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## BED BUGS

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## EDITORIAL

Insects of the genus *Cimex*, which belong to the family *Cimicidae*, have different names in Spanish-speaking countries, but are popularly known as *chinchas de cama* (bed bugs). In some regions of Colombia they are known as *chapetones*.

The earliest evidence of the association of cimicids with humans dates back over 3 500 years ago, (1-3) and it has been established that they were common in the Mediterranean throughout the Roman era, subsequently spreading from there to other regions via shipping trade (3). Cimicids are members of the order Hemiptera, which also includes Triatominae, and in Colombia are known as *pitos* (vernacular name).

Cimicids are hemimetabolous insects since they are morphologically and physiologically similar to adults in their early stages. The five nymphal stages and the adults are obligate hematophagous, and their blood sources are humans and other warm-blooded vertebrates. Their biting activity is nocturnal (2,3). Unlike triatomines, cimicids are apterous insects, so they cannot fly and, consequently, their movements are usually short, which means that they must be transported by their hosts on clothing, furniture, and other belongings for their spread.

There are three recognized species of cimicids that feed on human blood: *Cimex lectularius*, *Cimex hemipterus*, and *Leptocimex boueti* (3,4). The former is found mainly in warm areas of the planet, while the latter is distributed in tropical and subtropical areas, although in recent years it has been reported that it spread to temperate areas of the Middle East, the United States, Russia, France, Switzerland, Italy, Spain, and northern Australia (3,5).

*C. lectularius* and *C. hemipterus* can coexist sympatrically in regions of Africa, Australia, the United States (Florida and Hawaii), and Taiwan, while *L. boueti* are reported in West Africa and South America. Recently, the presence of *C. lectularius* has been registered in poultry farms (3), which suggests that one of its food sources is poultry blood, so infestation can also be considered a zoonosis. Moreover, a significant feature of these insects is that they can go into dormancy for several months when there is no food source available until conditions for feeding are favorable (6), which is similar to the situation of triatomine bugs.

The health importance of these insects lies in several aspects such as the immune response to their bite, which can induce respiratory symptoms and dermatological lesions (3,7,8). Other aspects related to infestations are mental health problems and social stigma and discrimination (9). In addition, infestations also have a significant impact on the economy (10,11).

While it has not been established yet whether bedbugs in the wild serve as competent vectors for any pathogenic agents for humans, a study by Salazar *et al.* (12) indicated that they can become infected with *Trypanosoma cruzi* from experimentally infected mice and that, in turn, the mice were able to transmit the parasite to other uninfected mice. Likewise, Blakely *et al.* (13) conducted a study in which they found

that bedbugs in the nymphal stage infected with *T. cruzi* retained the parasite after molting, suggesting that there was a transstadial transmission of *T. cruzi*.

The niches of *C. lectularius* and *C. hemipterus* are associated with humans and can be found in bedrooms, hotels, offices, libraries, and means of transportation such as airplanes, ships, buses, and trains (3). After almost being eliminated through the use of insecticides, bedbugs have re-emerged in countries such as the United Kingdom, where insecticide resistance and possible resurgence due to increased international travel and trade were first reported in 1998 (3).

Considering the resurgence and adaptation of bedbugs to new geographical locations, the case series published in the current issue of Case Reports (14), detailing a *C. hemipterus* infestation in Medellín, Colombia, is of utmost importance as it is the first study to inform on the presence of this insect in the country and describe how it survives under the conditions of the city. This article also addresses the impact on mental health of individuals exposed to these organisms and, consequently, the implications for public health, serving as a warning to authorities regarding the possible introduction of *C. hemipterus* into the country due to increased travel to regions where the insect is prevalent. On the other hand, the cases presented in this report demonstrate the effectiveness of alternative treatments for controlling and preventing reinfestations, as reported in the literature, due to the resistance that bedbugs have developed to various types of insecticides (15,16).

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