

Research in Pharmacy and Health Sciences

Case Reports

Ranitidine Induced Thrombocytopenia: A Case report

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ABSTRACT

Ranitidine is H₂ receptor antagonist. In some critically ill patient it induces thrombocytopenia, which is a rare drug related problems arise during treatment in intensive care unit (ICU) set up. We are going to present a case of 18 year old boy, which had fever and joint pain at the time of admission. Intravenous ceftriaxone, Paracetamol and Ranitidine was administered. Repeated lab investigations showed decrease in WBC and Platelet counts. After excluding the other causes, it was concluded that Ranitidine was the cause of thrombocytopenia.

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INTRODUCTION:

Ranitidine induced thrombocytopenia is a rare drug phenomenon, which occurs commonly severe ill patient. Ranitidine induced thrombocytopenia is due to immune mediated idiosyncratic reaction. It was shown that platelet count reduced up to 75 to 80 % after intake of ranitidine in some individuals' patients and it returns to normal level after stopping the intake of drug.

CASE REPORT:

A 18 years old male came to hospital with complaining of fever, joint pain, nausea and vomiting admitted in internal medicine ward at hospital of Teerthanker Mahaveer Medical College & Research Centre. Routine biochemical test was normal. WBC count of 8000cells/mm cube (N =80,L=15,E=2,B=0 ,M=3) and platelet count of 300000 per microlitre and Hb was 9g%. Malaria and dengue test were negative. Intravenous Ceftriaxone 1 gm BD, Ranitidine 10 mg BD and oral Paracetamol 500mg SOS were started. Blood investigation repeated after 3 days disclosed thrombocytopenia. Important causes of drug induced thrombocytopenia were ruled out. The drug was immediately stopped and significant improvement in the platelet count was noticed. At the time of discharge, Patient had no any fresh complain along with all blood parameters were normal.

DISCUSSION:

There are several mechanisms to produce to thrombocytopenia: failure of production by bone marrow,

immune mediated destruction, platelets aggregation in circulating blood.^[1] Several drugs causing acute immunologically mediated thrombocytopenia.^[1] H₂ receptor antagonists are generally prescribed as a prophylactic drugs for the hospital induced stress ulcer in hospital and for the patient which is at high risk of gastric perfusion.^[2] Ranitidine destroy the platelet by immune mediated idiosyncratic reaction. Ranitidine behave as both hapten and antigen and bind to the plasmatic or membrane proteins. It forms complex as antibody –antigen complex, which is responsible for destruction of platelets.^[3]

CONCLUSION:

In conclusion, in case of thrombocytopenia in ill patients, a pharmacological cause must be suspected, including H₂ receptor blockers. Other alternate regimens for prevention of stress ulcer or gastric ulcer should be considered to avoid the risk of thrombocytopenia.

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