CONJUNCTIVAL REACTIVE EPITHELIAL HYPERPLASIA IN A BLACK AFRICAN PATIENT– A CASE REPORT

Adedolapo Olaopa[*], **Yordanka Angelova**[◊], **Olaejirinde Olaniyi Olaofe**[**], **O I Akintoye**[*] **and Caroline Olufunlayo Adeoti**[*,1]
[*]Department of Ophthalmology, Ladoke Akintola University of Technology Teaching Hospital, Osogbo, Nigeria., [**]Department of Morbid Anatomy and Parasitology Ladoke Akintola University of Technology Teaching Hospital, Osogbo, Nigeria., [◊]Department of Ophtalmology, MBAL Rousse, Rousse, Bulgaria.

ABSTRACT

Background: Reactive hyperplasia can occur in any part of the body but of concern is occurrence adjacent to specific neoplasms such as cutaneous fibrous histiocytoma, granular cell tumour, Spitz nevus and melanoma. Ocular reactive epithelial hyperplasia is not as common as ocular reactive lymphoid hyperplasia. This is the first reported case in our environment. The patient was concerned about his cosmetic appearance, comments of friends and fear of eye problem in future. **Case summary:** We report the case of a 32-year-old patient with painless, progressive swelling of the conjunctiva following a stone injury to the eye while on a bike five years earlier. A traumatic conjunctival cyst to rule out melanoma was the initial diagnosis. We, therefore, managed the case by excision biopsy and histology report was in keeping with conjunctival reactive epithelial hyperplasia. One year after removal, he was free of any swelling and had no complaints. **Conclusion:** Excision biopsy is adequate, and it will assist in ruling out neoplasm and taking care of the patient's cosmetic problem.

KEYWORDS conjunctiva, epithelial, reactive, hyperplasia, trauma, histology, excision biopsy, black, African

Introduction

Hyperplasia refers to increase in the number of cells in response to specific stimuli. It could be physiological or pathological. Pathological cases are a result of excess hormone or growth factor.

Reactive hyperplasia comprises a group of fibrous connective tissue lesion that can occur in any part of the body such as oral mucosa, [1] lymph nodes, [2, 3] the eye [4, 5, 6] or could be adjacent to certain neoplasms such as cutaneous fibrous histiocytoma, granular cell tumour, Spitz nevus and melanoma.

Pathophysiologically, they comprise of chronic inflammation which produces granulation tissue with endothelial cells and chronic inflammatory cells. Fibroblastic proliferation later follows it which can then manifest as overgrowth.

These tumour-like growths are not neoplastic. They clinically present as well demarcated exophytic masses with their colour ranging from normal to red. In the eye, reactive hyperplasia occurs mostly as the lymphoid type found in the choroid, four ocular surfaces,[5] and retina where it occurs commonly in the retinal pigment epithelium.[6] They usually present clinically as well demarcated exophytic masses with colour ranging from normal to white or reddish. They can be soft or firm on palpation.

Histologically, they present as masses of hyperplastic connective tissue with dilated blood vessels usually with chronic inflammatory cells such as lymphocytes and plasma cells. The surface epithelium ranges from normal to acanthotic, ulcerated

DOI: 10.5455/ijsm.conjunctival-reactive-epithelial-hyperplasia
First Received: May 30, 2017
Accepted: August 23, 2017
Manuscript Associate Editor: Pavel Ninov (BG)
Editor-in-chief: Ivan Inkov (BG)

[1]Department of Ophthalmology, College of Health Sciences, P.O Box 979, Osogbo, Osun state, Nigeria.
Phone number: 2348033742827
Email: caroladeoti2001@yahoo.co.uk

or keratotic. The management can be by excision biopsy with removal of local irritants to prevent recurrence.[7] or intra-lesional infiltration with bevacizumab.[8] We present a rare case seen in our hospital for the first time and managed with excisional biopsy rather than intra-lesional bevacizumab as done by others.[8] Informed consent was obtained from the patient, and the ethical committee of our teaching hospital approved the study protocol.

