

Pediculicide Performance, Profit, and the Public Health

A glance at the full-page advertising in the public health, education, or nursing journals published in 1985 makes it clear how fiercely competitive the pediculicide market is today. Unfortunately, promotional literature generated by pharmaceutical companies vying for a share of that market has been the primary resource for many health professionals dealing with head lice on the front lines—to the detriment of establishing consistent protocols for diagnosis, treatment, and prevention. Assured by the manufacturers that pediculicides constitute fully effective treatment and by the medical literature that head lice do not transmit disease, physicians have deemed pediculosis of low importance both as a topic of research and in clinical practice.¹ At the same time, anxious to eliminate a distasteful infestation, patients are desperate to believe in any promised cure-all. As a result, we have all been fair game for misleading pharmaceutical information. We have proceeded on the basis of too little consideration for safety and too much faith in efficacy claims. Faced with a highly communicable condition affecting the public health, we have based control policies and procedures on marketing gambits and wishful thinking.

See also p 267.

The National Pediculosis Association, Newton, Mass, sponsored the pediculicide comparison study by Meinking et al² published in this issue of the ARCHIVES, because we view an accurate perception of product performance as the foundation of any pediculosis management strategy. Based, for the first time, on independently obtained data and conducted with field-collected head lice rather than public lice or laboratory-reared body lice, this study is the first step in reevaluating treatment decisions at the individual and public health levels.

This study sheds new light on many of the traditionally held wisdoms regarding the performance of the widely used pediculicides. Although the investigators conclude that all six remedies tested (Kwell Shampoo, RID, R&C Shampoo, A-200 Pyrinate Liquid, A-200 Pyrinate Shampoo, and Prioderm Lotion) are *effective*, they have used the term in its broadest sense; in fact, the results obtained reflect a wide range of efficacy levels. Moreover, as the investigators themselves point out, the results should be

considered the maximum achievable with these products. Under controlled laboratory conditions, results are not subject to application error generated during home use by haste, anxiety, or user inability to follow package directions. (Application error and product abuse due to frustration concerning treatment failure are the hallmarks of our parent hotline calls.) Other methodology decisions also produced results superior to those that might be achieved at home. For example, in the study, lice remained "in contact with the product until death." Of the six products tested, only Prioderm Lotion was able to knock down and kill crawling lice in a time span equal to or short of its actual recommended application time. Knock-down times of the synergized pyrethrins exceeded their application times by a (mean) range of 0.5 to 12.5 minutes, while Kwell Shampoo, often considered a standard of comparison within the industry, exceeded its application time by a mean of 186.2 minutes.

The likelihood of adult lice dying as a result of exposure to products for their actual, *safe* application times is thereby questioned. At the very least, while manufacturers' package claims of "on contact" kill may mean to physicians eventual certain louse death, such claims are entirely misleading to patients.

The ovicidal ability of Kwell Shampoo is also questionable considering that Meinking et al² tested this feature by immersing louse eggs in products for ten minutes—2½ times the safe application period for Kwell Shampoo. Nevertheless, Kwell Shampoo's exhibited hatch rate of viable nymphs (30%) was still higher than that of any of the other products. Except for Prioderm Lotion, all of the products tested left more than one fifth of the eggs viable after treatment. It appears that although the investigators conclude that these are effective pediculicides, what is actually demonstrated is that the products fall far short of expectations. As we begin to reexamine the efficacy claims of the pediculicide manufacturers, we may find that many of the myths and controversies surrounding head-lice treatment will fall like a house of cards.

Many of these controversies have placed physicians, educators, school nurses, and parents in adversarial positions. We address those currently raising questions in many of our communities.