed. The duplicate copies of all histological reports and their corresponding original slides were retrieved and reviewed in the histopathology department for histological diagnoses. The specimens were fixed in 10% formaldehyde solution and stained with haematoxylin and eosin (HE). Information

about the sex and age were extracted from the request forms. The results were displayed in tables and analyzed by simple statistical methods.

RESULTS

There were a total of 2760 malignancies histologically diagnosed between 1991 and 2005. Of these, 39(1.4%) were orbito-ocular malignancies. There were 28(71.79%) and 11(28.21%) females. The male to female ratio was 2.5:1. Table I shows the frequency distribution of 39 orbito-ocular malignancies seen at the University of Maiduguri Teaching Hospital. The most common orbito-ocular malignancy seen at this center was retinoblastoma accounted for 19 (48.7%). Others includes Squamous cell carcinoma, 8 (20.5%) cases; melanoma, 3(7.7 %) cases.

Of the 19 cases of retinoblastoma seen, 18(94.7%) were seen in the age group 5 years or less. There were 12 males and 7 females. The age and sex distribution of 19 retinoblastoma cases are as shown in table II.

Figure 1

Table 1: Frequency distribution of orbito-ocular malignancies

Histopathologic Diagnosis	Frequency	Percentage (%)
Retinoblastoma	19	48.7
Squamous cell carcinoma	8	20.5
Malignant melanoma	3	7.7
Adenocarcinoma	1	2.6
Burkitts lymphoma	1	2.6
Neuroblastoma	1	2.6
Malignant histiosarcoma	1	2.6
Plasmacytoma	1	2.6
Non Hodgkins lymphoma	1	2.6
Conjunctival carcinoma	1	2.6
Karposis sarcoma	1	2.6
Rhabdomyosarcoma	1	2.6
Total	39	100

Figure 2

Table 2: Age and sex distribution of retinoblastoma cases in Maiduguri.

Age (years)	Male	Female	Total No.	Percentage (%)
< 5	11	7	18	94.7
6 – 10	0	0	0	0.0
11 – 15	1	0	1	5.3
Total	12	7	19	100

DISCUSSION

In this study, there were only 39 histologically confirmed orbito-ocular surgical pathology entries. Abiose, et al₁ in Kaduna reported a larger series of 237 cases over eight year period. Kaduna is much older and larger center than our center. There was equally a well established referral system to Kaduna and these might have influenced the large number of cases seen.

Studies in Ibadan₂ and Benin₃ reported series of 225 and 93 cases respectively. However these studies can not be favorably compared with our series, because these studies were on all orbito-ocular diseases.

Retinoblastoma is the most common intra ocular malignancy. Bekibele and Oluwosola₂ in Ibadan reported retinoblastoma constitute 57.3% of all orbito-ocular malignancies. Onwasigwe₄ in Enugu reported 38.1%. Ezegwui et al₅ reported 56.1% in Eastern Nigeria. Chakrabarti₆ reviewing 69 cases of orbito-ocular malignancies in North Bengal reported retinoblastoma was the commonest orbito-ocular malignancies accounting for 65%. In this study, retinoblastomas constitute 48.7% of all orbito-ocular malignancies seen. This compares very well

with other studies_{2,4,5,6} in Nigeria and other parts of the world.

Ninety four point seven percent of all retinoblastoma cases seen in this study were below the age five years. This finding correlates very well with the assertion that, retinoblastoma is believed to have a prenatal origin, because the peak age incidence for their occurrence is soon after birth₇. The average age at diagnosis is 18 month and the vast majority becomes clinically apparent before the age of 3 years₈. Ajaiyeoba et al₉ reported that, the median age of children with retinoblastoma at the time of on set of symptom was 15 months.

The second most common orbito-ocular malignancy seen in this study was squamous cell carcinoma. It was seen in 20.5% of the cases reviewed. This correlates very well with 16.9% and 18% by Ochicha et al₁₀ in Calabar and Umar in Zaria₁₁ respectively. Squamous cell carcinoma occurs most commonly in elderly individuals₈. The median age of patients with squamous cell carcinoma in this study was 59.7 years.

There was a low prevalence of Burkitts lymphoma in this study. It was seen in 2.56%. Umar₁₁ in Zaria reported 4.5%. These findings were in variance with reports from Southern parts of this country. Ochicha et al₁₀ in Calabar reported 18.55%, Olurin₁₂ in Ibadan 21.4% and Olasimbo₁₃ in Lagos 26.9%. The known predisposing factors such as malaria and malnutrition are similar in both regions. Further studies are required to elucidate the reason for the disparity in reported figures.

In conclusion retinoblastoma is the commonest orbito-ocular malignancies in our environment and majority are seen in children less than 5 years of age. There is the need to educate the general populace on the early signs of retinoblastoma. If retinoblastoma is detected early, life and perhaps useful vision can be saved.

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