Short summaries

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These short summaries are based on reviews about evidence-based medicine or on synopses published in evidence-based journals.

Nonpharmacological methods to assist the induction of anaesthesia in children

Yip P, Middleton P, Cyna AM, Carlyle AV.

Non-pharmacological interventions for assisting the induction of anaesthesia in children. Cochrane Database Syst Rev 2009; issue 3

Sadly, dental problems still result in significant numbers of children being given a general anaesthetic. Induction of anaesthesia can be distressing both for the child and their parents. Although children can be given drugs to sedate them when anaesthesia is being induced, those drugs can have unwanted harmful effects such as possible airway obstruction and behaviour changes after the operation. A range of nonpharmacological interventions have been used to reduce peri-operative distress and encourage co-operation in children. These fall into four main groups: psychological (cognitive or behavioural), environmental, equipment modification, and social interventions including communication.

This review identified 17 trials (involving 1796 children), eight of which involved a parental presence. None showed significant differences in anxiety or co-operation of children during induction, except for one where parental presence was significantly less effective than midazolam in reducing children's anxiety at induction.

Six trials assessed interventions for children. Preparation with a computer package improved co-operation compared with parental presence (one trial). Children playing handheld video games before induction were significantly less anxious than controls or premedicated children (one trial). Compared with controls, clown doctors reduced anxiety in children (modified Yale Preoperative Anxiety Scale (mYPAS) with a mean difference (MD) of 30.75[95% confidence interval (CI), 15.14–46.36] in one trial. In children undergoing hypnosis, there was a nonsignificant trend towards reduced anxiety during induction compared with midazolam in one trial. A low sensory environment improved children's co-operation at induction (RR, 0.66; 95% CI, 0.45–0.95), again in one trial only, and no effect on children's anxiety was found for music therapy (one trial).

Parental interventions were assessed in three trials. Children of parents having acupuncture compared with parental sham-acupuncture were less anxious during induction (mYPAS MD 17; 95% CI, 3.49–30.51) and more children were co-operative (RR, 0.63; 95% CI, 0.4–0.99). Parental anxiety was also significantly reduced in this trial. In two trials, a video viewed preoperatively did not show effects on child or parental outcomes.

Overall, this review found that the presence of parents during induction of general anaesthesia does not reduce their child's anxiety.

Promising nonpharmacological interventions such as parentally acupuncture, clown doctors, hypnotherapy, low sensory stimulation and handheld video games require further investigation.

Garlic for the common cold?

Lissiman E, Bhasale AL, Cohen M.

Garlic for the common cold. Cochrane Database Syst Rev 2009; issue 3

Garlic is purported to have antimicrobial and antiviral properties that relieve the common cold. A quick Google search highlights over 2 million webpages on this topic. The common cold is caused by a range of viruses including picornaviruses (notably, rhinoviruses and enteroviruses), coronaviruses, adenoviruses, parainfluenza viruses, influenza viruses, metapneumoviruses and respiratory syncytial viruses and, on average, adults get two to four colds per year with children catching six to eight.¹ The common cold is associated with significant morbidity and economic consequences, with the total annual economic impact in the US estimated at \$40 billion.² This Cochrane review looked at the effect of garlic on the prevention and treatment of the common cold. Only one trial met the inclusion criteria, and found insufficient evidence to recommend garlic supplements as a preventative or treatment option for the common cold. The small trial suggests that garlic might reduce the frequency of symptoms of the common cold if taken continuously as a daily prophylactic, but the results require validation. Anecdotally, adverse events reported include odour and minor skin or respiratory irritation, but the frequency of adverse effects could not be determined from the evidence available.

1. Heikkinen T, Järvinen A. The common cold. *Lancet* 2003; **361**: 51–59.
2. Fendrick AM, Monto AS, Nightengale B, Sarnes M. The economic burden of non-influenza-related viral respiratory tract infection in the United States. *Arch Intern Med* 2003; **163**: 487–494.

Non-steroidal anti-inflammatory drugs for the common cold

Kim SY, Chang YJ, Cho HM, Hwang YW, Moon YS.

Non-steroidal anti-inflammatory drugs for the common cold. Cochrane Database Syst Rev 2009; issue 3

Nasal congestion, rhinorrhea, sneezing and coughing accompanied by general malaise are typical symptoms of the common cold — an acute respiratory tract infection that is one of the most common illnesses of man. Nonsteroidal anti-inflammatory drugs

(NSAID) have been used to treat the pain and fever associated with the common cold from many years and this Cochrane review looks at their efficacy.

