**Rickettsial Fever with Cefixime Induced Rash: Case Report**

**Sindhushree N**, **Rajesh Venkataraman**, **Puneeth G.K**, **Hrasha C**

1. Pharm D Interns, Department of Pharmacy Practice, Sri Adichunchanagiri College of Pharmacy, Adichunchanagiri University, Mandya, Karnataka, India.
2. Professor and Head of the Department, Associate Professor, Department of Pharmacy Practice, Sri Adichunchanagiri College of Pharmacy, Adichunchanagiri University, Mandya, Karnataka, India.

*Corresponding author’s E-mail: sindhunshree@gmail.com*

**ABSTRACT**

When a child has a fever and rashes, the diagnosis can frequently be determined with only one look, but it can also be difficult to make even after days of clinical observation and comprehensive laboratory testing. Cefixime has antibacterial properties because it inhibits the production of mucopeptides in the bacterial cell wall. Rickettsia is a category of vector-borne bacteria that causes acute fever diseases all around the world. While Rickettsial illness has a similar clinical presentation across the country, the causative species and epidemiology differ by region.

**Keywords:** Rickettsial Fever, Cefixime, Case report, Rash.

**Case presentation:**

A 16 years old boy with a background of renal colic for 1 week and undergone Urethroscopic removal of stone done 3 years ago and on admission, he was suffering from fever since 1 week and consuming Tab Dolo 650, Tab.Taxim and had rashes all over body including palms and soles since 2 days before the admission, also had complaints on Myalgia since 2 days. He had complaints of high grade fever which relieved with medications, associated with rashes in the morning on the day of admission no aggravating factors, not associated with chills/rigors.

He had no history of complaints on CHD, TB, Epilepsy, Bronchial asthma in the family. Immunization was done as per NIS, and the last immunization was done when he was at the age of 1 ½ and no optional vaccines were given.

On physical examination, he was alert, oriented, and conscious. He had multiple firm, non tender, right and left cervical and inguinal lymph nodes as well as an erythematous maculopapular rash on his chest, abdomen, back, and upper limbs without palm and sole involvement that was highlighted with fever; the rash was inconspicuous when fever subsided.

His vital organ sign on the day of admission were, blood pressure (110/80 mmHg), pulse rate:80 bpm, body temperature was 103.5 F, respiratory rate:18cpm, CRT<2seconds. Blood Investigation immediately after admission showed sodium levels of 134mmol/L, CRP:38.2 mg/L, Albumin:3.0 g/dl, globulin: 2.3 g/dl, total...
protein: 5.3 g/dl, SGOT: 53 U/L, Hemoglobin levels were 11.8 g/dl, and total count was decreased to 3760 cells/cumm, RBC red blood corpuscles of 3.9 and platelet count was 0.78 lakhs/cumm. Laboratory workup summarized in Table 1.

![Figure 1: Erythmatous rash on the chest region](image1)

![Figure 2: Rashes on hand](image2)

### Table 1: Laboratory Investigations.

<table>
<thead>
<tr>
<th>Laboratory findings</th>
<th>Day 1</th>
<th>Day 2</th>
<th>Day 3</th>
<th>Day 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Haemoglobin</td>
<td>11.8 gm/dl</td>
<td>11.8 gm/dl</td>
<td>12.4 gm/dl</td>
<td>12.3 gm/dl</td>
</tr>
<tr>
<td>Total WBC</td>
<td>3760 cells/mm³</td>
<td>3890 cells/mm³</td>
<td>3890 cells/mm³</td>
<td>3890 cells/mm³</td>
</tr>
<tr>
<td>RBC</td>
<td>3.94</td>
<td>3.96</td>
<td>3.96</td>
<td>3.96</td>
</tr>
<tr>
<td>PCV</td>
<td>34.7</td>
<td>34.9</td>
<td>34.9</td>
<td>34.9</td>
</tr>
<tr>
<td>PLATELET</td>
<td>0.78</td>
<td>0.96</td>
<td>0.96</td>
<td>0.96</td>
</tr>
<tr>
<td>RBS</td>
<td>104 mg/dl</td>
<td>109 mg/dl</td>
<td>109 mg/dl</td>
<td>109 mg/dl</td>
</tr>
<tr>
<td>BLOOD UREA</td>
<td>38 mg/dl</td>
<td>40 mg/dl</td>
<td>40 mg/dl</td>
<td>40 mg/dl</td>
</tr>
<tr>
<td>Na⁺</td>
<td>134 mmol/L</td>
<td>134 mmol/L</td>
<td>134 mmol/L</td>
<td>134 mmol/L</td>
</tr>
<tr>
<td>K⁺</td>
<td>4.0 mmol/L</td>
<td>4.2 mmol/L</td>
<td>4.2 mmol/L</td>
<td>4.2 mmol/L</td>
</tr>
<tr>
<td>Cl⁻</td>
<td>102 mmol/L</td>
<td>103 mmol/L</td>
<td>103 mmol/L</td>
<td>103 mmol/L</td>
</tr>
</tbody>
</table>

Other tests:
- Rapid Malarial test: Negative
- Malarial parasite smear: Negative
- Weil – Felix: Negative

He was initially treated with Doxycycline 100 mg BD and the fever spikes was reduced on day 2 and rash was reduced in the palm and trunk region, treatment continued for 3 days and there was no fresh complaints of fever and eruption of rashes. Patient improved clinically and was being discharged in a stable condition on advice.

**DISCUSSION**

We came across a case of maculopapular skin rashes all over the body of a 16 years old boy. The reason for the arise of rashes was due drug induced adverse reaction by cephalosporin (cefixim). Previous studies convey that rash occurred in 12.3%, 7.4%, 8.5 percent, and 2.6 percent of children who got cefaclor, penicillin, and cephalosporins, respectively. The majority of drug-induced adverse events
in children are caused by antibiotics, which are the most commonly prescribed paediatric outpatient medicines. 5

Doxycycline is the first-line treatment for rickettsial illness. Chloramphenicol, on the other hand, can be utilised. Standard antirickettsial medications, such as tetracycline or doxycycline, are ineffective against some types of rickettsiae. Some experts recommend using doxycycline or a combination of antibiotics, including rifampicin, to treat resistant instances. Doxycycline worked well for our patient. 2

**CONCLUSION**

As Rickettsial fever with rashes is linked to cephalosporin toxicity, patients who are taken cefixime or its combinations should be closely monitored. Patients should be informed if they are allergic to cefixime and given an ADR alert card to carry with them whenever they visit a doctor. Before completing the prescription, the doctor should inquire if the patient has a history of cephalosporin allergy. This study also demonstrates the importance of a clinical pharmacist on ward visits.

**REFERENCES**


**Source of Support:** The author(s) received no financial support for the research, authorship, and/or publication of this article.

**Conflict of Interest:** The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

For any question relates to this article, please reach us at: globalresearchonline@rediffmail.com

New manuscripts for publication can be submitted at: submit@globalresearchonline.net and submit_ijpsrr@rediffmail.com