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Uveitis Associated with Juvenile Psoriatic Arthritis A Case Report

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Abstract

Background: *We report the case of a 7 years girl with panuveitis related to juvenile psoriatic arthritis.*

Case report: *At the age of 7, a girl followed in dermatology since the age of 5 years for cutaneous psoriasis progressing by remission-flare with a fairly good quality of life, was diagnosed as having uveitis associated with Juvenile Psoriatic Arthritis. She was treated with intravenous then oral and local corticosteroid. Throughout the follow-up, the child experienced a second uveitis flare complicated by bilateral cataract. She undergoes cataract surgery in the right eye with good improvement of visual acuity.*

Discussion: The uveitis in juvenile psoriatic arthritis is a distinct entity. Early-onset juvenile psoriatic arthritis is associated with severe form of uveitis. The management is challenging. Regular screening by an experienced ophthalmologist is highly recommended.

Keywords: *Panuveitis, juvenile psoriatic arthritis, corticosteroids.*

Background

Psoriasis is a systemic inflammatory disorder with a propensity for skin, joint, and eye involvement. Its pathogenesis involves genetic, immunologic, and environmental factors.

The uveitis in juvenile psoriatic arthritis is a distinct entity **(**1**)**; it may have a different clinical course than idiopathic or HLA-B27-associated types, which is particularly severe when its onset affects children age six or younger **(**2**)** with potential complications such as cataracts and glaucoma causing reduced quality of life.

A recent article found a bidirectional association between psoriatic disease and uveitis **(**3**)**, it is the most frequent extra-articular manifestation, with an estimated frequency comprising between 1.4 and 25% **(**4**)**.

Case Presentation

At the age of 7 years, a girl followed in dermatology since the age of 5 years for cutaneous psoriasis progressing by remission-flare with a fairly good quality of life, presented at our emergency department with painful red eyes, photophobia and gradual deterioration of vision. Until the present admission, the patient had been treated for 24 months by dermo-corticosteroid and vitamin D derivatives with good clinical control. For about three months, the patient accused redness of both eyes with periodic exacerbation.

Our first ophthalmological examination found the visual acuity of 1 logMAR in both eyes, inferior band keratopathy and small keratic precipitates, moderate anterior chamber cells and flare, pupillary seclusion, moderate vitreous flare and macular edema. The intra-ocular pression was normal. The optical coherence tomography **(**OCT**)** revealed macular retinal thickness of 513 um in the right eye, 441um in the left one.

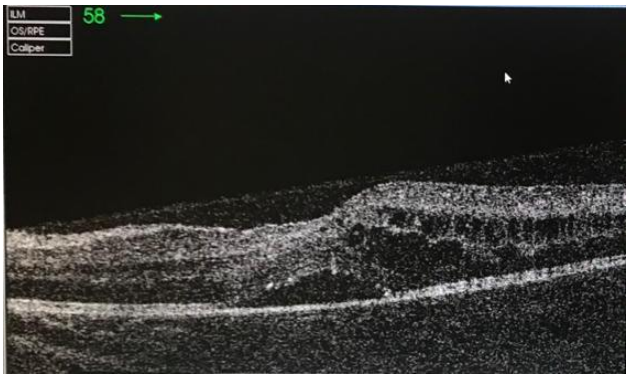

Figure 1: Optical Coherence Tomography imaging of Macular Oedema with Pigment Epithelial Detachment.

Skin symptoms were limited to scaly erythematous plaques on the legs and arms with a body surface area less than 2%, without affecting the mucous membranes, nail or scalp. The dermoscopy had objectified a glomerular vascularization with regular and homogeneous distribution. Otherwise, the physical articular examination revealed decreased active and normal passive range of motion in the left knee, an ultrasound confirmed mild intra-articular effusion.

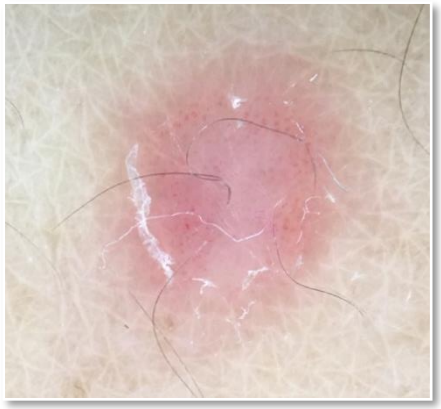

Figure 2: Dermoscopy **(**x10grossing**)**: globular vascular pattern with homogeneous distribution

Blood tests including viral and bacterial serological tests, rheumatoid factor, antinuclear antibodies, and HLA B 27 antigen were normal. Sedimentation rate and C- reactive protein were increased.

