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Case Report

Interesting case of uveitis in a child

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ABSTRACT

Childhood uveitis is complex condition, and it is very rear in children compared to adults. It accounts for 5-10% of all uveitis seen in tertiary referral clinics. Prevalence of uveitis is 22 per 100,000 persons. Uveitis in children is commonly asymptomatic. It can become chronic and cause damage to ocular structure. Diagnosis can be delayed due to various reasons, including preverbal age and difficulties in examining young children. Uveitis morbidities in pediatric patients include cataract, glaucoma, and amblyopia. Close follow up is necessary as uveitis can flare up during immune-modulary therapy. Here, we represent an interesting case of uveitis in a 7 years old boy who had idiopathic uveitis and presented with red eye which is most common presentation in primary care.

Keywords: Uveitis, Prevalence, Diagnosis, Morbidities, Follow up

INTRODUCTION

Uveitis means inflammation of uvea, the inside of eye. Uveitis can affect different parts of eye and can be caused by infection. There are different types of uveitis, anterior uveitis, intermediate uveitis, posterior uveitis and pan uveitis. Common presentation is with red eye (Figure 1), pain in the eye, sensitivity to light, blurred vision, floaters and tearing. Uveitis in children can be autoimmune or autoinflammatory. Most common cause in this age group is idiopathic and juvenile idiopathic arthritis associated uveitis. Incidence is 5-10% of all cases of uveitis.[1,2] Diagnosis is mainly by slit-lamp examination and needs various blood tests to identify underlying systemic conditions or infections. Ultrasound or optical coherence tomography (OCT) are done to assess the structures of the eye.

Uveitis treatment is mainly corticosteroids, topical, oral, or injected to reduce inflammation. Immunosuppressive drugs are used for cases not responding to steroids or associated with systemic autoimmune diseases. Treatment of underlying conditions is equally important to help with uveitis. Regular monitoring is important to assess the effectiveness of treatment and adjust as needed, as well as to check for any complications. Main complications are cataracts, glaucoma, band keratopathy (calcium deposits on the cornea), macular edema (swelling in the central retina) and vision loss.[3,4]

Figure 1: Right red eye presentation.

In this article, we discuss a particular case of uveitis started with a redness in the right eye and its treatment which started with the cyclopentolate and dexamethasone phosphate and ended up with an immune suppressant drug, methotrexate.

CASE REPORT

A seven-year-old boy with Asian background who presented with red right eye for last 2 days in April 2021. His left eye was normal. There was no discharge from his right eye but watery when watching the screen (e.g. television, monitor, and mobile). There was no previous history of any eye problem or other systemic illnesses. The boy was complaining about light pain and slightly blurred vision in the eye. Pain and blurred vision were the main key in the initial history and was referred to eye casualty urgently. There, he was diagnosed with Uveitis in the right eye and started on topical steroids, dexamethasone phosphate (1 mg/ml) with cyclopentolate. He was advised to use topical steroids 6 times a day and cyclopentolate 2 times a day. This treatment was continued for 12 weeks. Meanwhile, his blood tests and chest X-rays were all normal and it was difficult to diagnose the cause of a uveitis. After 12 weeks, he got no active flares in right eye and treatment was stopped. In a follow up after weeks of stopping his treatment, active flares were found, and the treatment was started again.

Now question was how he got it as he was otherwise fit and well. He was referred to rheumatology for autoimmune disorders investigations to find the cause. There was no history of joint problems, chest X-ray, ultrasound (US) abdomen and all bloods were unremarkable. After three trials with steroids over a period of 12 months, he was started on methotrexate as he was kept getting flares when steroids were stopped. Initially, he was treated with a 10 mg of methotrexate which was increased to 12.5 mg after 10 months when there was no significant improvement. The patient was also taking a 5 mg of folic acid after 48 hours of methotrexate dose. The condition improved with the increase dose of methotrexate after 4 months. Dexamethasone phosphate (1 mg/ml) and cyclopentolate were reduced and stopped gradually in June 2023. In December 2023, the methotrexate dose was reduced to 10 mg and the condition remain stable without using dexamethasone phosphate (1 mg/ml) and cyclopentolate. The methotrexate dose was further reduced to 7.5 mg in April 2024 but his examination in June 2024 revealed that he got flares again in his right eye with 7.5 mg of the methotrexate dose. In addition, he also got flares in his left eye. The methotrexate dose was increased again to 10 mg and started dexamethasone phosphate (1 mg/ml) in both eyes. In his August 2024 follow up, the condition is stable again, the dexamethasone phosphate (1 mg/ml) dose is stopped again but the treatment with methotrexate is continued.

DISCUSSION

Early diagnosis and appropriate treatment are critical for preventing long-term damage and preserving vision. Regular follow-up with an ophthalmologist specializing in pediatric uveitis is essential to manage this condition effectively. Multidisciplinary approach is important to find the cause of the disease before labelling as idiopathic uveitis. Such patients need regular follow up every 4 months. Even after remission, they need to be followed up regularly depending on what treatment they have received during the illness. Corticosteroids alone are often insufficient to achieve remission and early initiation of immunomodulary therapy is recommended if inflammation persists.

Another study published in July 2024, where Yiu et al concluded that clinical presentation in local pediatric uveitis differs from previously described features in Caucasian and other populations. Idiopathic and undifferentiated causes were the predominant reasons for pediatric uveitis. Their report evaluated the efficacy of immunomodulatory therapy and biologics in controlling uveitis and reducing ocular complications.[5]

Tugal mentioned in her article published in June 2023 that chronic non-infectious uveitis is major burden on the growing children and their families. There is high risk of complications and visual loss, and close monitoring is important. A multidisciplinary approach is essential for thorough investigation of any underlying disease even those initially diagnosed as idiopathic uveitis because extraocular manifestations may develop later in the disease course.[6]

CONCLUSION

Purpose of case review is that we see red eye very commonly in our daily practice. History is the key, and we shall take it seriously if a child is mentioning anything in addition to red eye. It's difficult in younger children to take proper history due to communication barrier. Uveitis is not very common, but we shall always think of rare things as well. If there is any doubt about the diagnosis, its better to refer to tertiary care for further assessment as diagnosis is difficult in young children due to limitations and needs prompt treatment to prevent long term complications in children.

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