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EC OPHTHALMOLOGY
Perspective

Bilateral Keratitis Associated with Protein Energy Malnutrition

Gaurav Gupta[1], Jitender Jinagal[2]* and Jaivinder Yadav[3]

[1]*Advanced Eye Centre, Post Graduate Institute of Medical Education and Research, Chandigarh, India*

[2]*Department of Ophthalmology, Government Medical college and Hospital, Chandigarh, India*

[3]*Department of Pediatrics, Post Graduate Institute of Medical Education and Research, Chandigarh, India*

***Corresponding Author:** Jitender Jinagal, Assistant Professor, Department of Ophthalmology, Government Medical College and Hospital, Chandigarh, India.

Received: May 30, 2019; **Published:** June 26, 2019

Abstract

A 6-years old Indian female child presented with severe photophobia and not able to open her eyes in bright light. There was no history of trauma. She had visible epithelial defect in both the eyes and presence of full thickness yellowish infiltrates in right eye, suggestive of bilateral keratitis. On general physical examination, the child was malnourished, had generalized loss of subcutaneous fat and hollowing of supraclavicular fossa. She had signs of micronutrient deficiency as well. Child was managed with broad spectrum topical antibiotics and dietary supplements for malnutrition. Protein-energy malnutrition is not an uncommon entity in developing countries due to poor socio-economic status and its severity has previously been related significantly to the occurrence of bilateral keratitis. Improved nutritional status of children can prevent the occurrence of keratitis in this age group.

Keywords: *Bilateral Keratitis; Protein Energy Malnutrition*

Photo Essay

A 6 years-old-Indian female child, presented with complaints of both eye painful decreased vision, which was associated with discharge. There was no history of trauma. On ocular examination, her visual acuity was counting fingers in both the eyes. Patient had severe photophobia and was not able to open her eyes in bright light. She had visible epithelial defect in both the eyes and presence of yellowish infiltrates which were involving the full thickness of corneal stroma in right eye (Figure 1A). These findings were suggestive of bilateral keratitis. On general physical examination, the child was malnourished with weight for age of 13 kgs (-2.41 Z score), height of 110 cm (-0.61 Z) and BMI of 10.74 kg/m^2 (-3.34 Z) according to IAP-2015 growth charts. She had generalized loss of subcutaneous fat and hollowing of supraclavicular fossa (Figure 1B). She had signs of micronutrient deficiency in form of pallor, angular cheilitis, dry skin, frontal alopecia, easily pluckable hair, skin hyperpigmentation and nail changes among others. Parents did not give any history of immunization. For keratitis, corneal scrapping was sent for microbiology which came out to be negative. So, Child was managed with broad spectrum topical antibiotics. Simultaneously patient was given dietary supplements for malnutrition. Keratitis resolved completely during follow up resulting in corneal opacity. Protein energy malnutrition is not an uncommon entity in developing countries due to poor socio-economic status. Bilateral keratitis can occur in these cases due to poor healing capacity and being more prone to infections [1]. The severity of protein-energy malnutrition have previously been related significantly to the occurrence of bilateral keratitis [2]. Additionally, lack of immunization further increases the risk of development of keratitis in these cases [3]. Improved immunization profile and the nutritional status of children can prevent the occurrence of keratitis in this age group.

Figure 1: *1A: Slit lamp photographs showing presence of epithelial defect in both the eyes with yellowish infiltrates involving corneal stroma in right eye. 1B: Clinical photograph of patient showing generalized loss of subcutaneous fat and hollowing of supraclavicular fossa; dry looking skin, frontal alopecia and skin hyperpigmentation.*

Financial Support

No financial disclosures

Conflict of Interest

No conflicting relationship exists for any author.

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Volume 10 Issue 7 July 2019