ORBITO-OCULAR LESIONS IN SAGAMU, NIGERIA

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ABSTRACT

The orbit is the cavity or socket of the skull in which the eye and its appendages are situated[1]. Orbital lesions form a significant cause of morbidity and mortality in our environment, but their incidence, site distribution and pathological profiles vary both globally and regionally[2,3,4,5,6,7]. ,due to varying local endemicity of pathogens[8] as well as accessibility of quality medical facilities. The aim of this study is to analyse in retrospect records of the orbito-ocular lesions seen at the OlabisiOnabanjo University Teaching Hospital (OOUTH) Sagamu, Nigeria pathology department between 2003 and 2012 by demographic patterns and compare with patterns seen both regionally and globally.

Keywords: Orbit, ocular, lesions

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INTRODUCTION

The orbit is the cavity or socket of the skull in which the eye and its appendages are situated[1]. Orbital lesions form a significant cause of morbidity and mortality in our environment, but their incidence, site distribution and pathological profiles vary both globally and regionally[2,3,4,5,6,7]. The aim of this study is to analyse in retrospect records of the orbito-ocular lesions seen at the OlabisiOnabanjo University Teaching Hospital (OOUTH) Sagamu, Nigeria pathology department between 2003 and 2012 by demographic patterns and compare with patterns seen both regionally and globally.

Materials and Methods

Pathology records at the Olabisi Onabanjo University Teaching Hospital between the years 2003-2012 were analysed by age, gender and site distribution as well as pathological diagnoses. The results were then compared with what obtains in other places, both locally and internationally.

Results

In the study period(2003-2012) 88 cases of orbito-ocular lesions were seen at the department of pathology at OOUTH comprising 45(51%) males and 43(49%) females with a male:female ratio of 1.05:1. Similarly the ages of the patients ranged between 10months and 87yrs with the majority of the cases(72%) occurring in children and young adults 40yrs and below(table 1)

Age(yrs)	Male	Female	Total	%
0-10	6	8	14	15.9
11-20	5	6	11	12.5
21-30	9	5	14	15.9
31-40	14	9	23	26.1
41-50	3	4	7	8.0
51-60	7	4	11	12.5
61-70	0	5	5	5.7
71+	0	2	2	2.3
Age not indicated	1	0	1	1.1
Total	45	43	88	100.0

Also the site distribution shows that majority of the lesions are located on the globe(75%) while most of the latter are also located on the conjunctiva(76%) The pathological diagnoses are equal between neoplastic and non-neoplastic lesions(44 cases each)while among the neoplastic lesions the majority are benign(61.4%). Majority of the benign neoplastic lesions are squamous papillomas(81%); others are benign nevus(11%) and haemangiomas. Most of the malignant neoplastic lesions were squamous cell carcinomas and were

diagnosed in adults aged between 29yrs and 87 yrs while the malignant lesions in children were all retinoblastomas diagnosed in those aged 13monts to 12yrs.(Table 2). The benign non-neoplastic lesions were pterigia(6), dermoid and epidermoid cysts(6) while others included granulation tissues and other inflammatory conditions like panophthalmitis as well as eyes enucleated due to haemorrhage or trauma.

Site distribution and pathological diagnoses

Site	number	Site/number	Site/number
Ocular	66	Conjunctiva 50	Non conjuctival 16
Extra-ocular	8		
Benign lesions	71	Malignant lesions	17
Neoplastic	44	Non-neoplastic	44

Pathological Features

The enucleated eyes in retinoblastoma showed typical grey-yellow firm, sometimes partly necrotic endophytic tumours when still confined to within the eye(Fig 1). On histological examination, the tumour shows sheets of round to oval or sometimes cigar to carrot shaped small blue cells forming rossettesor pseudo-rossettesin areas (Fig 2)

