

**Paper to be presented at the round table discussion on “Guidelines to worldwide control of head louse infestations”.**

## **CLINICAL TRIALS, SYSTEMATIC REVIEWS AND CONTROVERSY IN HEAD LICE TREATMENT.**

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Clinical evidence on the treatment of head lice is scarce and of poor quality. In 2 systematic reviews, two different teams attempted to gather all available evidence, with diverging results. A first systematic review was published by Vander Stichele RH et al. in 1995. Seven trials concerning 8 active ingredients were included. The reviewers concluded that only for permethrin enough evidence was available, with carbaryl and malathion as second choices.

Upon publication, this review was criticized for potential bias, because the authors could not include results of unpublished studies (kept hidden by the pharmaceutical company but identified by the team) and because of the “a posteriori” nature of quality criteria. In their reply, the authors called for a collective effort to produce a Cochrane review with focus on the retrieval of the unpublished studies and collective discussion of the quality evaluation process.

In 2000, a Cochrane review on interventions for treating head lice was published by CS Dodd, favoring permethrin, malathion and synergised pyrethrin.

The first review was based on 7 trials with 1808 patients on day 14, and the Cochrane review on three trials with only 212 patients at day 14. This illustrates a difference in selection approach. Although presented as a priori criteria, the selection criteria of the Cochrane review were heavily based on exclusion of trials, which allowed for viable nits in the inclusion assessment. The choice of synergised pyrethrines was based on 1 of the 3 selected studies, a heavily flawed study. The

Cochrane review was biased by personal communications and failed to solve the most prominent problem of publication bias.

The 2001 update of the Cochrane review integrated the conclusions of a new RCT by Roberts et al., stating that policies advocating bug-busting as a first line treatment for head lice infestation are inappropriate for the general population. This conclusion has been labeled "premature" in a recent report of a large screening study with observations of outcome on different treatment approaches.

1. Vander Stichele RH, Dezeure EM, Bogaert. Systematic review of clinical efficacy of topical treatments for head lice. *BMJ*. 1995;311:604-8.
2. Dodd CS. Interventions for treating head lice. *Cochrane Database Syst Rev*. 2000;(2):CD001165.
3. Roberts RJ, Casey D, Morgan DA, Petrovic M. Comparison of wet combing with malathion for the treatment of head lice in the UK: a pragmatic randomised controlled trial. *Lancet* 2000;354:540-4.
4. Vander Stichele RH, Lapeere H, Gyssels L et al. Wet combing for head lice: feasibility in mass screening, treatment preference and effectiveness. Accepted for publication by J R Society Health