Efficacy of honey on nocturnal cough in children

The aim of this study was to compare the effect of a single nocturnal dose of buckwheat honey or dextromethorphan (DM) with no treatment in the management of cough associated with upper respiratory infections (URIs) in children, evaluating symptomatic relief of sleep quality of children and their parents.

Methods
A total of 130 children (aged 2–18 years) with URI-associated cough (rhinorrhoea and cough for ≤7 days, not limited to congestion, fever, sore throat, myalgias and headache) were evaluated. Exclusion criteria were: diagnosis of other treatable respiratory disease; history of reactive airways disease; use of drugs known to inhibit the action of DM; antihistamine or DM hydrobromide within 6 h of bedtime or DM polistirex within 12 h of bedtime on the evening prior to or on the day of enrolment. Parents were asked to assess their children's coughs with a questionnaire (seven-point Likert scale) including cough frequency, cough severity, cough bothersome and effect of cough on child's and parents' sleep. Questions were related to the night before enrolment and a second survey was made the following day. Children were stratified by age (2–5, 6–11 and 12–18 years) and were assigned randomly in a partially double-blinded fashion to receive, within 30 min of usual bedtime, artificially flavoured DM, buckwheat honey or nothing in a 10 mL syringe. A ‘no treatment’ arm, instead of a placebo, was chosen since the same authors have previously demonstrated no difference between DM and placebo.

Results
Of 130 enrolled children, 105 (81%) completed the single-night study. Of them, 35 received honey, 33 received DM and 37 received no treatment. The median age was 5.22 years and 53% were female. The children were ill for a mean±SD of 4.64±1.68 days before participation, without any significant differences in either variable between treatment groups. There were no significant differences in symptom severity at baseline. Treatment with honey was most effective in all outcomes evaluated, followed by DM, while no treatment showed least effectiveness (p<0.001). Honey but not DM was superior to no treatment for nocturnal symptoms; however, direct comparison between honey and DM yielded no statistically significant differences.

Conclusion
Honey was reported as the most favourable drug to control nocturnal cough, both for children and for parents.

Message
Buckwheat honey appears more effective than dextromethorphan or no treatment for symptomatic relief of nocturnal cough associated with upper respiratory infections.

Editorial comment
Honey is known as an effective relief for some diseases, including cough and URIs its use is suggested by the World Health Organization [1]. Honey, and in particular dark honey [2], has several beneficial effects: it has wound healing, antioxidant and antimicrobial properties [3], and is considered safe in children aged >1 year. Its efficacy seems to be due to the sweet substances contained in honey, which cause reflex salivation and mucus secretion (and therefore have a sedative effect on the cough reflex), along with an interaction between the opioid and gustatory nerves [4]. Beside the lower cost of honey, DM has serious adverse effects, such as anaphylaxis, dystonia, mastocytosis and nervous system symptoms [5], whereas honey is generally recognised as safe, with the exception of the risk of infantile botulism for children aged <1 year and the rare grayanotoxin-mediated syndrome [6]. It is noteworthy that this study was supported by an unrestricted research grant from the National Honey Board, an industry-funded agency of the US Department of Agriculture.

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References