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A Case Report on Acute Hypersensitivity Reaction to Metronidazole Injection in a Female patient

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ABSTRACT

This case report discusses a 75-year-old female patient with a history of varicose veins, hypertension, and stroke, who presented with pain, swelling, and discharge from the left leg, ultimately diagnosed with bilateral lower limb lymphedema and lymphangitis. The patient experienced an acute hypersensitivity reaction after the administration of intravenous metronidazole, characterized by facial urticaria. The mechanism of this Type I hypersensitivity reaction involves sensitization to metronidazole, leading to IgE-mediated mast cell degranulation upon re-exposure. Given the patient's allergic reaction, clindamycin was identified as a safe alternative antibiotic, effective against anaerobic infections and Gram-positive cocci. This case underscores the importance of vigilance for drug-induced hypersensitivity reactions, particularly in older patients with multiple comorbidities, and highlights the necessity for careful monitoring and personalized antibiotic therapy to ensure patient safety.

1. INTRODUCTION

CASE REPORT:

A 75-year-old female patient was admitted with chief complaints of pain, swelling, and discharge from left leg past 1year. The patient has a history of fever for 7 days, associated chills and rigors. He has been a known case of varicose vein with ulcer for 6years Hypertension for 6 years and stroke for 2 years. The patient was conscious, oriented and afebrile, and other general & systemic examinations were normal. In local examination the patient's left leg got edematous positive(pitting), ulcers, tenderness positive around the wound, ROM-full &terminally painful. Based on the above-mentioned syndromes, the patient was diagnosed with bilateral lower limb Lymphedema with Lymphangitis, systemic hypertension, old cerebral vascular accident left hip and anaphylaxis. The patient was prescribed antibiotics, calcium channel blockers, Analgesic & Antipyretic, H2Blockers, corticosteroids, non-steroidal anti-inflammatory drugs, HMG-COA reductase, dietary supplement, Antihistamine (injection Ranitidine, injection Meropenem, injection metronidazole, injection paracetamol, injection

2. CONCLUSION:

This case underscores the crucial need to always be vigilant for drug-induced hypersensitivity reactions, especially in older patients who are frequently exposed to polypharmacy and have numerous comorbid disorders. Despite its widespread use for its outstanding anaerobic and protozoal coverage, metronidazole can sometimes induce severe hypersensitivity responses, such as IgE-mediated Type I reactions like urticaria, angioedema, and even anaphylaxis. If these reactions are not recognized and treated right away, they might be fatal. The importance of careful monitoring after starting antibiotics, particularly in at-risk patients, is highlighted by the onset of facial hypersensitivity symptoms in this patient after the first intravenous metronidazole dose. It is imperative to stop the offending agent and treat the patient right away with antihistamines and corticosteroids. In addition, finding a secure and successful alternative is essential to maintain ongoing infection control. Given these circumstances, clindamycin proved to be an acceptable alternative, providing excellent Gram-positive and anaerobic protection without the possibility of cross-reactivity. Because of its outstanding tissue penetration and safety profile, it is especially helpful for treating lymphatic and soft tissue infections in patients who have a known hypersensitivity to nitroimidazoles. This instance ultimately highlights the need for personalized antibiotic choices, awareness of side effects, and the use of safer therapeutic options when necessary.

3. PATIENT CONSENT:

Informed consent was obtained from the patient for the publication of this case report.

4. ACKNOWLEDGEMENT:

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