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[Intervention Review]

Over-the-counter (OTC) medications for acute cough in children and adults in ambulatory settings

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ABSTRACT

Background

Acute cough due to upper respiratory tract infection (URTI) is a common symptom. Non-prescription, over-the-counter (OTC) medicines are frequently recommended as a first-line treatment, but there is little evidence as to whether these drugs are effective.

Objectives

To assess the effects of oral OTC cough preparations for acute cough in children and adults.

Search methods

We searched the Cochrane Central Register of Controlled Trials (CENTRAL) 2012 Issue 3 which contains the Acute Respiratory Infections Group's Specialised Register, MEDLINE (January 1966 to March week 1 2012), EMBASE (January 1974 to March 2012), CINAHL (January 2010 to March 2012), LILACS (January 2010 to March 2012), Web of Science (January 2010 to March 2012) and the UK Department of Health National Research Register (March 2010).

Selection criteria

Randomised controlled trials (RCTs) comparing oral OTC cough preparations with placebo in children and adults suffering from acute cough in ambulatory settings. We considered all cough outcomes and secondary outcomes of interest were adverse effects.

Data collection and analysis

Two review authors independently screened potentially relevant citations, extracted data and assessed study quality. We performed quantitative analysis where appropriate.

Main results

Twenty-six trials (18 in adults, eight in children) involving 4037 people (3421 adults and 616 children) were included.

In the adult studies six trials compared antitussives with placebo and had variable results. Two trials compared the expectorant guaifenesin with placebo; one indicated significant benefit whereas the other did not. One trial found that a mucolytic reduced cough frequency and symptom scores. Two studies examined antihistamine-decongestant combinations and found conflicting results. Four studies compared other combinations of drugs with placebo and indicated some benefit in reducing cough symptoms. Three trials found antihistamines were no more effective than placebo in relieving cough symptoms.

In the children studies antitussives (two studies), antihistamines (two studies), antihistamine decongestants (two studies) and antitussive/bronchodilator combinations (one study) were no more effective than placebo. No studies using expectorants met our inclusion criteria. The results of one trial favoured active treatment with mucolytics over placebo. One trial tested two paediatric cough syrups and both preparations showed a 'satisfactory response' in 46% and 56% of children compared to 21% of children in the placebo group.

A minority of studies reported adverse effects and described a low incidence of mainly minor side effects such as nausea, vomiting, headache and drowsiness.

Authors' conclusions

There is no good evidence for or against the effectiveness of OTC medicines in acute cough. The results of this review have to be interpreted with caution due to differences in study characteristics and quality. Studies often showed conflicting results with uncertainty regarding clinical relevance. Higher quality evidence is needed to determine the effectiveness of self care treatments for acute cough.

PLAIN LANGUAGE SUMMARY

Over-the-counter (OTC) medications for acute cough in children and adults in ambulatory settings

Acute cough is a common and troublesome symptom in people who suffer from acute upper respiratory tract infection. Many people self prescribe over-the-counter (OTC) cough preparations and health practitioners often recommend their use for the initial treatment of cough. Twenty-six trials involving 4037 people were included. The results of this review suggest that there is no good evidence for or against the effectiveness of OTC medications in acute cough. A few studies reported adverse effects and described infrequent, mainly minor side effects such as nausea, vomiting, headache and drowsiness. The results of this review have to be interpreted with caution because the number of studies in each category of cough preparations was small. Many studies were of low quality and very different from each other, making evaluation of overall efficacy difficult.