

Preliminary report of body lice infesting homeless people in Brazil

Dear Editor

The *Pediculus humanus humanus* (body louse or Brazilian “muquirana”) has been causing infestations in vulnerable human populations with poor hygiene habits such as homeless, inmates and refugees¹. *P. h. humanus* is the only of three lice species related to potentially lethal infectious diseases, recognized as a competent vector of *Rickettsia prowazekii*, *Bartonella quintana* and *Borrelia recurrentis*². Recent data from *Marseille*, France (43°17'47"N 5°22'12"E) and *Bogotá*, Colombia (4°42'40"N 74°4'20"W) have described a decrease over time in overall body lice prevalence and have identified independent risk factors (older age, length of stay in France for migrants, frequent consumption of alcohol and tobacco smoking) for infestation among French homeless people³, alongside with 11.7% body lice prevalence in Colombian homeless⁴. Despite a Mediterranean climate in *Marseille* (14.5 °C) and a subtropical highland climate in *Bogotá* (12 °C), both cities provide similar mild average temperatures that favor body lice interaction with homeless people.

Based on these concomitant findings, we have first investigated body lice in a homeless of Curitiba (25°25'47"S, 49°16'19"W), the coldest and the eighth biggest Brazilian State capital (average temperature 16.5 °C), with a similar subtropical highland climate in comparison with *Bogotá*. A homeless volunteer found in downtown square, presenting truncal pruritic and scratching lesions was examined. Lice were collected using forceps and identified as *Pediculus humanus humanus* (body lice) based on the recovery site (clothing). Due to this positive finding, similar survey was performed in a homeless shelter of downtown *São Paulo* (23°33'1"S, 46°38'2"W), the largest South American city, with humid subtropical climate and average temperatures varying from 19 °C (winter) to 25 °C (summer).

Overall, several nits were evidenced in clothing seams with 10 (7 nymphs and 3 adults) body lice recovered in the Curitiba's homeless and 57 (50 nymphs and 7 adults) in clothing from 2 out of 5 homeless examined in *São Paulo* (Figure 1).

Limited body lice records were described in Brazil, infesting clothes and bedding of three relatives living in precarious household conditions in a shantytown in *São Paulo*⁵, and a considerable infestation in a homeless person with abrasions and hyperchromic skin lesions⁶. Nevertheless, in this last report *P.h. capitis* may have been mistaken for *P. h. humanus* as specimens were collected in hairy body areas and not in clothes⁵.

Our preliminary findings confirmed the suspicious body lice circulation among homeless populations in major Brazilian cities, drawing attention to the diagnosis, control and prevention of body lice infestation in vulnerable populations of other



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tropical cities in Latin America, and suggesting that further investigation of potential associated diseases should be performed.

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