

Case of Childhood Bilateral Cataract Complicating a Polymorphous Light Eruption

CEA Filali*, F Chraibi, A Bennis, M Abdellaoui and IA Benatiya

Ophthalmology Department, Hospital Hassan II, Faculty of Medicine and Pharmacy, Mohammed Ben Abdallah University, Fez, Morocco

***Corresponding Author:** CEA Filali, Ophthalmology Department, Hospital Hassan II, Faculty of Medicine and Pharmacy, Mohammed Ben Abdallah University, Fez, Morocco

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Abstract**Purpose:** To detail the clinical picture and the diagnostic procedure, and to update the therapeutic management.**Setting:** Ophthalmology Department, Hospital Hassan II, Fez.

Observation: An 11-year-old boy, a young farmer, without notion of consanguinity or similar familiar cases, visited us with one year history of progressive decline in visual acuity and photophobia. Visual acuity was 6/10 in both eyes. Slit lamp biomicroscopy examination found a very embarrassed child by the light, a conjunctival thickening interesting palpebral fissure and subscapular cataract, no ocular hypertension and a normal fundus examination in both eyes. General examination revealed erythematous and papular lesions on the face, the forearms and the dorsal hands, which are itchy, evolving by relapses and remissions, and exacerbated by solar exposure.

A skin biopsy was performed and histopathology disclosed a psoriasiform and spongiotic dermatosis with focal lichenoid reaction in favor of polymorphous light eruption. There were no abnormal laboratory findings, including antinuclear antibody and porphyria profiles. Thus, we diagnosed the patient with PLE complicated by bilateral cataract provoked by overlap solar exposure.

Conclusion: Our case, considered as first reported in the literature, encourages good ocular protection against UV at a young age, due to possible complications.

Keywords: Polymorphous Light Eruption; Child; Cataract**Introduction**

Polymorphous light eruption (PLE) is the most common photodermatosis [1]. Rarely in children. It usually starts during the second and third decades of life [2]. Ophthalmological manifestations are infrequent and cataract remains exceptional. We report a rare case of a child with a polymorphic light rash complicated by bilateral cataract.

Clinical Case

An 11-year-old boy, a young farmer, without notion of consanguinity or similar familiar cases, visited us with one year history of progressive decline in visual acuity and photophobia. Visual acuity was 6/10 in both eyes. Slit lamp biomicroscopy examination found a very embarrassed child by the light, a conjunctival thickening interesting palpebral fissure and subscapular cataract, no ocular hypertension and a normal fundus examination in both eyes (Figure 1a and 1b). General examination revealed erythematous and

papular lesions on the face (Figure 2), the forearms and the dorsal hands, which are itchy, evolving by relapses and remissions, and exacerbated by solar exposure.

Figure 1 a and 1b: Bilateral conjunctival thickening interesting palpebral fissure and subscapular cataract sure and subscapular cataract.

Figure 2: Erythematous plaques, poorly limited, sitting at the level of the 2 cheeks and the nose and ear.

A skin biopsy was performed and histopathology disclosed a psoriasiform and spongiotic dermatosis with focal lichenoid reaction in favor of polymorphous light eruption (Figure 3a and 3b). There were no abnormal laboratory findings, including antinuclear antibody and porphyria profiles. Thus, we diagnosed the patient with PLE complicated by bilateral cataract provoked by overlap solar exposure.

Figure 3a and 3b: Histological examination: a) Psoriasiform and spongiotic dermatosis (HES G x 50). b) Inflammatory infiltrate of the superficial and middle dermis (HES G x 100).

We started hydroxychloroquine treatment with 200 mg daily, artificial tears and topical steroid, and of course surgery of his cataract was indicated, we noted a good evolution of dermatological and conjunctival lesions (Figure 4).

Figure 4: Clinical cutaneous improvement.

Discussion

PLE is an acquired idiopathic photosensitivity disorder [3]. It predominantly affects females and shows a mean disease onset in the second to third decade of life. Onset during childhood is less commonly seen [4].

Ocular manifestations can be observed during the PLE as conjunctivitis and pterygium [5], but the occurrence of a cataract remains exceptional.

Epidemiological and experimental studies have demonstrated that exposure of the eye to ultraviolet radiation induces cataract in humans and animals [6]. Wavelengths around 300 nm are the most deleterious to the lens.

UV especially UVB is believed to damage the lens via protein modification, lipid peroxidation and DNA fragmentation induced by photo oxidation [7].

In addition to these mechanisms of cataract, UV may affect growth factor- and cytokine-mediated signal transduction pathways, leading to aberrant gene expression [8].

Nevertheless, cataract usually occurs in adults after years of solar exposure, and never during childhood, which makes our observation unique.

Conclusion

Our case, considered as first reported in the literature, encourages good ocular protection against UV at a young age, due to possible complications.

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