Case Report

We present a 32-year-old black patient, a vulcaniser who was apparently well until 5years before a presentation when he noticed a swelling in his right eye following a stone injury while on a motorbike. The swelling progressively increased in size and was not associated with any other swelling elsewhere in his body. He was concerned about the frequent comments of his friends who advised him to go to the hospital for treatment to prevent future sight problems. There was no pain, redness, discharge or blurring of vision. There was no history of spectacle use or ocular surgery. He was not hypertensive or diabetic. Ocular examination revealed a visual acuity of 6/5 in both eyes. The lids were mostly normal. There was a cystic, pedunculated and mobile mass which was not tender, in the conjunctiva of the nasal part of the right eye. This mass was brownish red in its superonasal part (Figure 1). All other parts of the eye were normal. Slit-lamp biomicroscopic examination revealed a conjunctival mass with feeding vessels. The intraocular pressures were 18mmHg in both eyes. A tentative diagnosis of the right traumatic conjunctival cyst was made. Based on the cosmetic problem, worries of the possibility of neoplastic lesions and to make a definitive diagnosis, an excisional biopsy was done. The specimen was sent for histology which revealed that the tissue was covered by epidermal type epithelium which was markedly thickened and appears to have trapped portions of the dermis which contained vascular channels many of which were congested. The subjacent dermis was loose and had extensive areas of haemorrhage. A histological diagnosis of reactive epithelial hyperplasia was made. (Figure 1) One year after surgery, the patient was happy and had no complaints. There was slight conjunctival pigmentation, but there was no swelling. (Figure 2)

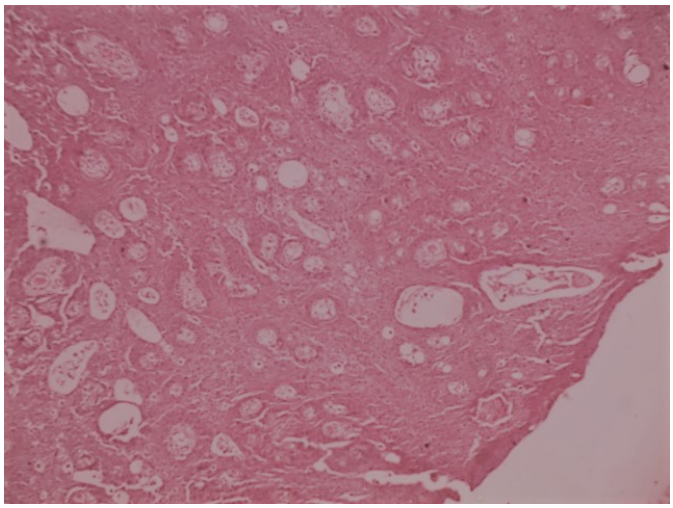

Figure 1: Haematoxylin and Eosin strain.

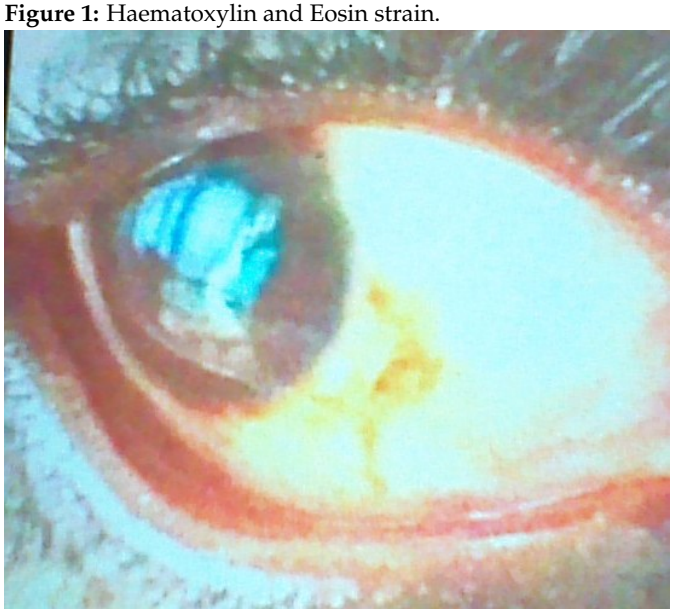

Figure 2: Eye one year after surgery.

