A CASE REPORT OF RIFAMPICIN-INDUCED
THROMBOCYTOPENIA

Srinavya Maroju*, Swarnalatha Koluguri*, Shilpa Laxman*, Sandeep Ankam,
Dr.Ramya Bala Prabha, Shushanta Kr.Das, Uma Maheswara Rao.V

Department of Pharm. D, CMR College of Pharmacy, Kandlakoya (V) Hyderabad, 501401,
Telangana state, INDIA

Abstract
Drug-related thrombocytopenia is diagnosed by excluding the other causes and to observe the
discontinuation of thrombocytopenia following cessation of the medications which are thought
to be the cause. Rifampicin is an antibiotic used in several diseases and has a potential of
producing immune thrombocytopenia. Thrombocytopenia can occur with initial daily doses of
Rifampicin treatment, as well as after a prolonged interruption of treatment. Patients should be
warned about the unlikely event of developing purpura or abnormal bleeding, they should stop
taking Rifampicin and visit their physician immediately. Clinician must be aware of this rare
complication which is life threatening but if detected early is completely reversible.

Key words: Tuberculosis, Drug-related thrombocytopenia, Rifampicin.

Corresponding Author

Srinavya Maroju

Department of Pharm.D,
CMR College of Pharmacy,
Hyderabad, Telangana state, INDIA

E-mail: srinavya280993@gmail.com
Phone: +91- 8500864035

Available online: www.ijipsr.com

September Issue 1362
INTRODUCTION

Tuberculosis is a chronic granulomatous infection that has caused mortality and morbidity for centuries. Treatment of this disease is problematic because of its long duration and compliance problems. One of the most important factors causing low compliance is the adverse effects of the drugs. Some of them are self-limiting, but some require treatment cessation. Common adverse effects are hepatotoxicity, hypersensitivity reactions, and loss of vision, loss of hearing, flu-like syndrome, hemolytic anemia, acute renal failure, shock, neuropathy, arthralgia, and thrombocytopenia. Although rare, severe thrombocytopenia may be life threatening [1]. A thrombocyte count of <1,50,000/mm3 is defined as thrombocytopenia (TCP).[1]

Thrombocytopenia is an uncommon but potentially life threatening complication of certain anti-tubercular drugs and is characterized by rapid destruction of platelets whenever an offending drug is taken by a susceptible person [2]. Rifampicin is most useful and effective oral anti tubercular agent. [3] It has both ADR’s of rash and thrombocytopenia. Discontinuation of suspected drug leading to resolution of thrombocytopenia provides a strong evidence of drug-induced thrombocytopenia. Rifampicin-induced thrombocytopenia was first reported in 1970. It is usually reversible if detected early and treated appropriately [3]. Drug-related thrombocytopenia is diagnosed by excluding the other causes and to observe the discontinuation of thrombocytopenia following cessation of the medications which are thought to be the cause.[4] Rifampicin is an antibiotic used in several diseases and has a potential of producing immune thrombocytopenia. Thrombocytopenia is generally related to high dose and twice a week use. It has been demonstrated that Rifampicin-dependent antiplatelet antibodies are responsible for the development of this complication [5-8].

CASE PRESENTATION

A 19 year old male patient known case of Tuberculosis(TB) abdomen on ATT (Anti tubercular therapy) since 9 months admitted in General Medicine department with complaints of high grade fever with chills, Burning micturition, Rash over the body. Patient doesn’t have any history of complaints in the past.

General examination:
Patient was conscious/coherent, afebrile. Pulse rate, blood pressure, cardiovascular sounds and per abdomen were found to be normal.
Laboratory investigations:
Blood smear and Dengue serology was performed in suspicion with Dengue and both were shown negative results. Complete urine examination (CUE) was done and it was found to be normal. Ultrasound scan of abdomen revealed an impression of Perispleenic peritonium, Mesenteric lymphadenopathy, Infection collection noted on liver. Complete blood picture was done which revealed low platelet count. Platelet count was monitored on alternate days which were gradually increased as RDPs were transfused.

Treatment:
Since patient is a known case of Tuberculosis of Abdomen, he was on ATT treatment which constitutes of Isoniazide(H), Rifampicin(R), Pyrazinamide(Z) and Ethambutol(E). Rash and thrombocytopenia due to rifampicin were suspected and it was discontinued.

Drugs on admission were: Inj.Ceftriaxone 1gm/IV/TID, Tab.Paracetamol 650mg/TID, Inj.Pantoprazole 40mg/IV/TID, IVF-2units Dextrose Normal Saline (DNS) and 1unit Ringers Lactate (RL), Tab.Artemether 80mg/BID, Plan for 2units RDPs transfusion, Inj.Methyl prednisolone 1gm/IV/BID. Artemether was discontinued on the next day as dengue serology has shown negative. Random Donor Platelets (RDPs) were given alternatively for 4 days and then discontinued as platelet count was increased to 1.2lakhs/cumm. Rash was decreased on day 4th.

Patient was discharged with the medication: Tab. Cefpodoxim 1gm/IV/TID, Tab.PCM 650mg/TID, Inj.Pantoprazole 40mg/IV/TID, Tab. Artemether 80mg/BID, Inj.Methyl prednisolone 1gm/IV/BID, Rifampicin stopped and continued with Isoniazide (H), Pyrazinamide(Z), Ethambutol(E).

DISCUSSION
Rifampicin is a well tolerated bactericidal antituberculosis drug but does not devoid of side effects. Common side effects are cutaneous symptom, an abdominal symptom, a flu syndrome, a respiratory symptom, purpura and elevated transaminase serum level. Thrombocytopenia in the present case was induced by Rifampicin, as the reaction developed in the patient while on therapy with the drug and subsided on its withdrawal. Such a reaction is extremely uncommon in a patient on daily Rifampicin therapy.

CONCLUSION
Rifampicin is a well tolerated and highly effective anti-tubercular drug when given in regular daily doses. Adverse reactions are uncommon, the most frequent being cutaneous reactions and
gastrointestinal upsets although hepatotoxicity may occur. Thrombocytopenia can occur with initial daily doses of Rifampicin treatment, as well as after a prolonged interruption of treatment. Patients should be warned about the unlikely event of developing purpura or abnormal bleeding, they should stop taking Rifampicin and visit their physician immediately. Clinician must be aware of this rare complication which is life threatening but if detected early is completely reversible.

REFERENCES


