Clindamycin induced Cutaneous Drug Reaction – A Case Report
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ABSTRACT

Adverse drug reactions (ADRs) due to antibiotics is one of the major concern. Hypersensitivity reactions with clindamycin may be immediate or delayed type, but their frequency and severity are relatively rare. We here report a case of a 32-year-old male patient with road traffic accident, who later developed osteomyelitis of occipital bone. After two weeks of therapy and debridement, the patient was on maintenance therapy receiving clindamycin 300 mg q8h, ciprofloxacin 500 mg q12 h and rifampicin 450mg fasting. After six days, he developed erythematous maculopapular rashes, initially on the trunk followed by neck and arm of both upper limbs with limitation of movement, fever, chills and night sweats. The reaction subsided after withdrawal of clindamycin and administering i.v. hydrocortisone 100mg stat followed by tablet promethazine 25mg 12hourly for 3 days. The causality assessment was done as per WHO-UMC scale and it was “probable” in this case. Although the incidence of clindamycin induced drug reaction is rare, the clinicians should be aware of such reactions before prescribing it.

Keywords: Clindamycin, Cutaneous Drug Reaction, Adverse Drug Reactions.

INTRODUCTION

Antibiotics are one of the most commonly used agents to treat various kind of infections. Adverse drug reactions (ADRs) caused by these agents is one of the major concern. Among all ADRs 75-80% are classified into type-A (predictable) whereas 20-25% as type-B (unpredictable). Unpredictable ADRs may be of immediate or delayed type that occur in susceptible individuals. Immediate reactions are usually IgE-mediated whereas delayed reactions are usually non-IgE or T-cell mediated.[1,2] Clinically these ADRs could be cutaneous (e.g., maculopapular rashes, erythroderma, exfoliative dermatitis and fixed drug reactions), organ-specific (e.g., blood dyscracias, hepatitis, interstitial nephritis), systemic (e.g., anaphylaxis, drug induced hypersensitivity syndrome) or various combinations of these. Severe cutaneous ADRs such as Stevens Johnson Syndrome (SJS), Toxic Epidermal Necrolysis (TEN) and Acute Generalized Exanthematous Pustulosis (AGEP) could be life-threatening.[1,3] Beta-lactam antibiotics were found to be the
commonest cause of these ADRs. A special committee on drug allergy of the world allergy organization (WAO) presented the most relevant information about the hypersensitivity reactions due to other antibiotics also and it was found that they are relatively frequent.

Hypersensitivity reactions with clindamycin may be immediate or delayed type, but their frequency and severity are relatively rare. Clindamycin was mostly found to cause exanthematous eruptions, however other reactions that has been reported are anaphylactic shock; urticaria; angioedema; fixed drug eruptions; bullous eruptions; Acute Generalised Exanthematous Pustulosis (AGEP); Sweet’s Syndrome; Stevens Johnsons Syndrome (SJS); Drug-induced Hypersensitivity Syndrome (DIHS)/Drug Rash with Eosinophilia and Systemic Symptoms (DRESS) and TEN. We report here a case of Cutaneous Drug reaction caused by Clindamycin.

CASE REPORT
One month back, a 32-year-old male patient was admitted confronting with a road traffic accident soon followed by transient loss of consciousness, occipital headache, and dizziness with lacerated wound on left side of back of skull. Depressed fracture of occipital bone of left side of skull was treated surgically with open drainage and received oral antibiotic therapy with cefpodoxime 200mg 12hourly and linezolid 600mg 12hourly. 15 days after the surgery, he developed wound infection and received antibiotic and surgical debridement. Due to the persistent wound discharge, infectious disease specialist consultation was requested and osteomyelitis of occipital bone was suggested. A CT scan of his brain showed depressed bone fracture with underlying haemorrhagic contusion of left occipital lobe. Past medical and drug history was negative. Other findings were normochromic-normocytic anaemia, negative CRP, increased WBC count and an elevated ESR equal to 50 mm/h. In wound culture, the methicillin-sensitive Staphylococcus aureus was grown.