The review included nine randomised controlled trials (including 1064 patients), which made 37 comparisons between them: six tested NSAID versus placebo, and three tested NSAID versus other NSAID. In a pooled analysis, NSAID did not significantly reduce the total symptom score or the duration of colds. For outcomes related to the analgesic effects of NSAID (headache, ear pain, and muscle and joint pain) there were significant benefits. There was a borderline benefit for malaise and mixed results for chills. Throat irritation was not improved, and neither were cough and nasal discharge, but the sneezing score significantly improved. There was no evidence of increased frequency of adverse effects in the NSAID treatment groups.

Melanoma of the scalp and neck riskier than melanoma of the extremities?

McCarthy B.

Melanoma of the scalp and neck had greater risk of melanoma-specific mortality than melanoma of the extremities. Evid Based Med 2008; 13: 155

Melanoma of the scalp and neck is a condition that dental practitioners are able to spot in their regular attendees. This commentary in the *Evidence-based Medicine* journal discusses a review by Lachiewicz and colleagues,¹ the conclusion of which is that in patients with a first invasive melanoma, tumours of the scalp, neck or trunk, older age, being male, tumour thickness, and ulceration were associated with increased risk of melanoma-specific mortality.

The data from the study came from the American Surveillance, Epidemiology and End Results (SEER) program. McCarthy notes the potential problems relating to possible incompleteness of the SEER database and the risk of inadequate or incomplete followup, so he emphasises the fact that these results should be interpreted with caution. This is also mentioned by the review's authors, who highlight the need for their results to be confirmed.

1. Lachiewicz AM, Berwick M, Wiggins CL, et al. Survival differences between patients with scalp or neck melanoma and those with melanoma of other sites in the Surveillance, Epidemiology, and End Results (SEER) program. *Arch Dermatol* 2008; **144**: 515–521.

Interventions for promoting information and communication technology adoption by healthcare professionals

Gagnon MP, Légaré F, Labrecque M, et al.

Interventions for promoting information and communication technologies adoption in healthcare professionals. Cochrane Database Syst Rev 2009; issue 1

Communication is a key element of clinical practice and everyday life. The range and type of information sources available today are ever-increasing and we seem to be in constant danger of being swamped with this information. These very same information and

communication technologies (ITC) have the potential to address some of the challenges facing healthcare systems, but are underused by healthcare professionals. Five broad categories of ITC have been defined (www.openclinical.org/e-Health.html):

- electronic medical records (including patient records, clinical administration systems, digital imaging and archiving systems, e-prescribing, e-booking);
- telemedicine and telecare services;
- health information networks;
- decision support tools for healthcare professionals;
- internet-based technologies and services.

Whereas some of these are in use in dentistry, none of the ten studies included in this review involved dentists and only two measured patient outcomes. Use of the Internet for audit and feedback, and e-mail for provider-patient communication, were targeted in two studies. Four studies showed small to moderate positive effects of the intervention on ICT adoption. Four studies were unable to demonstrate significant positive effects, and the two others showed mixed effects. No studies looked at the long-term effect or sustainability of the intervention.

So, not unsurprisingly, the authors concluded that the effectiveness of interventions to promote ICT adoption in healthcare settings remains uncertain, and more well-designed trials are needed.

The effects of onscreen, point-of-care computer reminders

Shojania KG, Jennings A, Mayhew A, Ramsay CR, Eccles MP, Grimshaw J.

The effects of on-screen, point of care computer reminders on processes and outcomes of care. Cochrane Database Syst Rev 2009; issue 3

Providing decision support to clinicians at the point of care is considered one of the main incentives for implementing sophisticated clinical information systems. This Cochrane review identified 28 studies (reporting a total of 32 comparisons). Computer reminders achieved a median improvement in process adherence of 4.2% [interquartile range (IQR), 0.8–18.8%] across all reported process outcomes; 3.3% (IQR, 0.5–10.6%) for medication ordering; 3.8% (IQR, 0.5–6.6%) for vaccinations; and 3.8% (IQR, 0.4–16.3%) for test ordering. In a sensitivity analysis using the best outcome from each study, the median improvement was 5.6% (IQR, 2.0–19.2%) across all process measures and 6.2% (IQR, 3.0–28.0%) across measures of medication ordering.

The review overall showed small to modest improvements, with a minority of interventions showing larger effects, but no specific reminder or contextual features were significantly associated with effect magnitude. Consequently, future research must identify design features and contextual factors consistently associated with larger improvements in provider behaviour if computer reminders are to succeed on more than a trial and error basis.

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