Based on the clinical and laboratory findings, the patient was diagnosed as having uveitis associated with Juvenile Psoriatic Arthritis.

Intravenous methylprednisolone 200mg/day for 3 days combined with local corticosteroid, then oral corticosteroid at a dose of 1 mg/kg/day was prescribed; in parallel, symptomatic therapy with a nonsteroidal anti-inflammatory drug and dermocorticoid was maintained. Re-evaluation was continued at frequent intervals, and then tapering the drug slowly, as dictated by the clinical response. Remission was achieved after 7 weeks with a complete resolution of articular manifestations, associated with normalization of inflammatory parameters.

One year later, she experienced a second uveitis flare-up. Slit lamp examination also revealed bilateral nuclear cataract responsible for severe visual loss. Ocular ultrasound found high choroidal thickness in both eyes. She undergoes cataract surgery in the right eye 3 months after remission with good improvement of visual acuity, but we did not indicate the cataract surgery of the left eye considering the high risk of ocular phthisis. After 2 months follow up, the child experienced partial remission of uveitis, which has lasted for 6 months **(**up to the latest visit**)**. No adverse reactions occurred during treatment.

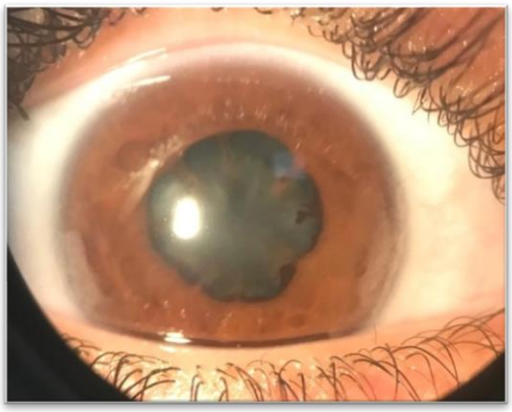

Figure 3: inferior band keratopathy, posterior synechiae, nuclear cataract.

Discussion

Uveitis is a potentially serious ocular complication that may occur in 7% to 20% of patients with psoriasis **(**5**)**. Juvenile idiopathic arthritis **(**JIA**)** is the most common chronic rheumatic disease of childhood. Following ILAR classification of juvenile idiopathic arthritis **(**2001**)**, psoriatic arthritis is defined by: Arthritis with either a psoriatic rush or at least 2 of the following: Dactylitis; nail pitting or onycholysis and psoriasis in a first-degree relative. **(**6**)**

Psoriatic juvenile idiopathic arthritis **(**JPsA**)** represents up to 10% of all JIA subtypes, with chronic uveitis occurring in 10–15%. **(**7**)** High disease activity has been reported to be associated with a higher risk of uveitis occurrence, but the subsequent clinical course of uveitis appears to be quite independent of arthritis activity. **(**8**)**

A Cross-sectional analysis of Childhood Arthritis and Rheumatology Research Alliance **(**CARRA**)** registry suggests that an early onset **(**at ≤ 4–6 yrs**)** JPsA as predominantly a disease of females with peripheral arthritis, followed by presentation of later-onset juvenile psoriatic arthritis **(**> 4–6 yrs**)** and with enthesial and axial involvement, more common in males. Also, according to the data from the CARRA study, 83% of the patients with psoriasis and uveitis had an early onset, and are at risk for a severe form of uveitis. **(**9**)**

Another recent study demonstrates that children with JPsA are at increased risk for other clinically important comorbidities including diabetes and depressive disorder. **(**10**)**

The treatment of the uveitis in juvenile psoriatic arthritis using glucocorticoid, immunomodulators or biologic therapeutics is challenging. The prognostic for visual acuity remains poor. **(**1**)**

We have characterized the uveitis in 7 years-old girl, who presented severe bilateral panuveitis related to JPsA, with moderate skin and peripheral joint damage. Our case is consistent with the literature pointing to a female predominance in early-onset JPsA, with severe form of uveitis. Less is known about juvenile onset psoriatic arthritis and the uveitis that may accompany this diagnosis. The first study characterizing the uveitis has been published in 2017. It has included 6 cases and revealed distinctions from the uveitis noted in adults. It has also supported the hypothesis that juvenile psoriatic arthritis has at least two distinct subsets, one with an onset at age 6 or before and one with an age of onset around age 11. **(**2**)**

Conclusion

Ocular symptoms associated with psoriasis are often underestimated by non-ophthalmologist physicians. Usually, psoriasis appears first, followed by uveitis but, sometimes, uveitis may be an early indicator of inflammation and a possible "announcer" of PsA. **(**4**)** Regular screening by an experienced ophthalmologist is highly recommended.

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