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Unilateral Posterior Uveitis in a Young Suspected Juvenile Idiopathic Arthritic Male

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Authors' contributions

This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.

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Case Report

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ABSTRACT

A 15 y/M was referred from Paediatrics department to rule out uveitis in a suspected case of Juvenile idiopathic arthritis(JIA). He had no ocular complaints. There was history of left eye amblyopia since childhood and usage of thick glasses since 10 years. There was no history of ocular trauma, procedure or any systemic illness. Best corrected visual acuity(BCVA) was 6/9 in RE and 6/24 in LE recorded using Snellen's chart, color vision and Amslers grid test were within normal limits in both eyes. On examination, anterior segment was within normal limits. Posterior segment showed myopic changes in both eyes with mild vitreous degeneration in right eye and vitreous debris, inflammatory debris in the inferotemporal quadrant, perivascular sheathing and snowbanking in superotemporal and inferior quadrant in left eye with no active macular edema. Systemic workup was done and the patient was started on oral steroids and immunosuppressant. JIA-associated uveitis rarely presents with complaints, a high index of suspicion is indicated in these cases due to poor prognosis and high rate of complications.

Keywords: JIA; posterior uveitis; young.

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1. INTRODUCTION

Juvenile idiopathic arthritis (JIA) is an autoimmune arthritis arising from undefined etiology. It begins before 16 years of age and lasts for duration of 6 weeks or more [1]. Uveitis is the most prevailing extra-articular manifestation of JIA. Uveitis is reported in 5.6–24.4% of JIA patients, especially those with the oligoarthritis type (10–30%) [2]. Ocular manifestations include cataract, glaucoma, band keratopathy, posterior synechiae and macular edema which occur as a result of the disease or associated steroid treatment [3]. Asymptomatic nature of JIA-associated uveitis demands routine ophthalmic screening in these patients for early detection and management of uveitis to prevent complications and visual impairment.Here, we report a suspected case of JIA, a 15 year old male presenting with posterior uveitis.

2. CASE REPORT

A 15 years/Male was referred from Paediatrics department to rule out uveitis in a suspected case of JIA. Patient had no ocular complaints. There was history of left eye amblyopia and usage of thick glasses since 10 years. There was no history of ocular trauma or procedure or any systemic illness. Patient had acute non-resolving abdominal pain and constipation since 1 month. There was no history of joint pain. Computed tomography (CT) chest, CT abdomen and colonoscopy was within normal limits.Visual acuity was finger counting at 2meters improving to 6/12 with pinhole in right eye(RE) and was finger counting at 1meter improving to 6/24 with pinhole in left eye(LE) recorded using Snellen's chart. Best corrected visual acuity(BCVA) was 6/9 in RE with correction of -6.25 sphere and -1.75 cylinder at an axis of 24 degrees and in the LE was 6/12p with correction of -6.00 sphere and -2.50 cylinder at an axis of 170 degrees. Colour vision and Amsler's grid test was normal in both eyes. Anterior segment examination of both eyes was within normal limits. Intraocular pressure(IOP) was 14mmHg in both eyes recorded using Goldmann applanation tonometer(GAT). Posterior segment revealed myopic changes in both eyes with mild vitreous degeneration in RE and vitreous debris, inflammatory debris in the inferotemporal quadrant, perivascular sheathing and snowbanking in superotemporal and inferior quadrant in LE with no active macular edema. (Figs. 1 and 2) Optical Coherence Tomography was done for both eyes (Fig. 3). Patient was evaluated thoroughly to rule out systemic causes of inflammation and infections. Anti-nuclear antibody, rheumatoid factor and Cartridge based nucleic acid amplification test for tuberculosis were negative. Erythrocyte sedimentation rate was 20mm/hr, and C-reactive protein was 17.6mg/L. Cyclic citrullinated peptide and HLA B-27 testing could not be done.Rheumatologist opinion was taken and patient was started on Tab. Prednisolone 20mg OD, Tab Methotrexate 15mg once a week. Patient was advised to follow up monthly.

