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A case of severe *pediculosis capitis*

Head lice, *Pediculus humanus capitis*, are obligatory ectoparasites that feed exclusively on human blood. These parasites affect over 100 million people worldwide each year.^{1,2} The infestation by head lice, *Pediculosis capitis*, is generally considered as a benign condition. Although all age groups may be affected, it is particularly frequent among children 3 to 11 years of age.³ *Pediculosis capitis* may cause skin irritation, secondary infection from scratching, social stigmatization, and psychological distress. Recent studies suggest that head lice, as is the case of body lice, could act as a vector for louse-borne diseases.⁴⁻⁷

We report a case of a heavy infestation in a patient with several comorbidities, resulting in serious cutaneous damage. A 41-year-old man was admitted to our hospital to take care of a cardiac decompensation complicating a dilated cardiomyopathy (left ventricular ejection fraction = 20%). Suffering from insulin-dependent diabetes mellitus for 10 years, the patient developed a diabetic nephropathy (creatinine clearance: 46 ml/min) and a diabetic neuropathy. He presented with chronic anemia with a hemoglobin rate fluctuating around 10 g/dl. He also reported having asthma, occasionally treated by salbutamol sulfate. The patient, unemployed at the time of presentation, was a former homeless person living in an apartment. The patient presented with a major carelessness. His head was covered in lice, harboring numerous adult and nymphs, eggs, and nits (hatched eggs). No lice were seen on the rest of the body, including within the pubic hair. A dermatological examination highlighted many hurts of scratching on the scalp, the neck (Fig. 1), and the shoulders. There was no history of previous dermatologic condition. No secondary bacterial infection was found. The patient's head was totally shaved. No other treatment, either topical or oral medication, was given. The pediculosis was successfully treated and did not occur another time during the follow-up of the patient. The patient was rehospitalized 6 months and 4 years after the initial hospitalization. The patient died of terminal cardiac and renal failure during the course of the last hospitalization.

Severe *pediculosis capitis* is rarely reported.⁸ Chronic and heavy lice infestation were rarely reported as associated with anemia, particularly in women who were already suffering from iron deficiency anemia.⁹ Hyperinfestation has also been reported as leading to iron deficiency anemia in schoolchildren.¹⁰ In the present case, the anemia was probably in relation to the chronic nephropathy as the elimination of lice was not followed by a correction of the hemoglobin rate. Repeated scratching may lead to loss of skin integrity with secondary

bacterial infection and impetigo.³ Severe pyoderma of the scalp can rarely lead to irregular patches of cicatricial alopecia. As the patient was a former homeless person, it is likely that his *pediculosis* was chronic. The scraping lesions observed on neck and shoulders resembled those that may be observed in a case of body lice infestation, although such lice were not present on the clothing or on the body of the patient, as we verified it. The debilitated health of the patient, presenting several comorbidities, may explain the uncommon aspect of the lesions associated with the parasitic condition.

Shaving the scalp is one of the oldest and simplest methods to remove the lice and eggs.¹¹ However, head shaving is generally not recommended because of possible psychological distress. Usual treatment of *pediculosis capitis* relies on topical formulations containing insecticides or physical-acting products.¹²⁻¹⁵ Oral ivermectin may be given (off marketing authorization) in case of suspected insecticide resistance or history of previous repeated therapeutic failures.^{16,17}

In conclusion, when associated with particular comorbidities or in a debilitated patient, *pediculosis capitis* may not be well tolerated and lead to significant dermatologic damage. Potential bacterial superinfections should always be searched and taken into consideration.



Figure 1 The head and neck of the patient shortly after shaving of the scalp

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