

HEAD LICE INFESTATIONS IN MALTA

Nadia Piscopo

Introduction

Head lice (*Pediculus humanus capitis*) are parasites specific to man, seen predominantly in children. Infestation is spread mainly by head-to-head contact. Head louse infections, or pediculosis, are sometimes accompanied by secondary infections. The condition can also create social problems in the community (Gillis et al, 1990).

The studies conducted were aimed at investigating various local aspects of head lice infestations including: epidemiology, methods of detection, treatment and prevention, parents' attitudes and the role of the pharmacist.

Methodology

Three different questionnaires, each addressing the various issues mentioned above, were drawn up and distributed to the following three groups: (i) community pharmacists; (ii) a number of parents whose children attend a kindergarten centre or a primary school; (iii) a number of kindergarten assistants and primary school teachers. Parents were also asked specifically about their child's past cases of infection, if any.

Records of head inspections carried out by school nurses were obtained from the Health Education Unit. The records available cover the years 1980-1987.

Results

The data obtained from the records of head inspections by school nurses reveal that over the period 1980-1987, the average infestation rate was 2.53%. This is similar to the incidence of 2.45% in the United Kingdom, as estimated by Donaldson (1975).

The sales of pediculicidal preparations by pharmacists throughout the year indicate October as the month of peak incidence. On the other hand, from observations made by teachers, it seems that infestation rates show another peak in May besides that in October.

The distribution of head lice infections with age, as reported by the parents, conforms approximately to a Gaussian distribution in which incidence peaks in the 6-year-olds. However, according to teachers, incidence peaks at 3 years. These results indicate that the peak incidence

was in the 3-6 year old age group. An almost twofold predominance of cases was found in females when compared to males. The studies also showed that, contrary to popular belief, incidence does not prevail in the lower social classes.

The most available pediculicides are those containing pyrethroids and carbaryl, both found in 97.3% of the pharmacies, followed by malathion (54.1%), lindane (32.4%) and benzyl benzoate (2.7%). 50.2% of parents declared having used antilice products on their children some time or other. Some of these parents applied the product to the rest of the family as well. The pediculicides most commonly used by parents are the pyrethroids, followed by carbaryl, lindane and lastly malathion, the latter amounting to only 2.9%. The studies revealed that the formulation used by most parents is the shampoo, which is used either alone, or in combination with a lotion or spray or both.

Only 3.3% of pediculicide-users found the product to be ineffective, and only 3.2% complained of side-effects, 2 of which consisted of asthma and allergy precipitated by the use of a lotion.

Pediculicides are often used by parents for prophylactic purposes only. However, most pharmacists do not really believe in such treatment, and only dispense prophylactically on the insistence of parents. In such instances, the formulations dispensed consist of shampoos (41.8%) and the spray (41.8%).

The checking of head for lice is an important prophylactic and diagnostic measure. Unfortunately, the studies revealed that head inspections by school nurses are very infrequent. Although most parents stated that they do check their child's head, most cases were detected only when the child was seen scratching his head (a symptom usually experienced a few weeks after infestation). Few parents used a fine-toothed comb to aid the checking of heads, while even fewer used it as a method of prevention.

Most pharmacists, parents and teachers also stated that they feel the need for a campaign against head lice infestations.

Discussion

The results obtained indicate that the problem of head lice infestations does exist in the local community, especially in primary school children. Probably the peak incidence occurs at 3-6 years because at this age

children start taking care of their hair themselves (Ibarra, 1989). The higher incidence in females might be explained by the fact that it is more common and acceptable for females to come into close contact with one another. The monthly variation of incidence is possibly due to the biology of the louse (the warmer temperatures in May being optimal for egg laying and hatching) and also due to the behaviour of the host (the children re-entering schools in October) (Gillis et al, 1990).

Currently, the 3 most effective and safe pediculicides available on the market are carbaryl, malathion and pyrethroids. Although malathion offers an advantage over carbaryl in that it possesses higher residual activity, it is still not popular with parents, probably due to its unpleasant smell. The emergence of resistance to these agents, as had happened with DDT and lindane in the past, can be prevented by discouraging their prophylactic use and over-use. In the United Kingdom, a rotational policy between carbaryl and malathion on a three year basis has been set up in most districts, as an additional measure (Saunders, 1984).

Lotions are more effective than shampoos since they provide a higher concentration of insecticide on the hair and, unlike shampoos, they provide a residual effect (Saunders, 1984). However the studies indicate that parents tend to prefer shampoos, one of the reasons being that these are easy to apply.

Conclusions

The results of the studies suggest that an educational campaign about head lice, aimed particularly at parents and children, should be initiated. The pharmacist is in an optimal position to convey such information, and to give advice about the proper use of pediculicides. The campaign can be made more effective by the distribution of leaflets to parents and through visual aids, e.g. a colouring book about lice, for children.

The rotational policy set up in England, can also be adopted by the pharmacies in Malta on a regional basis to avoid emergence of resistance to pediculicides.

References

Donaldson, R.J. The Head Louse in England: prevalence amongst school children. *R Soc Health J* 1975; 96: 55-57.

Gillis, D. et al. Seasonality and long-term trends of Pediculosis Capitis and Pubis in a Young Adult Population. *Arch Dermatol* 1990; 126: 638-641.

Ibarra, J. Head lice in Schools. *Health at School* 1989; 4(5): 147-151.

Saunders, K.A. Treatment of Head Lice. *Pharm J* 1984; 233: 338-339.