Medora: Medical Sciences

ISSN (Online): 3139-1400 | CC BY 4.0 | Erudexa Publishing

Vol 2, Issue 3, July – September, 2026

Received	29-Apr-26	Accepted	30-June-26
Revised	12-June-26	Published	07-July-26
DOI	https://doi.org/10.5281/zenodo.21246604		

Unilateral Bitot's Spot in a Young Adult Male: A Case Report

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Abstract

Background

Bitot's spot is a characteristic ocular manifestation of Vitamin A deficiency. It appears as a triangular, foamy, whitish lesion on the bulbar conjunctiva and is considered an important indicator of xerophthalmia.

Case Presentation

A 25-year-old male with a chief complaint of irritation in the left eye for the past two weeks. There was no history of trauma, redness, watering, or diminution of vision. Visual acuity was 6/6 in both eyes. Anterior and posterior segment examinations were normal except for a foamy, triangular, whitish lesion observed on the temporal bulbar conjunctiva of the left eye during slit-lamp examination.

Diagnosis: Based on clinical findings, a unilateral Bitot's spot secondary to vitamin A deficiency was diagnosed.

Management and Outcome: The patient was advised to take vitamin A supplementation, make dietary modifications, use ocular lubricants, and undergo follow-up evaluation.

Conclusion

This case highlights the importance of detailed slit-lamp examination in identifying early signs of nutritional deficiencies and emphasizes the role of eye care practitioners in timely diagnosis and referral.

Keywords: Bitot's spot, Vitamin A deficiency, Xerophthalmia, Bulbar conjunctiva, Case report

Introduction

Vitamin A is an essential fat-soluble vitamin required for maintaining normal vision, epithelial integrity, immune function, and ocular surface health [1]. Deficiency of Vitamin A remains a significant public health concern in developing countries and can lead to a spectrum of ocular manifestations collectively known as xerophthalmia [2].

Bitot's spot is one of the earliest visible signs of Vitamin A deficiency. It presents as a superficial, triangular, foamy, keratinized patch on the bulbar conjunctiva, usually located temporally [3]. Early detection is crucial to prevent progression to more severe ocular complications, including corneal ulceration and blindness.

Case presentation

Patient Information

Age: 25 years

Gender: Male

Occupation: Student

Chief Complaint: Irritation in the left eye

History of Present Illness

The patient reported mild irritation and foreign body sensation in the left eye for approximately two weeks. There was no history of trauma, redness, discharge, photophobia, watering, or visual disturbances.

Ocular Examination

Visual Acuity

PGP- NIL								
VISUAL ACUITY								
EYE	Distance Vision	With Pinhole	Near Vision	Cm				
OD	6/6 P	6/6	N6	40 cm				
OS	6/6 P	6/6	N6	40 cm				
AUTO REFRACTION								
EYE	SPHERE	CYLINDER	AXIS					
OD	-0.25							
OS	-0.25							
SUBJECTIVE REFRACTION / ACCEPTANCE								
	DISTANCE				ADD	ACCEPTANCE		
EYE	Dsph	Dcyl	Axis	BCVA	Dsph	BCVA	Cm	PREFERENCE
OD	+0.00	-	-	6/6	+0.00	N6	40	Plano
OS	+0.00	-	-	6/6	+0.00	N6	40	Plano

External Examination

Examination	OD	OS
Lid	Normal	Normal
Conjunctiva	Normal	Presence of a triangular, foamy, whitish lesion on the temporal bulbar conjunctiva consistent with Bitot's spot
Cornea	Clear	Clear
Anterior Chamber	Deep & Quite	Deep & Quite
Iris	Normal	Normal
Pupil	RRR	RRR
Lens	Clear	Clear
Ocular Movement	Full	Full

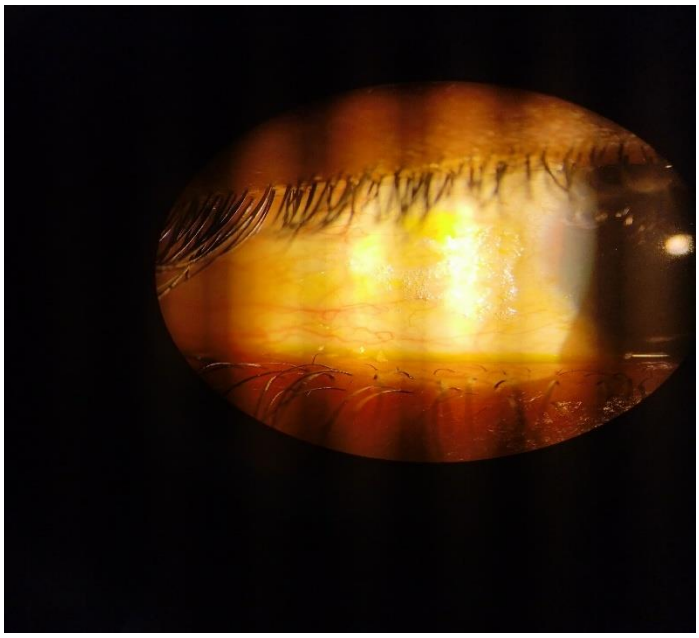

Figure 1. Slit-lamp photograph of the left eye (OS) showing a characteristic triangular, foamy, whitish lesion on the temporal bulbar conjunctiva consistent with Bitot's spot. Image captured using a Motorola Edge Pro smartphone camera.

