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A Case Report on Ceftriaxone Induced Exfoliative Dermatitis

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<p>Dr. Suresh Sake¹, M. Janardhan*¹, Dr.C. Sugunakar Raju¹, S. Mahin¹, Y. Chaitanya Kumar¹, R. Rameswari¹, Dr. S. Parveen².</p> <p>¹<i>Consultant Dermatologist in Internal Medicine, Rural Development Trust Hospital (RDT), Bathalapalli, Anapatur, India – 515661</i></p> <p>²<i>Assistant professor, Department of Pharmacy Practice (Pharm D), P Rami Reddy Memorial College of Pharmacy, Kadapa, India – 516003</i></p> <p>¹<i>Department of Pharmacy Practice (Pharm D), P Rami Reddy Memorial College of Pharmacy, Kadapa, India – 516003.</i></p> <p>Submission: 2 February 2017 Accepted: 7 February 2017 Published: 25 February 2017</p>

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ABSTRACT

Exfoliative dermatitis is a type of drug-induced skin reaction pattern that characteristically recurs at the face, chest, same skin or mucosal site. Ceftriaxone is one of the common drugs prescribed as antibiotic agent in all age group of patients. ED is a well-reported, but uncommon side-effect of Ceftriaxone, usually the classic, pigmenting type most commonly found in children and adolescents. We present a case of 40 years old female patient who developed Exfoliative Dermatitis over the back, abdominal region, face and chest region and total body following ceftriaxone use.



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INTRODUCTION

Exfoliative dermatitis is an inflammatory dermatosis involving more than 90% of body surface area. It is a life-threatening condition if not treated in time [1]. Cutaneous drug eruptions are one of the most common types of adverse reaction to medications, with an overall incidence of 2–3 % in hospitalized patients [2]. In particular, drug induced exfoliative dermatitis (ED) are a group of rare and more severe drug hypersensitivity reactions (DHR) involving skin and mucous membranes and usually occurring from days to several weeks after drug exposure [3]. Antibiotics are administered prior to some susceptible infections. Ceftriaxone causes number of adverse effects, those are bleeding, nephrotoxicity, allergic manifestations and disulfiram like effect etc. Cephalosporins are administered intravenously because of their poor oral absorption. These are well distributed into body fluids, and elimination occurs through tubular secretion [4].

CASE REPORT

A 40 years female patient was admitted in female medical ward in RIMS with the chief complaints of fever, vomitings and rashes. She had past medical history of known hypertensive since 3 years. Her ultrasound abdomen examination shows fatty liver and cholelithiasis. She was on treatment with Tab Amlodipine since 3 years, she was in treatment with Inj. Ceftriaxone, Tab. Paracetamol, Inj Pantoprazole, Tab. Udiliv, Tab. Metronidazole for high-grade fever with fatty liver in SVIMS at Tirupati after 3 weeks she was discharged.

She was admitted in general medicine ward with complaints of multiple scaly lesions and maculopapular lesions at lower the back and vertebral regions. She was prescribed with Inj Ceftriaxone, Tab. Hepamerz, Inj. Pantop, Tab. Paracetamol, Inj. Ondansetron continued same treatment for 3 days. On next day, rapidly spreading total body surface and also develops erythema over the face, shoulders region and also followed by non-follicular lesions leading to exfoliative dermatitis. On next day Inj. Ceftriaxone was stopped after 2 days complaints was reduced, so we suspect that it is a condition of Ceftriaxone induced exfoliative dermatitis.

On general examination she had increased temperature 103⁰F, blood pressure 140/90mmHg, WBC-7.6 cells/cumm, Neutrophils: 72%, Lymphocytes: 26, Eosinophils: 0.2%, RBS: 112 mg/dl,Urea :28 mg/dl, Serum Creatinine :10mg, Bilirubin:1.4gm/dl, Renal Function Tests are

normal. Urine Analysis, Bacteria Culture, Serology tests are negative and she was diagnosed ED and she was treated Tab. Cetirizine, Inj. Dexamethasone, Inj. Pantop, Tab. IFA.

A complete resolution was achieved on 11th day with Ceftriaxone induced ED shown in figure 01. 10 days later she was evaluated in dermatology department and she referred do not take Ceftriaxone. Patch test is useful for better results in further studies.

Ceftriaxone Induced Generalized ED is shown in figure 01. The probability of ED due to Ceftriaxone cannot be ruled out after applying Naranjo's scale of causality assessment of ADR's with a score of 3. Laboratory investigations such as Haemoglobin, Complete Blood Count and Blood Sugar level were found to be within normal limits. Rest of the treatment was continued and the initial symptoms improved over next 5 days. WHO ADR assessing scale Karch and Lasagna results were shown in table 01. We also assessed the severity, predictability and preventability as a part of management through modified hart wig and Siegel severity scale, Schomok and Thornton preventability scale.



Figure 01: Ceftriaxone Induced Exfoliative Dermatitis.

ADR Management:

Generally, Management of ADR includes withdrawal/suspension, dose reduction of suspected drug and administration of supportive therapy. Here, in this case, report the suspected drug Ceftriaxone was discontinued.

ADR analysis:

TABLE 01: causality assessment of suspected ADRs

Suspected drug and reactions	Naranjos Scale	WHO-Probability Scale	Karch & Lasagnas Scale
Ceftriaxone-induced Exfoliative Dermatitis	Possible	Probable	Probable

SEVERITY: - Moderate Level- 3

PREDICTABILITY: - Un-Predictable

PREVENTABILITY: - Probably Preventable

DISCUSSION

Ceftriaxone may show severe ADR's. ED is one of the severe reactions of Ceftriaxone. Immediate replacement of the drug with other antibiotics such as Amoxiclav 1.2gm. In this case, ED may develop after administration of the drug and relieved the allergic reactions after withdrawn of the drug. In this period corticosteroids may helpful of the reducing the allergic reactions. Some of the drugs may give the supportive therapy of the ED such as Histamines, Vitamin Supplementary, Protein Support, Liquid paraffin [reducing the dryness], Antibiotics may prefer for any super added infection.

CONCLUSION

Ceftriaxone is widely prescribed by physician as well as also a popular antibiotic drug. Physician must suspect if such reaction occurs during therapy involving Ceftriaxone and should carefully evaluate drug-associated reaction. It is important that skin reactions are identified and documented in the patient record and patient should be explained properly not to use that drug so that their recurrence can be avoided in future.

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