

## Recalcitrant Scalp Pruritus in a 3-year-old Girl

Fu-Sen Hsieh    Mark Ming-Long Hsu

### CASE REPORT

A 3 year-old healthy girl complained of scalp itching and irritation for several weeks. The treatment at dermatologic clinics showed little or no effect. Careful examination at our department revealed many yellow-brown semi-transparent papules (arrow) firmly adherent to scalp (Fig. 1) and some excoriated crust-like lesions on the posterior neck skin. Further inspection revealed several transparent nits (arrowhead) on some hair shafts (Fig. 1). The papular lesions were scraped and examined microscopically (Fig. 2).



Fig. 1



Fig. 2

*From the Department of Dermatology, National Cheng Kung University Hospital*

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*Reprint requests: Mark Ming-Long Hsu, M.D., Department of Dermatology, National Cheng Kung University, Tainan, Taiwan, R.O.C.*

*TEL: 886-6-2353535 ext. 5417    FAX: 886-6-2766180    E-mail: a441224@mail.ncku.edu.tw*

## **DIAGNOSIS: *Phthirus Pubis* Infestation of the Scalp**

### **DISCUSSION**

*Phthirus pubis*, commonly known as the crab louse, is an ectoparasite which is only found on humans and requires human blood to survive. The crab louse does not fly and jump, only crawl slowly, so it usually needs close and prolonged contact to infest new hosts, most often through sexual contact, although it may occur via close nonsexual contact, including toilet seats, clothing, or bedding.<sup>1</sup> Normally crab louse infestation is limited to pubic area, but other hair-bearing sites such as thighs, axillae, mustache, beard, eyelashes, eyebrows and trunk can be involved. Scalp infestation is rare.<sup>1,4</sup> The first case was reported in 1892 and most reported cases were found in children.<sup>2</sup> The youngest reported patient was a 6-week-old male infant.<sup>5</sup> Goldman found a female to male ratio of 2:1.<sup>2</sup> In infants and children, who have no pubic hair, the eyelashes and scalp margins are thought to be a suitable environment. The head is also a possible site for the louse.<sup>5</sup> The reason for scalp infestation is not known. One hypothesis is that the louse has become adapted to growing in areas having apocrine sweat glands, just like the eyelash infestation explained by the close similarity of the meibomian glands to the apocrine glands.<sup>2</sup> Some authors believe it is due to the qualitative and quantitative differences in the hair of different sites, while others consider the distance between hairs and hair texture and thickness to be important factors in the distribution of the louse.<sup>2</sup> In adult, pediculosis pubis is primarily a sexually transmitted disease.<sup>4,5</sup> When infants or children are affected, the possibility of sexual abuse or family dysfunction that put the patient at risk must be considered.<sup>5</sup> In our case, the infestation was possibly through bedding or clothes which were contaminated by her grandfather with a previous history of classical pediculosis pubis. Scalp pruritus due to crab louse infestation may be misdiagnosed as sebor-

rheic dermatitis or atopic dermatitis as seen in our case. Detailed history and close examination are suggested in such patients. If possible, microscopic evaluation is recommended to differentiate *Phthirus pubis* scalp infestation from pediculosis capitis.

There is no special treatment recommended for *Phthirus pubis* scalp infestation in English literatures. Generally, the treatment of *Phthirus pubis* scalp infestation is the same as classical pediculosis pubis. Topical permethrin 1% cream rinse for 10 minutes, Gamma benzene hexachloride (lindane) 1% shampoo or lotion for 4 minutes, or pyrethrins with piperonyl butoxide for 10 minutes are all appropriate therapies for *Phthirus pubis*.<sup>4</sup> Lindane is not recommended for pregnant or lactating women or children younger than 2 years due to the risk of central nervous system toxicity.<sup>4,6</sup> Retreatment in 1 week is usually recommended to kill hatching lice. Contaminated clothing, linens and personal items could be disinfected with heat of 50°C for 30 minutes or put in plastic bags for 1 month.<sup>5,6</sup> From this case, rare site involvement of crab louse such as scalp and neck skin is possible and easily missed or neglected.

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