Posterior Segment Examination

Normal findings in both eyes

Diagnosis

Unilateral Bitot's Spot (Left Eye)

Management

The patient was advised:

- Oral vitamin A supplementation as per physician recommendation
- Dietary counselling to increase intake of vitamin A-rich foods such as carrots, green leafy vegetables, eggs, and dairy products
- Lubricating eye drops for symptomatic relief
- Referral for systemic evaluation and nutritional assessment

Follow-up

At follow-up after 2–4 weeks, the patient reported symptomatic improvement with reduction in ocular irritation. Regression of the conjunctival lesion was monitored clinically.

Discussion

Bitot's spots are keratinized plaques formed due to squamous metaplasia of the conjunctival epithelium associated with Vitamin A deficiency. They typically appear as dry, foamy, whitish patches on the exposed bulbar conjunctiva [4,5].

In the present case, the patient complained only of mild irritation without any reduction in visual acuity. Most ocular structures were normal, and the diagnosis was established primarily through slit-lamp examination.

Although Bitot's spots are more commonly observed in children, they may also occur in adults with inadequate dietary intake, malabsorption syndromes, or chronic illnesses affecting nutrient absorption [6]. The lesion is often asymptomatic but may cause irritation or foreign body sensation. Early recognition is important because Vitamin A deficiency can progress to conjunctival xerosis, corneal xerosis, keratomalacia, and ultimately irreversible blindness if left untreated [7]. Management includes Vitamin A supplementation, dietary counselling, and regular follow-up to monitor regression of the lesion [8].

This case demonstrates the significance of comprehensive anterior segment evaluation even when routine ocular findings are normal.

Conclusion

Bitot's spot is a classical ocular sign of Vitamin A deficiency and may present with minimal symptoms. Careful slit-lamp examination plays a crucial role in detecting such lesions. Early diagnosis and appropriate nutritional intervention can prevent progression to severe ocular complications [9]. This case emphasizes the importance of considering nutritional deficiencies in patients presenting with mild ocular irritation despite otherwise normal ocular findings.

Article Publication Details

This article is published in the **Medora: Medical Sciences**, ISSN 3139-1400 (Online). In Volume 2 (2026), Issue 3 (July - September). The journal is published and managed by **Erudexa Publishing**.

Acknowledgements

We sincerely thank the editors and the reviewers for their valuable suggestions on this paper.

Authors' contributions

All authors read and approved the final manuscript.

Data availability

No datasets were generated or analyzed during the current study.

Declarations

Ethics approval and consent to participate

Not applicable. This study did not involve human or animal subjects.

Funding

The authors declare that no funding was received for this work.

Competing interests

The authors declare that they have no competing interests.

References

- Maudgil, A., Rachdan, D., Khan, M. S., Siddiqui, A., Hazrati, L. N., Richards, M. D., Najm-Tehrani, N., & Ali, A. (2022). Bitot-like spots in children with normal vitamin A levels. Eye (London, England), 36(10), 1896–1899. https://doi.org/10.1038/s41433-021-01569-z
- Ram, J., & Jinagal, J. (2018). Bitot's Spots. The New England journal of medicine, 379(9), 869. https://doi.org/10.1056/NEJMicm1715354
- Mocanu, V., Horhat, R., Horhat, F. R., & Poenaru-Sava, M. (2025). Bitot-like Spots and Congenital Aniridia: A Case Report. Journal of clinical medicine, 14(3), 987. https://doi.org/10.3390/jcm14030987
- Foster A. (2022). Case study: Clinical research. Community eye health, 35(117), 4.
- Fukuoka, H., Yokoi, N., & Sotozono, C. (2023). Immunohistochemistry in an Adult Case of Bitot's Spots Caused by Vitamin A Deficiency. Diagnostics (Basel, Switzerland), 13(24), 3676. https://doi.org/10.3390/diagnostics13243676

- Bantihun, A., Gonete, K. A., Getie, A. A., & Atnafu, A. (2020). Child Night Blindness and Bitot's Spots Are Public Health Problems in Lay Armachiho District, Central Gondar Zone, Northwest Ethiopia, 2019: A Community-Based Cross-Sectional Study. International journal of pediatrics, 2020, 5095620. https://doi.org/10.1155/2020/5095620
- Crum, A. R., Srikumaran, D., & Woreta, F. (2017). Bitot's Spots following Bariatric Surgery: An Ocular Manifestation of a Systemic Disease. Case reports in ophthalmology, 8(3), 581–589. https://doi.org/10.1159/000485235
- Ifwat, A., Liew, O. H., Abdul Hamid, H., Patrick, S., & Ab Ghani, S. (2022). Xerophthalmia in Picky Eater Children. Cureus, 14(3), e22846. https://doi.org/10.7759/cureus.22846
- Nimmanagoti, N., Varma, A., Taksande, A., & Meshram, R. J. (2024). Hepatitis A Leading to Severe Vitamin A Deficiency and Bitot's Spots in a Three-Year-Old Male Child: A Case Report. Cureus, 16(1), e51821. https://doi.org/10.7759/cureus.51821