



ORIGINAL RESEARCH PAPER

Ophthalmology

A TENACIOUS CASE OF HYPOPYON UVEITIS

KEY WORDS: Hypopyon uveitis, Rifabutin, HIV, Drug-induced uveitis, Anti-tubercular therapy

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ABSTRACT

This is a case report of rifabutin-induced hypopyon uveitis in a middle-aged woman with HIV infection undergoing anti-tubercular therapy for tuberculous lymphadenitis. Patient initially developed hypopyon uveitis in the left eye, followed by a similar episode in the right eye. Both episodes responded well to topical corticosteroids and cycloplegics. Further evaluation revealed rifabutin as the causative agent, and symptoms resolved after discontinuation of the drug. This case highlights the importance of considering drug-induced uveitis in the differential diagnosis of ocular inflammation, particularly in immunocompromised patients.

INTRODUCTION

Uveitis is commonly associated with autoimmune or infectious etiologies; however, certain systemic or topical medications may also trigger intraocular inflammation. Rifabutin, a semisynthetic rifamycin derivative approved in 1992 for prophylaxis against Mycobacterium avium complex (MAC) in HIV-infected individuals, is one such drug. Although uncommon, rifabutin-associated uveitis is a recognized adverse effect that can easily be overlooked, particularly in patients with multiple comorbidities.

Case Report

A 47-year-old HIV-positive woman on highly active antiretroviral therapy presented with sudden, painless diminution of vision in her left eye of one day duration. She had been on anti-tubercular therapy for tuberculous lymphadenitis for one month.

On examination, best corrected visual acuity was 6/6 in the right eye and counting fingers at 0.5 m in the left eye. Intraocular pressure was normal bilaterally. Right eye was unremarkable. Left eye showed conjunctival congestion, anterior chamber cells 4+, flare, fibrin in the pupillary region and hypopyon. Cornea was clear and fundus view was obscured. B-scan ultrasonography of left eye revealed localized vitritis.

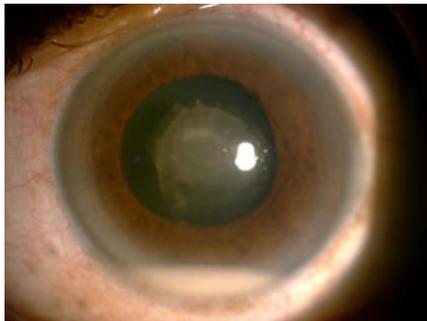


Figure 1: Slit-lamp photograph showing hypopyon uveitis in the affected eye.

There was no history suggestive of Behçet's disease, systemic autoimmune disorders, trauma, intravenous drug abuse, or recent systemic illness. Patient was started on topical corticosteroids and cycloplegics, with significant improvement in vision and media clarity. Subsequent fundus evaluation showed no evidence of retinitis.

While left eye was still under treatment, she developed similar episode in the right eye, which also responded well to topical corticosteroids and cycloplegics. A review of systemic medications she was taking revealed rifabutin as part of her regimen. The drug was discontinued after discussing with her primary physician, and she remained stable thereafter with no further episodes since past one year.

DISCUSSION

Ocular inflammation in HIV-positive individuals may result from opportunistic infections, immune recovery uveitis, malignancy, or drug reactions. Hypopyon uveitis as an initial manifestation is unusual and warrants careful evaluation to exclude masquerade syndromes or infective endophthalmitis.

Rifabutin-associated uveitis is rare but well-documented. The onset can vary from 2 weeks to several months after initiation of therapy and is often dose-dependent. Possible mechanisms include direct ocular toxicity or cumulative drug effects. Reported risk factors include low body weight (<55 kg), higher cumulative doses (>600 mg/day), co-administration of CYP3A4 inhibitors (macrolides, azole antifungals, protease inhibitors) and hepatic dysfunction.

In our case, the absence of prior ocular episodes, temporal association with rifabutin therapy, and resolution after drug withdrawal strongly support a drug-induced etiology.

CONCLUSION

Rifabutin-induced uveitis, though uncommon, should be considered in patients with unexplained recurrent anterior uveitis, particularly those on anti-tubercular therapy. Timely recognition, discontinuation of the offending drug, and appropriate topical therapy can prevent vision-threatening complications. Ophthalmologists must remain vigilant for this drug-related adverse effect when managing such patients.

REFERENCES

1. Sudharshan S, Nair N, Curi A, Banker A, Kempen JH. Human immunodeficiency virus and intraocular inflammation in the era of highly active antiretroviral therapy: An update. *Indian J Ophthalmol.* 2020;68:1787-98.
2. Fauci AS. The AIDS epidemic – considerations for the 21st century. *N Engl J Med.* 1999;341:1046-50.
3. Shafran SD, Singer J, Zarowny DP, Deschênes J, Phillips P, Turgeon F, et al. Determinants of rifabutin-associated uveitis in patients treated for MAC bacteremia: a multivariate analysis. *J Infect Dis.* 1998;177:252-5.
4. Wang HH, Chung YM, Lin YC, Hu HC, Wong WW. Rifabutin-induced hypopyon uveitis in AIDS patients with MAC infection. *J Chin Med Assoc.* 2007;70(3):136-9.
5. Nightingale SD, Cameron DW, Gordin FM, Sullam PM, Cohn DL, Chaisson RE, et al. Two controlled trials of rifabutin prophylaxis against MAC infection in AIDS. *N Engl J Med.* 1993;329:828-33.