

ADVERSE DRUG ERUPTION SECONDARY TO RIVAROXABAN**¹Dr. Sajal Mahajan (MBBS), ²Dr. Vishwapriya Kumar (MBBS) and ³Dr. Manhar Shah (MBBS)(MS)**¹Junior Resident 3, Department of Emergency Medicine, Dr. D Y Patil Hospital, School of Medicine, Nerul, Navi Mumbai, Maharashtra, India.²Intern, Intern in Dr. D Y Patil Hospital, School of Medicine, Nerul, Navi Mumbai, Maharashtra, India.³Professor and head of department, Department of Emergency Medicine, Dr. D Y Patil Hospital, School of Medicine, Nerul, Navi Mumbai, Maharashtra, India.***Corresponding Author: Dr. Sajal Mahajan (MBBS)**

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ABSTRACT

Adverse drug reactions (ADR) are the most common medical emergency seen in ER. It is essential to know the drugs causing ADR owing to its high rate of hospitalisation leading to high morbidity and mortality. The most common groups of drugs causing ADRs are anti platelet, diuretics, non steroidal anti inflammatory drugs and anticoagulant. A 69 years old male patient presented in ER with multiple blisters on an erythematous base on lower legs since 2 days without any evidence of systemic involvement. Patient gives history of consumption of multiple drugs (anti hypertensives and anti diabetics) amongst which newly consumed drug was Rivaroxaban. It is a factor Xa inhibitor, newly developed anticoagulant used to prevent deep vein thrombosis and atrial fibrillations (AF). So, the final diagnosis of adverse drug eruption secondary to Rivaroxaban consumption was made. We hereby, present you this case for its rarity as rivoroxaban is believed to be the safest of all the anticoagulants with lesser fatal side effects.

KEYWORDS: Adverse drug reaction, Rivaroxaban, Anti-coagulants.**INTRODUCTION**

ADRs are one of the major health problem faced by emergency physicians today owing to the impact on morbidity and mortality.^[4]

The WHO has defined ADR as "Any response to a single drug which is unintended, noxious and occurs at doses generally used for diagnosis, prophylaxis or treatment of the disease". ADR accounts for 4.3% to 10.2 % of hospital admissions.^[5,6,7] Brocq in 1984, coined the term "Fixed eruptions" to describe a pattern of drug reactions with antipyretics.^[1] Since then several studies have been conducted on drugs responsible for adverse reaction amongst which the most common are anti platelet drugs, diuretics, non steroidal anti-inflammatory drugs and anticoagulants.^[2,3] Anticoagulants frequently causes ADRs and is one of the major cause for Emergency department (ED) and hospitalisation. This scenario is reflected in many studies, one of them was conducted by Ruiten *et al*^[2] in Neitherlands, among individuals aged ≥ 55 years, with a conclusion that 23% of ADRs were secondary to anticoagulants, and another one carried out in France on elderly patients, showed that 25.8% of ADRs were because of anticoagulants. Anticoagulant drugs, including warfarin, unfractionated and low molecular weight heparin are among the most common

medications that cause ADR in hospitalized patients.^[10] Anticoagulants have marked innate toxicity, especially oral anticoagulants in particular require close monitoring to ensure safer use of the drugs.^[8]

CASE REPORT

A 69 years old male patient, hypertensive and diabetic presented in ER with multiple, painful eruptions over both the lower legs since 2 days. Patient denied any history of insect bite or trauma. The lesions were tender on touch with no history of itching, fever, oral ulcers, joint pain, eye complaints or any other systemic complains. There was no history of oral or genital lesions. Past and family history was not contributory. General physical and systemic examinations were normal. All the routine investigations (CBC, ESR, LFT, RFT, U r & m, CXR) were within normal limits. The cutaneous examination revealed multiple, well defined, purpuric plaques of 1-1.5 cm on erythematous base, topped with multiple, tense blisters showing seropurulent discharge. Palms, soles and mucosa (oral, genital) were spared.

Based on the history obtained from the patient, he was admitted and operated for left total arthroplasty i.e. Prosthetic dislocation 10 days back for which during the

discharge (3 days back) patient was given potpourri of medications like atorvastatin, metformin, losartan, aspirin, rivaroxaban. Patient was on anti hypertensive and anti diabetic medications since last 10 years and the only newly added drug was rivaroxaban (anticoagulant) which patient consumed 15mg twice daily. The reference was given to the dermatologist for the same and the diagnosis of bullous adverse drug reaction secondary to rivaroxaban was concluded. Hence, the drug was stopped and patient was advised to take an orthopaedic opinion for the alternative of rivaroxaban. The patient was advised topical potent corticosteroid along with antihistaminics and emollients. The lesions resolved with crusting over a week's duration and subsided with post inflammatory hyperpigmentation in 3 weeks.



Fig 1.



Fig 2.

DISCUSSION

Oral anticoagulants are most effective therapy used for the prevention of ischaemic stroke and systemic embolism related to deep vein thrombosis, atrial fibrillation. This is the most common group of drugs given in elderly patients (as seen in our case). There are multiple elderly patient on oral anticoagulants who visit ER on the daily basis for their co-morbid conditions. Oral anticoagulant therapy is complex because of the need for the haemorrhagic risk that the therapy entails. The use of anticoagulants requires custom management for individual patient and proper selection of the drugs, since many of these patients have multiple comorbidities and polypharmacy. Patients admitted for adverse reactions to anticoagulants often die, usually because of the profile of patients taking these drugs (eg, old age, comorbidity and polypharmacy).^[9] So, it is an utmost important for an ER physician to know the pharmacology, metabolism of all the anticoagulants used routinely.

Newly developed anticoagulant agents, such as the direct factor X inhibitors rivaroxaban, apixaban and edoxaban were recently shown to have a favourable risk-benefit ratio under various clinical conditions where anticoagulants are indicated, as is the case with AF (8). Rivaroxaban, inhibitor of factor Xa is an oral anticoagulant used for prophylaxis of deep vein thrombosis and reduces risk of embolism in patients of atrial fibrillation. The most common side effect of the drug is backpain, bleeding gums, hematochezia, bowel bladder dysfunction, hemoptysis, dizziness and the less common side effects are paralysis and drug reaction. However, we report here a case of adverse drug reaction secondary to rivaroxaban due to its rarity.

Conflicting Interest (If present, give more details): none.

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