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Case Report *Medical research*

Rifabutin induced vitritis in a HIV patient Co-infected with tuberculosis: A case report

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ABSTRACT

A 48-year-old newly diagnosed HIV infected woman presented with ulcers in mouth, weight loss, breathlessness since 5-6 months, she was diagnosed with oral Candidiasis, Pneumocystis carnii Pneumonia and tubercular lymphadenitis. Seventy days after starting on ATT, she presented with complaints of blurring of vision in the right eye. Opthalmic evaluation revealed severe vitritis in the absence of posterior uveitis. The causality of vitritis to Rifabutin intake was probable as per WHO probability scales. It took 6 weeks for complete spontaneous resolution of Vitritis and the visual acuity returning to 6/6 in both eyes. Rifabutin toxicity can occur throughout the course of treatment that has to be monitored based on clinical manifestations.

Keywords: Rifabutin, vitritis, HIV, Tuberculosis.

INTRODUCTION

Rifabutin is a spiro-piperidyl-rifamycin derived from rifamycin-S. It is structurally related to rifampicin and shares many of its properties. It has a broad spectrum of antimicrobial activity and its effect is based on blocking the DNA-dependent RNA-polymerase of the bacteria. It is active against Mycobacteria and a variety of gram-positive and gram negative bacteria. It is well tolerated in patients with HIV-related tuberculosis (TB) [1]. Vitritis in HIV patients could be either due to infections, lymphoma, immune related uveitis or very rarely drug induced. Uveitis has been reported in association with a variety of topical, intraocular, periocular, and systemic medications. To establish causality of adverse events by drugs, in 1981, Naranjo and associates proposed seven criteria, which are related to the frequency and documentation of the event; circumstances of occurrence, recovery, and recurrence; and coexistence of other factors or medications. Rarely does a drug meet all seven criteria [2].We report a rare case of Rifabutin induced vitritis in an HIV infected TB patient which resolved on discontinuation of the drug.

M Bazewicz et al present two case reports illustrating the classical presentation of Rifabutin and cidofovir induced uveitis. The first case was a 33 year old woman with AIDS treated with anti-protease and anti-tuberculosis drugs (including Rifabutin). She presented with a red painful right

eye. There was a strong anterior segment inflammation with fibrinous exudates and a dense vitritis. Rifabutin was stopped and topical steroids and mydriatics were given. Intraocular inflammation and symptoms rapidly resolved. In another case report, in HIV infected patient started on ART and Rifabutin based ATT, Five weeks after Rifabutin therapy was started the patient experienced sudden pain in his left eye that was associated with severe itching, a foreign body sensation, tearing, decreased vision, and photophobia. Rifabutin was discontinued because of early reports of it associated uveitis. The patient's symptoms disappeared, and his eyes returned to normal after six weeks. [2, 3].

CASE REPORT

A 48-year-old newly diagnosed HIV infected woman was admitted to Ashakirana hospital on April 2015 because of ulcers in mouth, weight loss, and breathlessness since 5-6 months, she was diagnosed with Oral Candidiasis, Pneumocystis carnii Pneumonia and Tubercular lymphadenitis after investigations. She was treated with co-trimoxazole, fluconazole and anti-tubercular therapy (Isoniazid 300 mg + Rifampicin 450 mg + Ethambutol 800 mg + Pyrazinamide 1500 mg) since 02/05/2015. She was started on antiretroviral therapy from 19/05/2015 (Tenofovir + Lamivudine + Efavirenz once a day). Patient developed Grade 2 rashes due to Efavirenz after 10 days and ART was stopped. She was restarted on Protease inhibitor based ART (Tenofovir + lamivudine + Atazanavir/Ritonavir 300+100 mg) on june 2015. Since rifampicin and protease inhibitors have significant drug interactions, Rifampicin was substituted with Rifabutin 15 days before initiation of Protease Inhibitor based ART.

Seventy days later, the patient presented with complaints of blurring of vision in the right eye. Opthalmic evaluation revealed, bilateral best corrected visual acuity to be 2/60 with bilateral acute non granulomatous anterior and intermediate uveitis because of presence of moderate anterior chamber inflammation and severe vitritis in the absence of posterior uveitis. After discontinuation of the Rifabutin it took 6 weeks for complete spontaneous resolution of uveitis and the visual acuity returning to 6/6 in both eyes. The causality of vitritis to Rifabutin intake was probable as per WHO probability scales

DISCUSSION

Rifabutin associated Vitritis has been reported earlier. In a case reported earlier similar reaction to Rifabutin was observed in our patient too. Vitritis could be a result of the formation of anti-rifabutin antibodies or of immunoglobulins directed against a rifabutin–protein complex (serum or tissue protein), similarly to what is already known with Rifampicin. However, Rifabutin in vivo does not alter cellular immunity nor does it decrease the number of circulating CD4 lymphocytes. [4].

In our patient presenting symptoms had no features of uveitis. Symptoms were suggestive of optic neuritis and the patient was also on Tablet Ethambutol. In resource poor settings in this type of clinical situation there is a tendency to just stop ethambutol if there are no ophthalmological services available. Our case highlights the importance of ophthalmic evaluation in all patients on Rifabutin with any ophthalmic symptoms.

In our patient Rifabutin toxicity presented 10 weeks after the initiation of drugs. In all previous case reports, the presentation manifested 3 – 6 weeks after the initiation of drug.

CONCLUSION

All the patients on Rifabutin have to undergo ophthalmic evaluation if there are any ophthalmic symptoms. Rifabutin toxicity can occur throughout the course of treatment that has to be monitored based on clinical manifestations.

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