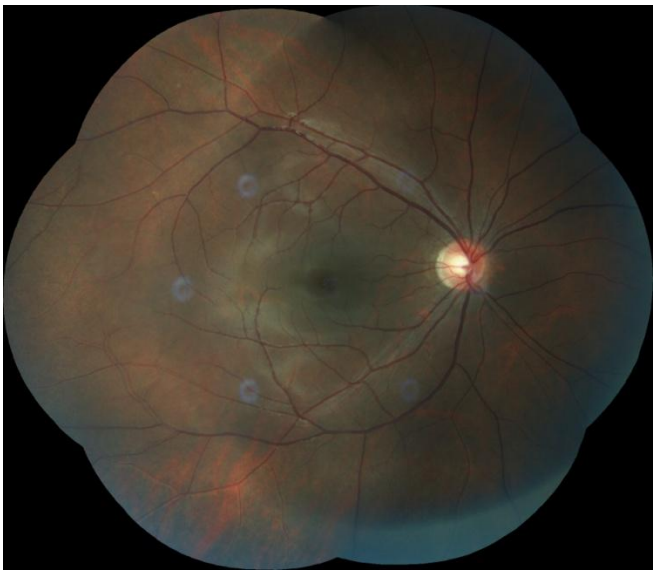

Fig. 1. Fundus photograph of right eye at presentation

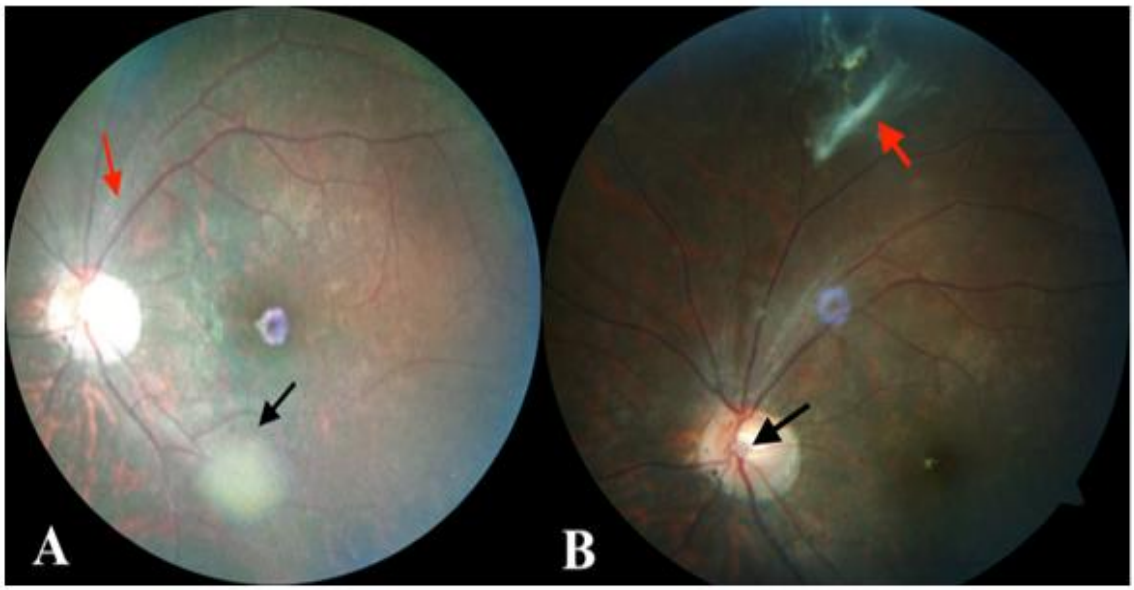

Fig. 2. Fundus photograph of left eye showing myopic changes with A) inflammatory debris(black arrow) in the inferotemporal quadrant and perivascular sheathing(red arrow) and B) signs of chronic inflammation seen as inflammatory debris at the disc(black arrow) and in superotemporal quadrant(red arrow).

