

## Case Report

# Bullous Skin Disease Occurring Due to Bedbug Bite: Case Report

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## Abstract

Bedbug bites are arthropod bites which are mostly seen in especially developing countries and in countries which have low socio-economic status. If allergic reaction occurs due to these bites; urticarial skin rashes, macules, papular lesions can be observed. Its aetiology is not known clearly. Aim of this case example is to present the skin reactions occurring in a 40-year-old male patient, who has come to our emergency service, due to bedbug bite.

**Keywords:** Bullous pemphigoid; Bedbug; Auto-immune disease

## Introduction

*Cimex Lectularius* popularly known as bedbug belongs to Cimicidae insect family [1]. They feed on bleeding humans and animals. This family consists of two species as *Cimex Lectularius* and *Cimex Hemipterus* which live in mild climates. An adult bedbug feeds three or five times a day. Bedbug bites mainly resemble other arthropod bites; but they tend to be dense on the skin that is not covered during the sleep [2]. Single symptom of bedbug bites can be itchy erythematous macules for individuals who have not been bitten before whereas more severe local lesions such as vesicles and bullous can be observed for individuals who have been bitten before. This case report presents the skin reactions occurring in the patient who has been bitten by bedbug before and who has the same complaint again; and management of this by corticosteroid treatment.

## Case Presentation

A 40-year-old male patient came to our emergency service complaining about bullous and papular lesions on skin continuing nearly 1 week. It was seen in the physical examination of the patient that there were healed ulsere lesions and fluid retention around his left eye. The patient said that his complaints of these were occurred after his contact with "*Cimex Lectularius*" which is popularly known as bedbug. Vitals of the patient when he came were as TA: 125/82 mmHg, Pulse: 95 beat/per minute oxygen Saturation: 98% Fever: 36.3°C. Patient's lesions are as the following (Figures 1 and 2).

We have learnt that the patient does not have any chronic diseases, use any drugs regularly and is not sensitive to any allergen he knows. Other system examinations of the patient were normal and any additional pathology was not encountered.

The result of hemogram analysis of the patient was as the following: WBC: 7120  $\mu$ L, HGB: 14.6 g/dL, HCT: % 42.4 and PLT: 298.000  $\mu$ L. The result of biochemistry analysis of the patient was as the following: Glucose: 100 mg/dl, Creatinine: 0.83 mg/dl, GGT: 38 IU/L, ALT: 19 U/L, AST: 24 U/L, LDH: Haemolysis, Calcium: 9.5 mg/dl, Sodium: 136 mmol/L, Potassium 4.4 mmol/L, Chlorine : 106 mmol/L, CRP: 5.3 mg/L. The result of coagulation analysis of the patient was as the following: aPTT: 22.5 seconds, PTZ: 11.5 seconds, INR: 1.0.

40 mg prednol, 40 mg pantoprazole, 45.5 mg pheniramine hydrogen maleate were applied to the patient in a 1000 cc physiological saline solution at the emergency service and this treatment continued for 3 days. At the same time the patient was prescribed 15 mg mepyramine maleate, 15 mg lidocaine hydrochloride and 50 mg gel consisting of dexpanthenol and antihistamine. The changes in the lesions of the patient when he came in the second day are as the follow (Figures 3 and 4). We recommended our patient whose complaints were decreased with the treatment to see the dermatology clinic.

## Discussion

Bedbug causes allergic reactions. We studied diagnosis and treatment process of the patient who came to the emergency service complaining about itchy bullous papular lesions in this case report. The patient did not have any known dermatological diseases. Patient's lesions occurred as a result of bedbug bite. The patient was discharged from the hospital after he recovered with our treatment. DeShazo et al. [3] took the photographs of bedbug bites at the 6<sup>th</sup>, 12<sup>th</sup>, 24<sup>th</sup>, 36<sup>th</sup> and 72<sup>th</sup> hours; even for 4 weeks in the article they published in May 2012. They scanned the medical literature for finding patients who developed bullous reaction due to these bites and found out that bedbug bites were only seen in the 6% of the patients. Antigens in the bedbug's saliva were held liable for this hypersensitivity reaction [4]. Fallen et al. [2] emphasized in the study they carried out that bedbug bites must be taken into consideration during differential diagnosis,

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**Figure 1:** Bullous and papular lesions on patient skin.



**Figure 4:** Changes in the eye after treatment.



**Figure 2:** Healed  lsere lesions and fluid retention around his left eye.



**Figure 3:** Changes & decreasing the lesions of the patient after treatment.

these lesions causing various skin lesions and psychological disorders can even cause anaphylaxis. They also asserted that corticosteroids, symptomatic drugs can be used against this bedbug invasion which does not have an exact treatment protocol; however actual treatment is the eradication of this living creature. Wieczorek et al. [1] reported in their study that bedbug bites can imitate bullous diseases such as Pemphigoid or Duhring disease; and that differential diagnosis of the auto-immune diseases can be accurately made with immunofluorescence examinations.

As a result; disease situation related to bedbug must be questioned in the medical history of the patients who came to emergency service complaining about erythematous, bullous or papular lesions and this situation must not be ignored.

## References

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