



## PIC QUESTION OF THE WEEK: 1/07/08

Q: Is there any benefit in using honey for the treatment of cough in children?

A: In October, 2007, the Food and Drug Administration (FDA) sponsored a joint meeting of its Pediatric and Nonprescription Drug Advisory Committees to evaluate the safety and efficacy of over-the-counter (OTC) cough and cold preparations. Shortly before this meeting, manufacturers revised the labeling of these products to indicate they are not recommended for use in children *two years of age or less*. The Advisory Committee recommended that these preparations not be used in children *less than six years* of age. Manufacturers of these products did not agree with this specific committee recommendation and continue to market the medications for this age group. The FDA will ultimately make a final ruling on the use of these drugs in children of all age groups. In December, 2007, a study was published that evaluated the potential role of honey in the management of cough in children. A randomized, partially double-blinded study was conducted among one hundred and five children between the ages of two and eighteen years diagnosed with upper respiratory tract infection. Patients received either a *single* nighttime dose of buckwheat honey, honey flavored dextromethorphan, or no treatment. Dosage of dextromethorphan was based on age. For those 2-5 years, the dose was 8.5 mg (*1/2 teaspoonful*); ages 6-11 received 17 mg (*1 teaspoonful*); those aged 12-18 years received 34 mg (*2 teaspoonfuls*). Children receiving honey were administered the equivalent *volume* as the age specific dose of those getting dextromethorphan. Assessment was based on the frequency and severity of cough and its impact on the quality of sleep of the children as well as their parents. Nocturnal symptoms such as sore throat and headache were also evaluated. Two assessments (30 minutes before bedtime) were conducted, one on the evening prior to treatment and the other on the following day. The authors concluded that honey was more effective than dextromethorphan in all aspects of the study; however, there was no statistically significant difference among the treatment groups. Both groups responded better than children receiving no treatment. Honey may be considered an alternative to available antitussive agents for children suffering from cough; however, additional studies are necessary before its role in this condition can be established. The mechanism by which honey effects cough is unknown, but may be related to its ability to increase saliva which serves as a demulcent for the pharynx and larynx. *Honey should not be used in children less than one year of age due to the possible risk of botulism.*

### References:

- Sharstein JM, North M, Serwint JR. Over the counter but no longer under the radar – pediatric cough and cold medications. *N Engl J Med* 2007;357:2321-4.
- Alternatives to cough and cold medications for children. *Pharmacist's Letter/Prescriber's Letter* 2008;24(1):240111.
- Paul IM, Beiler J, McNonagle A, et al. Effect of honey, dextromethorphan, and no treatment on nocturnal cough and sleep quality for coughing children and their parents. *Arch Pediatr Adolesc Med* 2007;161:1140-6.

Amanda M. Strutt and Brian P. Matthews, Pharmacy Clerkship Students

The PIC Question of the Week is a publication of the Pharmaceutical Information Center, Mylan School of Pharmacy, Duquesne University, Pittsburgh, PA 15282 (412.396.4600).