

Correspondence

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Head lice infestations in different ethnic groups

A number of surveys of school children populations, mainly in the US, have shown a low prevalence of head lice among black school children (0–0.3%).^{1–7} There is one survey from Brazil showing a similar prevalence in white, black and Asian school children.⁸ In African school children, a higher prevalence can be found with 7% of black children infested compared to 17% of nonblack children in mixed communities.⁹ The low incidence has been attributed to the use of hair-oils to straighten hair, which may coincidentally suffocate head lice,⁷ or to an oval cross-sectional hair-shape in Negroid hair, which is meant to be less favorable for head lice; although there has been no evidence to support either of these claims. Since black children, like any other children around the world, are colonized by head lice,^{9,10} one might expect an anatomical adaptation in these lice if Negroid hair poses a more difficult living environment. We looked at the anatomical features of live adult head lice collected from black as well as white school children in a predominantly white district in a British city to see if such a difference exists. We also compared the incidence of head lice and the use of hair gel amongst black school children compared to the rest of the school population.

Approval from the south and west regional ethical committee had been obtained to assess school children (aged 5–11) for head lice and collect samples. Consent for inspection was obtained from parents and 95% of available children were examined ($n=930$). School children with an established head lice colony (defined as the presence of at least one live adult louse) were identified, and live adult head lice were collected off school children's hair using a fine-toothed plastic comb. The lice were preserved in formalin and mounted in agar gel. All the lice

were oriented in the same plane and photographs were taken of the whole body ($\times 100$ magnification) and of the right fore-leg claw ($\times 400$ magnification). To adjust for the difference in age and size of the lice, the ratio of body lengths was compared with the ratio of radii described both for the arc of the inner hinged claw-edge as well as the arc of the outer hinged claw-edge. Eight pairs of lice, one each from a black child and one each from a white child were assessed. A two-tailed Student's *t*-test comparing the radii ratios with the body length found no significant differences ($P=0.26$, body/outer claw arc; $P=0.27$, body/inner claw arc; $P=0.59$). Two-hundred and ten nonblack children out of 700 had a head louse infestation as did 7 out of 20 black children. There was, therefore, no significant difference in the likelihood of infestation ($P=0.33$, χ^2 -test). Six of the black children used hair gel regularly and none were infested with head lice; only one of the 43 nonblack children who use hair gel had head lice. Children in both populations were significantly less likely to have a head louse infestation when using hair gel ($P=0.04$ and $P=0.002$ for black and nonblack, respectively, Fisher's Exact test).

No anatomical differences were found on macroscopic assessment of individual lice, and no significant differences were found between the shapes of the fore-claws. Therefore, head lice on black children are not a specific strain adapted to Negroid hair. Bias may have been introduced into our measurements if the claws or bodies were not rotated in the same plane. The low incidence of head lice often found in black children in previous studies is more likely to be due to two factors. Firstly, curly hair can be difficult to comb with a louse detector comb, and since this is the best way to detect head lice, then a low incidence may be recorded in black children compared to nonblack

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children with straight hair. Secondly, hair oils are used to straighten curly hair and were used extensively by black children in some of the populations examined.⁷ It is likely that these products block head lice breathing holes and lead to suffocation. The regular act of combing to aid hair straightening will also remove lice. Our survey confirms that hair gel directly or indirectly leads to fewer head lice infestations.

It is important not to exclude black children when assessing and treating for head lice, even when the incidence in this group is lower. Extra time may be required to avoid missing infested cases.