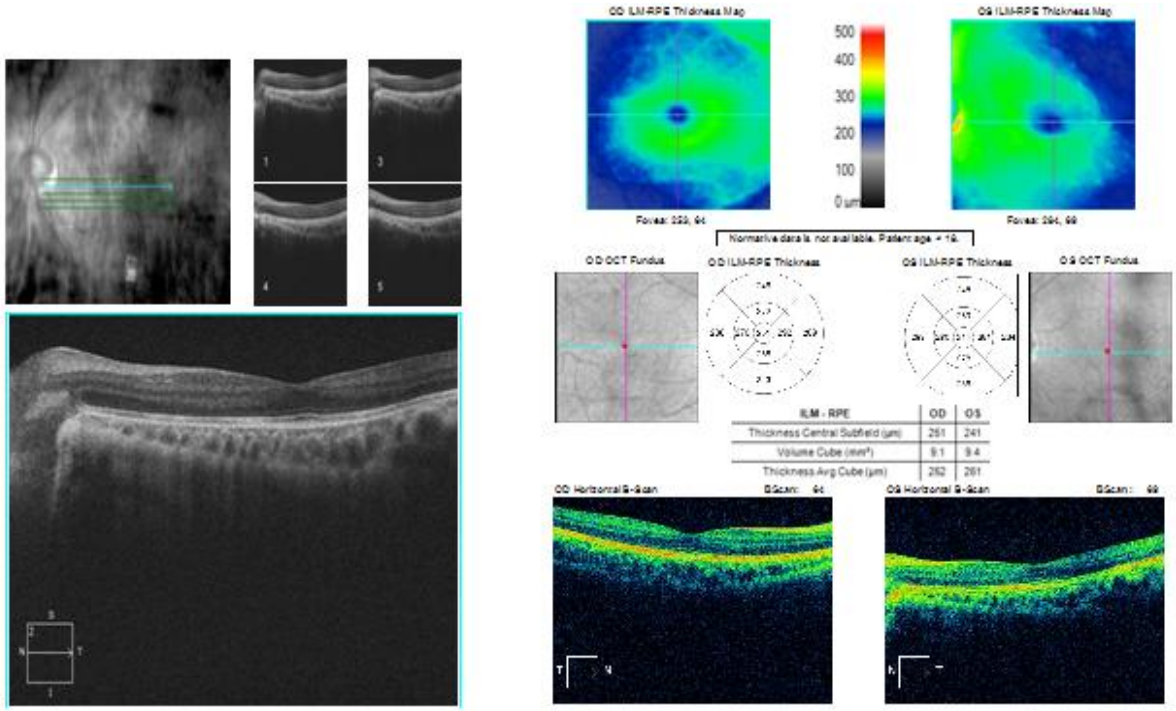

Fig. 3. Optical coherence tomography macular cube of both eyes

On follow up after a month, BCVA, IOP, anterior and posterior segment examination had similar findings as previous visit. After three months, BCVA was 6/6p in RE and 6/18 in LE. IOP was recorded as 16mmHg in RE and 18mmHg in LE using GAT. Posterior segment examination revealed resolution of the inflammatory debris. Oral Prednisolone was tapered to 15 mg.

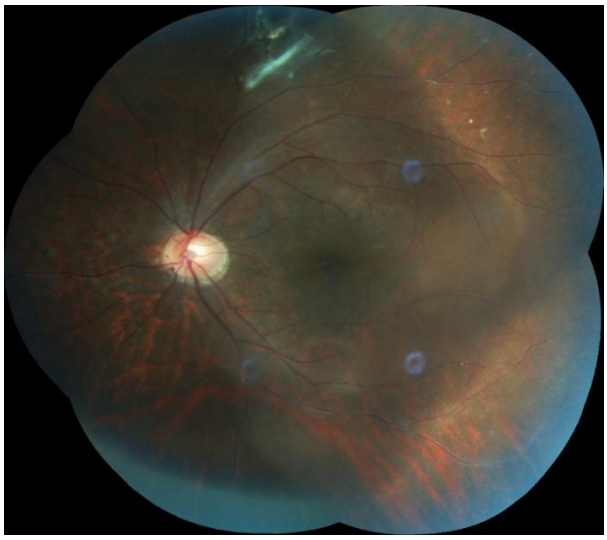

Fig. 4. Fundus photograph of left eye after 3 months of treatment

3. DISCUSSION

JIA is the most common chronic rheumatic disease affecting children associated with variable clinical presentation, course and outcome [4].

The recognized risk factors for a severe course and poor prognosis include young age at onset, male sex, antinuclear antibody status and arthritis preceded by uveitis [5-7]. Predominantly involving CD4+ T cells, the etiology of JIA is autoimmune in nature. However, the pathogenic mechanisms remain indistinct regarding the association with genetic and environmental factors and uveal inflammation [8].

Kotaniemi et al reported in a review that 10% patients with oligoarticular type of JIA had uveitis and 37.3% of JIA-associated uveitis patients suffered from complications due to the disease itself or associated steroid-treatment like cataract, glaucoma, band keratopathy, posterior synechiae, or macular edema [2,3]

Marelli et al conducted a retrospective study among 125 patients with JIA-associated uveitis and observed that 96% patients had anterior uveitis, 1.6% patients had posterior uveitis and 2.4% three patients had panuveitis. Bilateral involvement was noticed in 67.2% subjects [9].

Sudarshan et al conducted a retrospective chart study among 40 JIA patients and observed that 26 patients (65%) presented with bilateral involvement and 12 patients (30%) presented with unilateral involvement. Chronic uveitis was seen in 39 eyes (61%), acute anterior uveitis was seen in 10 eyes (16%), panuveitis was seen in 7 eyes (11%) and intermediate uveitis was seen in 4 eyes (6 %) [10].