Images

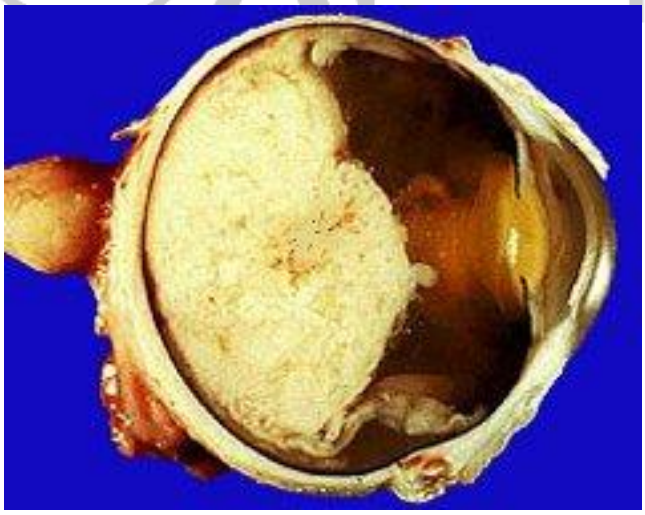

Fig 1 Section through the eyeball showing a grey-yellow endophytic retinoblastoma

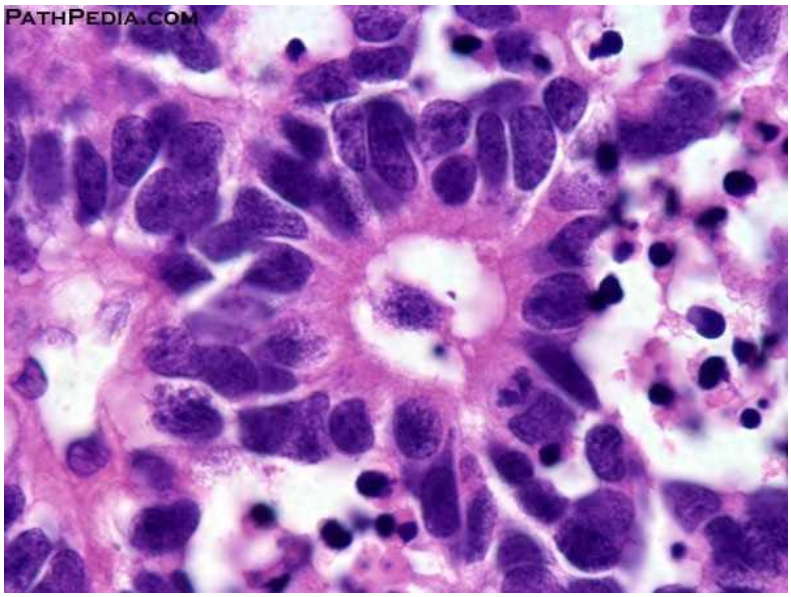

Fig 2 Typical cigar to carrot shaped small blue cells of Retinoblastoma forming rossettes

Discussion

The preponderance of male sex in this study compares with other studiesby C. O. Bekibele and A. O. Oluwasola[5] in Ibadan, Nigeria. and the series by Ifeyinwa et al[7].Inflammatory and non-neoplastic lesions continue to contribute significantly to space occupying orbital lesions as noted in the various local and international studies[2,3,4,5,6,7,8]. Idiopathic Orbital Inflammatory Disease, or orbital pseudotumor, refers to a marginated mass-like enhancing soft tissue involving any area of the orbit. It is the most common painful orbital mass in the adult population, and is associated with proptosis[8]However this study which shows that 80.7% of the cases were benign is more than other previous studies cited, for instance in the series by Bonavolontà G et al[9] 68% were benign. This may be explained by the fact that other modalities for investigation like imaging studies are more readily assessed in developed countries and inflammatory lesions which could be treated non-surgically would easily be eliminated from biopsy. The predominance of squamous cell carcinoma among the malignant cases compares with the study by Ifeyinwa et al[7] but differs from the series by Anunobiet al[4]where they found retinoblastoma as the predominant malignant diagnosis. Retinoblastomas however continue to be the predominant malignant orbital tumour in childhood while squamous cell carcinoma is the predominant diagnosis made in adults [10]. It is noteworthy however that many of the cases of ocular squamous cell carcinoma in this study were seen in patients less than 60yrs of age in contrast to the study byBonavolontà G[1] et al[9] where the majority of cases were in those over 6oyrs. Although the HIV status of the patients were not recorded, an association of HIV infection with surface squamous cell carcinoma of the conjunctiva was cited in cases in sub-Saharan Africa and Nigeria.[11,12]

CONCLUSION

The lack of adequate imaging studies contribute to the preponderance of benign lesions in pathological samples from developing African countries, in advanced countries such would have been positively diagnosed and treated non-srgically.[13,14]

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