Considering all clinical and paraclinical evidences compatible with osteomyelitis, intravenous (IV) 1 g of ceftriaxone 12 hourly plus 500 mg of oral ciprofloxacin 12 hourly daily and rifampicin 450mg fasting begun and the patient was transferred to the infectious ward. The debridement of infected soft tissues and bone was performed through a neurosurgeon. After two weeks of intravenous antibiotic therapy, wound discharge was stopped and the patient was released from the hospital with the maintenance, oral antibiotic therapy including clindamycin 300 mg q8h, ciprofloxacin 500 mg q12 h and rifampicin 450mg fasting.

After six days, the patient developed erythema, maculopapular rashes, initially on the trunk followed by neck and arm of both upper limbs with limitation of movement, fever, chills, night sweats. Physical examination were normal. The laboratory findings were as following: ESR: 31 mm/h, CRP: +1, Wright and Coombs Wright tests, rheumatoid factor and anti CCP were negative and uric acid was 4.5. BUN, Cr and U/A were normal. Patient was immediately given intravenous hydrocortisone 100mg stat followed by tablet promethazine 25mg 12hourly for 3 days.

After discontinuing treatment with clindamycin rashes improved and a triple therapy with ciprofloxacin 500mg BD, linezolid 600mg BD and rifampicin 450mg TDS was given for 3 weeks. In follow-up visits, the wound was normal and the patient had no problem after 3 months.

However, on the 4th post-operative day, the patient became drowsy and developed weakness of the left side of the body.

DISCUSSION
Clindamycin is a lincosamide antibiotic that inhibits bacterial protein synthesis. It is approved for the treatment of anaerobic, streptococcal and staphylococcal infections. It was found that clindamycin shows prompt clinical and bacteriologic response. It has excellent tissue as well as bone penetration. Thus, there is increasing use of clindamycin in clinical practice to treat infections. In spite of the increased use of this antibiotic, the adverse reactions are minor. Rash is the only cutaneous adverse reaction that has been reported so far with an incidence of <1%. Recently, a rare adverse
reaction of wrist monoarthritis occurred due to clindamycin.\textsuperscript{[6]}

In our case, we found erythematous maculopapular rash associated with fever and chills causing hospitalization of the patient six days after initiating clindamycin therapy. The patient had no previous history of any kind of allergy or drug reactions. The most common presentation for clindamycin allergy is a delayed maculopapular exanthema which usually occurs after 7-10 days of initiation of drug therapy.\textsuperscript{[2]} In our case the patient presented with rash initially on the trunk followed by neck and arm of both upper limbs with limitation of movement, fever, chills, night sweats. A similar case was seen where the patient presented with rash on antecubital fossa, neck, abdomen, thighs, legs and face after 10 days of clindamycin therapy along with methylprednisolone and was diagnosed with DRESS syndrome.\textsuperscript{[7]} Our case did not have DRESS syndrome as his general physical examinations were normal, there was no systemic involvement and his laboratory values were within normal limits. The administration of systemic corticosteroids is the standard therapy for this condition, but it may be susceptible to cause infections.

Several tests are there to confirm the causative agent. These are skin prick test, intradermal test, patch test or oral rechallenge test. Of these, skin prick test, intradermal test, have not found to be effective for the diagnosis of clindamycin induced drug reaction. Patch test with clindamycin showed maximum result.\textsuperscript{[4]} However, we could not perform any of these tests to confirm the causative agent. In our case the patient recovered after withdrawing of clindamycin from the therapy and causality assessment as per WHO-UMC, scale was “probable” in this case.

CONCLUSION

Although the incidence of clindamycin induced drug reaction is rare, but it has the propensity to cause serious life threatening conditions. Thus, the clinicians should be aware of such reactions before prescribing Clindamycin.

What this study adds

1. What is known about this subject?
Hypersensitivity reactions with clindamycin may be immediate or delayed type, but their frequency and severity are relatively rare. Among them exanthematous eruptions are the mostly commonly found reaction due to clindamycin.

2. What new information is offered in this study?
Adverse drug reactions (ADRs) due to antibiotics is one of the major concern. Although the incidence is rare, but the clinicians should be aware of such reactions before prescribing Clindamycin.

REFERENCES


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