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References

- 1 Slonka GF, McKinley TW, McCoran JE, et al. Epidemiology of head lice. *Am J Trop Med Hyg* 1976; **25**: 739–743.
- 2 Sokoloff F. Identification and management of pediculosis. *Nurse Pract* 1994; **19**: 62–64.
- 3 Ashcroft MT. Racial differences in *Pediculus capitis* infestation in Guyana. *Trans Roy Soc Trop Med Hyg* 1969; **63**: 547.
- 4 Hoffmann G. Epidemiology and control of pediculosis capitis infestation in the Federal Republic of Germany. *J Roy Soc Hlth* 1983; **3**: 88–92.
- 5 Juranek DD. Epidemiology of lice. *J Sch Hlth* 1977; **6**: 552–555.
- 6 Clore ER, Longyear LA. Comprehensive pediculosis screening programs for elementary schools. *J Sch Hlth* 1990; **60**: 212–214.
- 7 Green EM. Pediculosis in Boston's public schools. *Boston Med Surg J* 1898; **68**: 70–71.
- 8 de Madureira PR. Pediculosis and ethnic groups. *Int J Dermatol* 1991; **30**: 524.
- 9 Chunge RN. A study of head lice among primary schoolchildren in Kenya. *Trans Roy Soc Trop Med Hyg* 1986; **80**: 42–46.
- 10 Ebomoyi E. Pediculosis capitis among primary school children in urban and rural areas of Kwara state. *Nigeria J Sch Hlth* 1988; **58**: 101–103.

Chronic phlebopathic cutaneous ulcer: a therapeutic proposal

Chronic phlebopathic cutaneous ulcers on the lower limbs are frequently observed at health services. Their treatment is always long and difficult due to therapeutic and etiologic diversity.^{1,2}

A new material based on natural latex from the rubber tree *Hevea brasiliensis*, treated with 0.1% polylysine, shown as an important inductor of wound healing of the esophageal wall of dogs through

mechanisms involving a marked increase in vascularization (neoangiogenesis), has been successfully researched by investigators from Faculty of Medicine of Ribeirão Preto-USP, Brazil, since 1994.^{3–7}

Considering the discomfort provoked by the chronic course of these lesions and their treatments, we present a proposal of effective, low-cost and biocompatible treatment using the natural latex biomembrane.

Case report

A 64-year-old Brazilian white man, had been presenting with painful ulcer-necrotic lesions on the right leg and foot for 1 year. These were associated with recurring venous ulcers that had been occurring for 25 years. He had hypertension controlled systemically.

Clinical-dermatologic examination revealed a wound with a necrotic bottom and upright borders (2.0 × 1.0 × 0.3 cm) on the anterior and distal surface of the right leg, and a similar larger lesion (4.5 × 4.0 × 5.0 cm) on the dorsum of the right foot with tendon exposure (Fig. 1A). The surrounding skin was hyperchromic, and liposclerotic with varices. Laboratory evaluation was normal.

The wounds were cleaned with 0.9% physiological saline and daily dressings with a chloramphenicol fibrinolytic pomade were applied to the leg ulcer (control lesion). The foot lesion was similarly cleaned and biopsied for histopathological examination (Fig. 2A,B). The biomembrane (Fig. 1C) was applied as a dressing to the entire bottom surface of the foot ulcer on alternate days.

After the 15th day of treatment, clear signs of stimulation of granulation were clinically (Fig. 1B) and histopathologically (Fig. 2C,D) visible with the latex treatment, coupled with a reduction of pain.

The control lesion was unchanged on the 30th day (Fig. 1D), so the application of biomembrane was started.

The granulation tissue reached the epidermal level of the borders of the ulcers (Fig. 1E) occurred after approximately 2 months of treatment with latex; the use of the biomembrane was discontinued and the dressings consisted of the chloramphenicol pomade. After a 4-month follow-up, a clinical and histopathologic reduction of ulcers of the leg (1.5 × 0.55 cm) and foot (2.0 × 2.0 cm) was observed, as shown in Figs 1F and 2E,F.

Discussion

The treatment of phlebopathic ulcers has acquired relevant proportions with the increased life expectation for the population and the expense of long-term medical care.⁸

The case reported presented a severe ulcer which had been resistant to standard treatment for approximately one year, causing pain and limiting walking.