

Sleeping With the Enemy

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A middle-aged male presents to the clinic with a 10-day history of numerous pruritic papules scattered all over his body (Figure 1). He has recently returned from a holiday at an all-inclusive resort in Central America, where he captured some suspicious creatures (Figure 2).

What is the diagnosis?

This is a case of **bed bug bites**. Historically, bed bugs have been problematic in crowded, unsanitary conditions. However, these wingless insects have enjoyed a resurgence over the past few years, cropping up anywhere from homeless shelters to five star hotels.

Bed bugs include seven species of the *Cimicidae* family, the most common being *Cimex lectularius*. These creatures feed on mammalian and avian blood and they bite their victims at night. They appear as 5 mm to 7 mm oval-shaped, flat and tan-coloured insects with six legs. They turn a reddish-brown colour after engorging with blood.

On examination, bed bug bites are most commonly found on exposed areas of skin, including the:

- face,
- neck and
- extremities.

One feature that distinguishes them from other arthropod bites is a linear configuration of three bites, known as breakfast, lunch and dinner.

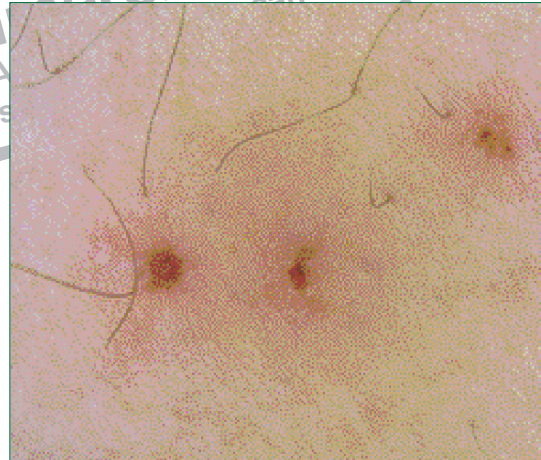


Figure 1. Grouped erythematous papules.



Figure 2. *Cimex lectularius*.

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While the severity of symptoms varies, the bites often appear as pruritic, erythematous papules or wheals, with a central hemorrhagic punctum. The bite causes an irritation, as well as a range of immune-mediated reactions, which may take a few days to develop. Bullous eruptions and anaphylaxis are rare. Symptomatic treatment with topical steroids and oral antihistamines may be helpful. Chronic exposure may produce:

- anxiety,
- fatigue,
- pallor and even
- iron deficiency.

Secondary infections (*i.e.*, impetigo, ecthyma, lymphangitis and cellulitis) may complicate the course; however, bed bugs have never been proven to be vectors of infectious disease.

Confirmation of bed bug infestation can be difficult. The insects hide during the day, finding sanctuary in:

- small crevices in floorboards,
- walls,
- furniture,
- mattresses,
- bedding,
- suitcases and
- wallpaper pockets.

Infestation is not influenced by cleanliness, as even spotless homes may become infested.

Clues to look for include:

- eggs cemented to hard surfaces,
- specks of insect excrement,
- bloodstains on bedding and
- cast-off exoskeletons from bed bug molting.

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Since bed bugs can live for longer than a year without a blood meal, they are notoriously difficult to eradicate. In addition to filling wall and floor crevices, vacuuming and steam cleaning may be useful (be sure to discard the vacuum bag). Smaller items that potentially harbour eggs or live insects should be laundered in hot water. Pesticides, such as permethrin (present in many commercially available products) should be applied to any bug-ridden surfaces and reapplied in one week to two weeks. Evidence of bed bug activity two weeks after an elimination attempt is considered a failed attempt. A professional pest-control specialist may need to be consulted.

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