

# Orbital lymphoma in a developing community

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## Abstract

Orbital lymphoma is variably defined but refers collectively to the eyeball. Single case reports have appeared in the literature. Therefore, three cases are reported here from the Ibo ethnic group in Nigeria on the basis of using the recommendation that the histopathology data pool facilitates epidemiological analysis.

**Key words:** Eye; lymphoma; Ibo; age; sex; reference laboratory;

## Introduction

Orbital lymphoma has been defined differently in the terms of (i) "a lymphoma occurring in the conjunctiva, lacrimal gland, eyelid and ocular musculature" (1), (ii) "infiltration of malignant lymphoid cells of the uveal tract, retina vitreous or optic nerve head, in the absence of systemic lymphoma" (2), and (iii) "a subset ... in which lymphoma cells invade the sub retinal pigment epithelial spaces and vitreous cavity with or without central nervous system involvement at the time of ocular diagnosis" (3). Now, typical single cases have been reported from Nepal (4) and Turkey (5). Therefore, affected patients of the Ibo ethnic group (6), who are domiciled in the South Eastern Region of Nigeria, are deemed to be worthy of documentation.

## Investigation

Birmingham (UK) associates keenly pointed out that the establishment of a histopathology data pool facilitates epidemiological analysis (7). Such a pool established at Enugu, erstwhile capital of Eastern Region of Nigeria, was headed by this author who insisted on variegated surgical specimens being submitted with useful data. Accordingly, the cases satisfying these requirements are documented here.

## Case Reports

1. NU, a 54-year-old female was seen by Dr Asobie with the complaint of right proptosis increasing gradually for one year. Orbital tumor or lipoma was queried. Surgical biopsy was undertaken. The finding was of a fleshy growth like fat. A 4 cm cystic mass resembling the eye ball but devoid of the optic nerve as well as six fatty masses between 2 cm to 4 cm were submitted in formal saline. On section, the cavity showed suspicious whitish growths around the anterior chamber with hemorrhagic and necrotic areas. On microscopy, although fat was present with some skeletal muscle, there was

frank malignancy. Tumor cells of the lymphoid series grew in sheets, invading and replacing fat. Neither giant cells nor the starry-sky appearance was found. An associated abscess was noteworthy. Accordingly, non-Hodgkin's lymphoma was diagnosed.

2. JC, a 35-year-old male presented to Dr Okoro at the Presbyterian Joint Hospital, Uburu, with the history of both panophthalmitis and evisceration having been noted elsewhere some 2 months previously. Surgical biopsy was undertaken. However, there was regrowth of friable purulent lesions with thickened optic nerve. Therefore, enucleation was performed with partial excision of the optic nerve. Unfortunately, in a narrow-necked, dark-colored diminutive bottle, there was a difficult to retrieve 1.5 cm elongated piece. This was multisectioned for routine processing. On microscopy, no normal tissue was recognized. Rather, sheets of round variform tumor cells, which did not manifest rosettes or other differentiating elements, were identified as malignant lymphoma.
3. EC, a 8-year-old boy, presented at the Orthopedic Hospital, Enugu, to Dr Achebe with the complaint of swelling of the left upper eyelid of 4 months duration. This rapidly increased in size to cover the whole eye. There was spontaneous bleeding. X-Ray shows local invasion without intracranial extension. Exenteration was performed and rhabdomyosarcoma was queried. The eye and lids as well as growths were incised from below in order to preserve the specimen for museum purpose. On microscopy, skeletal muscle and fat were being replaced by round hyper chromatic tumor cells in the diffuse manner typical of malignant lymphoma.

## Discussion

The ages of 8,35, and 54 years (mean 32) occurred locally. These were compared with the literature findings. Thus, from the US, patients ages ranged from 35 to 94 years (median 68) (8), another group being aged 32-89, with median age of 69 years (9). From Germany, the comparative data ranged from 42 to 88 years with median age of 57.7 years (10). Moreover, from India, the range was 24 - 70 years with median age of 55 years (11). Accordingly, younger patients were involved in this developing community.

Concerning sex, the Spanish ratio was 5 women to 4 men (12). Similarly, the USA cohort came close as 24 women to 23 men (13).

Accordingly, the close ratio in the local data is in tune with the world patterns.

Attention may be drawn to the title which Nepal authors used, i.e., "elderly patient." This turned out to be only 49 years old (4). In this context, this is of interest, seeing that, elsewhere (14), the author drew attention to the problem of who is "elderly?"

In conclusion, let us hear from the group from Belgium (15). "Although treatment does not substantially improve the long term survival, it provides short term improvement in these patients." One article provided an overview of treatment modalities for initial recurrent and relapsed cases (16). Megavolt radiation was preferred (17). While this was combined with chemotherapy (18,19). When relapse occurred, follow-up is the answer (20). Incidentally, the clinical outcome of the local cases was not known because in the circumstance of an underdeveloped system, all that was required is the provision of only the microscopically diagnosis.

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