International Journal of Medical Case Reports and Reviews
2024 Volume 3, Issue 2
DOI: 10.59657/2837-8172.brs.24.043

BioRes Scientia
Value your Research

Case Report

Open Access

Actinic Keratitis in Adolescents: Review of the Literature on a Case Report

Cristina Gómez Campo[1]*, Ana alcalde Loeches[2]
[1]*Paediatric specialist. La Zarzuela Hospital. Madrid, Spain.*
[2]*Third year paediatrics resident. Móstoles Hospital, Spain.*
**Corresponding author: Cristina Gómez Campo.*

Abstract
Red eye is one of the most frequent reasons for consultation in pediatric emergency departments. The differential diagnosis of red eye in children includes three main entities: conjunctivitis, keratitis and anterior uveítis. Keratitis can be of infectious or non-infectious origin. Actinic keratitis is due to exposure to ultraviolet radiation. Signs appear within a few hours of such exposure. It is diagnosed clinically and treated topically with antibiotics and lubrication.

Keywords: actinic keratitis; red eye; corneal pathology

Introduction

Red eye is one of the most frequent reasons for consultation in paediatric emergency departments. It can sometimes be a diagnostic challenge for paediatricians, therefore it is important to know the characteristics of the hyperemia, whether it is associated with pain and whether it is accompanied by secretions. The three most frequent entities in this age group, and which should therefore be considered in the presence of a red eye, are conjunctivitis, keratitis and anterior uveítis [1]. In the case of corneal pathology, it should be suspected when a red eye is accompanied by pain, epiphora, photophobia, blepharosmasm and sometimes loss of visual acuity. In these cases, it is important to ask the patient about a history of previous trauma, if he/she is a contact lens wearer, previous eye surgery or systemic diseases (ichthyosis, vitamin A deficiency, Steven Johnson syndrome, etc.) or diseases of the ocular surface.

Clinical case

15-year-old adolescent who attended the paediatric emergency department in the early hours of the morning due to the impossibility of bilateral ocular opening since waking up. He reported that he had not presented any ocular symptoms the previous day. He is not a contact lens wearer. No ocular secretions or tearing. He denies other symptoms. Physical examination shows normal vitals and a stable paediatric assessment triangle. The patient's eyes were closed at all times. There is mild bilateral soft palpebral edema without erythema and blepharospasm. During the examination, passive ocular opening was attempted, but the patient reported intense bilateral ocular pain. It was decided to administer fluotest eye drops (topical fluorescein and oxybuprocaine hydrochloride) in both eyes and the patient was subsequently examined, which revealed intense ocular hyperemia and a bilateral corneal epithelialisation defect with a stippled appearance. In addition, a complete physical and neurological examination was carried out, with no significant alterations. In view of these findings, the ophthalmology department was contacted for a thorough assessment. The slit-lamp examination revealed a papillary reaction in the tarsal conjunctiva and diffuse keratitis in both eyes, with no corneal infiltrates and negative Tyndall. No conjunctival foreign bodies were observed. On re-historying the patient, he reported that the previous day he had been with his father watching him weld without wearing eye protection. Finally, the patient was diagnosed with actinic keratitis of both eyes secondary to welding. Treatment was prescribed with tobramycin ointment, cycloplegic eye drops, oral analgesia and artificial tears. He was followed up in the ophthalmology department and progressed well. He is currently asymptomatic and has no ocular sequelae.

Discussion

The causes of keratitis in the paediatric age group can be both infectious and non-infectious. Infectious

causes mainly include bacterial ulcers, herpetic keratitis and fungal keratitis. With regard to non-infectious ulcers, apart from the physical ones, as in our case, there are also those of traumatic and chemical origin. Actinic keratitis is caused by exposure to ultraviolet rays, which produce superficial necrosis of the cornea [2,3,4]. It is typically seen in welders who do not use adequate eye protection or after prolonged exposure to the sun (beach, snow, etc.), such as in skiers. It usually takes 6 to 10 hours from exposure to the onset of symptoms, with the most common symptoms being intense eye pain, perichoaratic hyperemia, photophobia, blepharospasm and tearing [2,3,4]. Occasionally it may be associated with reduced visual acuity. Diagnosis is essentially clinical, requiring a correct anamnesis and ocular examination. Fluorescein staining of the cornea reveals corneal stippling, known as punctate keratitis, usually predominating in the inferior región [2,3]. Treatment consists of cycloplegic eye drops (cyclopentolate hydrochloride 1%) and oral analgesia due to the intense pain experienced by these patients [2,3,4]. In addition, it is very important to lubricate the eye intensively using artificial tears containing hyaluronic acid during the day and to apply an epithelialising ointment at night [3]. In addition, it is recommended to add topical antibiotics, either in the form of eye drops or ointment [3]. In the case of welders, it is recommended to look for conjunctival foreign bodies [2]. Subsequently, strict ophthalmological control and follow-up is required, as the possible complications are very serious and disabling (perforation, vascularised scarring and blindness).

References

1. M. Granados Fernández, S. Noval Martín. Non-traumatic red eye. In: Panamericana. Manual of Diagnosis and Therapeutics in Pediatrics, 571-573.
2. Puche, A. C. Ocular trauma. Ophthalmology Service, Malaga University Clinical Hospital.
3. Puertas Ruiz-Falcó ML. Red eye in pediatrics. Comprehensive Pediatrics, (1):16-22.
4. Puertas Ruiz-Falcó, ML. (2021). Vision, examination visual acuity, myopia, hyperopia, ocular motor system, trauma, fundus. The most common alterations in adolescents are the most common ones. Adolescere, 3:84-94.

Cite this article: Cristina G. Campo, Ana A. Loeches. (2024). Actinic Keratitis in Adolescents: Review of the Literature on a Case Report, *International Journal of Medical Case Reports and Reviews*, BioRes Scientia Publishers. 3(2):1-2. DOI: 10.59657/2837-8172.brs.24.043

Article History: **Received:** February 16, 2024 | **Accepted:** February 28, 2024 | **Published:** March 06,2024