Discussion

Hyperplasia which refers to increase in the amount of tissue as a result of proliferation may be due to some causes such as trauma, chronic inflammatory response and hormonal dysfunctions in any part of the body. It is not neoplastic but may progress even after treatment to neoplasia, thus necessitating prolonged follow up of patients. They may also be found adjacent to certain neoplasms such as cutaneous fibrous histiocytoma, granular cell tumour, Spitz nevus and melanoma. Ocular reactive hyperplasia is not very common when compared with oral mucosa lesions. This is because the oral mucosa is constantly exposed to external and internal stimuli resulting into a variety of diseases.[1] Reactive lymphoid hyperplasia has been widely reported contrary to reactive epithelial hyperplasia. Of 192 conjunctival specimens examined by Laila, reactive lymphoid hyperplasia was found in 2.1% of cases. Stephen et al. reported only 2 cases of benign lymphoid hyperplasia. However, in an ocular oncology unit of Valladolid University hospital, 39.9% of conjunctival tumours were of epithelial in origin. How many of these were reactive epithelial hyperplasia is not known. Most cases of conjunctival swellings managed with excision biopsy in literature turned out to be reactive lymphoid hyperplasia. Intra-lesional infiltration with bevacizumab also proved effective.[8, 9] However, reactive epithelial hyperplasia in the cornea after photoreactive keratectomy in a patient with keratoconus who had previously been implanted with intrastromal corneal ring segment has been reported.[10] This was successfully managed with mechanical epithelial debridement, mitomycin C and amniotic membrane (AM). Hyperplastic lesions are not neoplastic, but some cases of recurrence especially hyperplastic lymphoid hyperplasia have been reported to be malignant.[11] We report the first case of reactive epithelial hyperplasia managed with excision biopsy in this environment. Intra-lesional bevacizumab was not tried because of its scarcity and cost. The eye remained free of any swelling one year after surgery. Therefore, excision biopsy is advocated for cases like this rather than intra-lesional bevacizumab which is scarce and very expensive in our environment. We intend to follow up this patient for as long as possible.

Conclusion

Conjunctival reactive epithelial hyperplasia can be successfully managed with excision biopsy to allay the fears of the patient and the doctor.

Disclosure Statement

There were no financial support or relationships between the authors and any organization or professional bodies that could pose any conflict of interests.

Competing Interests

Written informed consent obtained from the patient for publication of this case report and any accompanying images.

References

1. Effiom OA, Adeyemo WL, Soyele OO. Focal reactive lesions of the gingival; An analysis of 314 cases at tertiary health institution in Nigeria. Niger Med J. 2011; 52: 35-40.

2. B. Castleman, L. Iverson, V.P. Menendez. Localized mediastinal lymph node hyperplasia resembling thymoma. Cancer, 9 (1956), pp. 822–830.

3. Stephen D. Mcleod, Deepak P. Edward. Benign Lymphoid Hyperplasia of the Conjunctiva in Children. Arch Ophthalmol. 1999;117(6):832-835.

4. Ahmed A Hidayat, Glenn C Cockerham, Karen E Bijwaard, Zong-Mei Sheng, Karen E Bijwaard, Re-evaluation of "reactive lymphoid hyperplasia of the uvea An immunohistochemical and molecular analysis of 10 cases. American academy of Ophthalmology. 2000; 107 (1): 151-158.

5. Martina C. Herwig, Jana Fassunke, Sabine Merkelbach-Bruse, Frank G. Holz, Hans-Peter Fischer, Karin U. Loeffler. Reactive lymphoid hyperplasia of the ocular surface: clinicopathologic features and search for infectious agents. Acta Ophthalmologica. 2012; 90(4): e331-e332.

6. Timothy W. Olsen, William C. Frayer, Frank L. Myers, Mathew D. Davis, Daniel M. Albert. Idiopathic Reactive Hyperplasia of the Retinal Pigment Epithelium. 1999; 117(1): 50-54.

7. Jose L. Guell, Merce Morral, Oscar Gris, et al. Management of epithelial hyperplasia after photorefractive keratectomy on a corneal with intrastromal corneal ring segments. Br J Ophthalmol 2010; 94: 1547-1548.

8. Siegelman J Jakobiec FA. Lymphoid lesions of the conjunctiva: relation of histopathology to clinical outcome. Opthalmology. 1998; 85818 – 843.

9. Oh DH, Chun YS, Kim JC. A case of ocular benign lymphoid hyperplasia treated with bevacizumab injection. 2011; 25(1): 57-59.

10. Jose L Güell, Merce Morral, Oscar Gris, et al. Management of epithelial hyperplasia after photoreactive keratectomy on a cornea with intrastromal corneal ring segments. Br. J Ophthalmol. 2010; 94:1547-1548.

11. Jo, Young-Joon Park, Chang-Jun Lee, Sung-Bok. A Case of Ocular Adnexal Benign Reactive Lymphoid Hyperplasia Recurred as Systemic Malignant Lymphoma. Journal of the Korean ophthalmological society. 2007; 48 (12): 1711-1715.