Hsin-Hui Yu et al conducted a population based cohort study in Taiwan among 2636 patients under 16 years of age to analyze the incidence, prevalence of JIA and the characteristics of JIA-associated uveitis and they observed anterior uveitis in 125 (4.7%) patients. Only 3 patients with pan-uveitis had posterior segment manifestations [11].

Foeldvari et al conducted a retrospective study among 25 patients with JIA-associated uveitis who were treated with methotrexate and found positive response in 21 patients [12].

Veronika Rypdal et al conducted a population based multicenter study including 434 JIA patients to assess the outcome of uveitis in these cases and concluded that screening for uveitis should be started immediately in suspected or confirmed cases of JIA and be continued for more than 8 years after the diagnosis of JIA. [13].

Posterior uveitis as the presenting feature, unilateral involvement and asymptomatic nature of this case signifies the importance of screening of suspected cases of JIA for early detection and mangement of ocular complications.

4. CONCLUSION

Routine ophthalmic screening with rheumatologist consultation is essential for early

detection and management of suspected and confirmed JIA cases to prevent potential visual complications.

CONSENT

It's not applicable.

ETHICAL APPROVAL

As per international standard or university standard ethical approval has been collected and preserved by the authors.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

REFERENCES

1. Petty RE, Southwood TR, Manners P et al. "International league of associations for rheumatology classification of juvenile idiopathic arthritis: Second revision, Edmonton, 2001," Journal of Rheumatology. 2004;31(2):390–392.
2. Kotaniemi K, Savolainen A, Karma A, Aho K. Recent advances in uveitis of juvenile idiopathic arthritis. Surv Ophthalmol. 2003;48:489–502.
3. Sabri K, Saurenmann RK, Silverman ED, Levin AV. Course, complications and outcome of juvenile arthritis-related uveitis. J AAPOS. 2008;12(6):539-45.
4. Prakken B, Albani S, Martini A. Juvenile idiopathic arthritis. Lancet. 2011;377:2138–2149.
5. Ayuso KV, Cate HAT, van der Does P, Rothova A, de Boer JH. Male gender as a risk factor for complications in uveitis associated with juvenile idiopathic arthritis. American Journal of Ophthalmology. 2010;149(6):994.e5–999.e5. [PubMed] [Google Scholar]
6. Hoeve M, Ayuso VK, Schalij-Delfos NE, Los LI, Rothova A, de Boer JH. The clinical course of juvenile idiopathic arthritis-associated uveitis in childhood and puberty. British Journal of Ophthalmology. 2012;96(6):852–856. [PubMed] [Google Scholar]
7. Vitale AT, Graham E, de Boer JH. Juvenile idiopathic arthritis-associated uveitis: clinical features and complications, risk factors for severe course, and visual outcome. Ocul Immunol Inflamm. 2013;21(6):478-85. DOI: 10.3109/09273948.2013.815785. Epub 2013 Aug 19. PMID: 23957455.
8. Clarke SLN, Sen ES, Ramanan AV. Juvenile idiopathic arthritis-associated uveitis. Pediatr Rheumatol. 2016;14: 27. Available:https://doi.org/10.1186/s12969-016-0088-2
9. Marelli L, Romano M, Pontikaki I, Gattinara MV, Nucci P, Cimaz R, Miserocchi E. Long term experience in patients with JIA-associated uveitis in a large referral center. Front. Pediatr. 2021;9:682327. DOI: 10.3389/fped.2021.682327
10. Sudharshan SDO, Biswas Jyotirmay MS, Ganesh Sudha K, DO Analysis of juvenile idiopathic arthritis associated uveitis in India over the last 16 years, Indian Journal of Ophthalmology: 2005;55(3):199-202. DOI: 10.4103/0301-4738.31940
11. Yu H-H, Chen P-C, Wang L-C, Lee J-H, Lin Y-T, Yang Y-H, et al. juvenile idiopathic arthritis-associated uveitis: A nationwide population-based study in Taiwan. PLoS ONE. 2013;8(8):e70625. Available:https://doi.org/10.1371/journal.pone.0070625
12. Foeldvari I, Wierk A. Methotrexate is an effective treatment for chronic uveitis associated with juvenile idiopathic arthritis. J Rheumatol. 2005;32:362-365.
13. Veronika Rypdal, Mia Glerup, Nils Thomas Songstad, Geir Bertelsen, Terje Christoffersen, Ellen Arnstad et al. Uveitis in juvenile idiopathic arthritis:18-year outcome in the population-based nordic cohort study. AAO Ophthalmology. 2021;128(4). ISSN 0161-6420/20. Available:https://doi.org/10.1016/j.ophtha.2020.08.024

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