**Evidence-Based Dentistry (2000) 2,** 53–55
© 2000 Evidence-Based Dentistry All rights reserved 1462-0049/00 $15.00

www.nature.com/ebd

# digest

## These short summaries are taken from a range of other evidence-based journals and publications

**Derek Richards**

Centre for Evidence-based Dentistry, Oxford, UK

## Acupuncture for dental pain

***Electronic Bandolier,* July 99 (available on the internet at: http://www.jr2.ox.ac.uk/Bandolier/painres/painpag/Acutrv/Other/APO27.html)**

Ernst E, Pittler MH. The effectiveness of acupuncture in treating acute dental pain. Br Dent J 1998; 184:443–447

It believed that acupuncture works to relieve pain by restoring energy flow through meridians in the body. Western theories of the mechanism include activation of endogenous substances inhibiting nociceptive transmission, and theories of diffuse noxious inhibitory control. Acupuncture analgesia is a modern concept, dating perhaps to 1958. Currently, the most frequent indication of acupuncture is for pain control.

In their review, Ernst and Pittler identified three trials which fulfilled the inclusion criteria of randomised, double–blind, placebo-controlled trials of acupuncture for dental pain with a group size at least 10. The authors' conclusion without pooling data was that acupuncture can alleviate dental pain, and that future research should concentrate on the best technique and the relative efficacy of acupuncture to conventional treatment.

One of one trials (in 20 patients) reported significantly better pain relief over 3 hours with 15 minutes of Ho-Ku acupuncture administered after tooth extraction compared with sham acupuncture. Two trials with 90 patients looked at pain caused by drilling into the dentine, comparing 30 min of Ho-Ku electroacupuncture carried out during surgery with placebo. For these two trials, data pooling was possible, but did not reveal significant differences between groups on any measure, including pain reduction — relative benefit 1.2 (0.96 to 1.4). Both trials had a design flaw, which resulted in insufficient power to demonstrate a pre-emptive effect, resulting in a very high placebo response rate.

The review ignores established validity criteria for acute pain measurements. For assays to be valid, pain has to be moderate or severe in intensity and established pain measuring methods must be used for between 4 and 6 hours. Trials should be both randomised and double–blind additional pain during a procedure may be different from pain after a procedure, and that experimental pain is not clinical pain.

On the basis of a very small number of trials therefore, there is no convincing evidence for the effectiveness of acupuncture in relieving clinical dental pain. There is no evidence that acupuncture relieves pain during drilling into the dentine, and there is a very preliminary suggestion (based on 20 patients) that acupuncture may be beneficial in relieving postoperative pain.

## Review: 7.7 to 12.9 units of alcohol per week is the level of alcohol consumption at which mortality is the lowest in men

***Evidence-Based Mental Health,* Vol 3 May 2000 p 64**

White IR. The level of alcohol consumption at which all-cause mortality is least. J Clin Epidemiol 1999; 52:967–975

This Medline only review of cohort studies in industrialised countries that related all-cause mortality to alcohol consumption. Studies were excluded if they did not report men and women separately or if they reported <3 levels of alcohol

**Table 1** Analgesic effectiveness of acupuncture compared with placebo during dental restoration

| Efficacy measure | No. of trials | Acupuncture patients with successful outcome | Placebo patients with successful outcome | Relative benefit (95% CI) | NNT (95% CI) |
|---|---|---|---|---|---|
| Pain reduction – patient rating* | 2 | 40/46 | 33/44 | 1.2 (0.96 to 1.4) | 8.4 (3.6 to −24) |
| Local anaesthetic required** | 2 | 45/46 | 42/44 | 1.0 (0.94 to 1.1) | 42 ( 10 to −20) |
| Dentist rating of procedure as successful | 2 | 44/46 | 39/44 | 1.1 (0.96 to 1.2) | 14 (5.5 to −25) |
| Patient rating of no pain | 1 | 13/26 | 11/25 | 1.1 (0.63 to 2.1) | 17 (3.0 to −4.7) |
| Pain reduction – dentist rating* | 1 | 18/26 | 20/25 | 0.87 ( 0.63 to 1.2) | −9.3 (7.8 to −2.9) |

*success = pain reduction excellent or good; **success = no anaesthetic required

consumption. The review found that for men mortality was lowest with alcohol consumption between 7.7 and 12.9 units per week. There are some methodological issues relating to different measure of alcohol consumption between the studies and the use of weekly consumption. However, most studies produced a U-shaped risk curve. This suggests that moderate drinkers have a lower mortality than either abstains or heavy drinkers. However, two studies in men under 30 did not show this U-shaped cure, but an increase in mortality with increasing intake. It is also worth noting that wider considerations than dose response between alcohol and mortality need to be considered as alcohol consumption may also negatively after the individual for example in participation in health screening.

## Mass media interventions may influence health service use

***Evidence-based Health Care,*** **Vol 4, 2**

Grilli R, Freemantle N, Minozzu S, Domenighetti G, Finer D. Impact of mass media on health service utilization. The Cochrane Library. Oxford Update Software.

This Cochrane review identified 69 papers of which 17 met the inclusion criteria. They all used interrupted time series designs. Fourteen of the studies evaluated formal mass media campaigns including the promotion of immunisations, HIV tests, and cancer screenings. Seven of the studies were reanalysed. The authors found that there was evidence to support the view that mass media communications may have an important role in influencing the use of health services.

## Fruit and vegetable intake decreased risk of ischaemic stroke

***Evidence-based Nursing,*** **Vol 3, April 2000 p57**

Joshipura KL, Ashcherio A, Manson JE et al. Fruit and vegetable intake in relation to risk of ischaemic stroke. JAMA 1999; 282:1233–1239

This study utilises data from two population-based cohorts in the USA. The women are from the Nurses' Health study with 14 years follow-up and the men are from the Health Professionals' follow-up from which 8 years' data are available. Participants completed postal questionnaires at baseline and every 2 years after. Stroke was confirmed by blinded assessment of medical records. Data were available for 75,596 women and 38,683 men; 670 cases of stroke were reported in women and 317 in men. Intake of fruit and vegetables, specifically citrus fruit and juice, cruciferous vegetables (e.g. broccoli, cabbage, cauliflower and Brussels sprouts) and green leafy vegetables were associated with lower risk of stroke. Adjustments for the potential effect of many factors were performed but the generalisability of these data from nurses, dentists and other health professionals to the rest of the population is unknown. However, since stroke is a significant public health problem, a primary preventive approach based on the recommended consumption of five servings of fruit and vegetables per day has it attractions.

## Metoclopramide is ineffective in preventing postoperative nausea and vomiting

***Bandolier*** **Jan 2000 p 71–8 (available on the internet at: http://www.ebando.com/band71/b71-8.html)**

Henzi L, Waldwr B, Tramer MR. Metclopramide in the prevention of postoperative nausea and vomiting: a quantitative systematic review of randomized placebo-controlled studies. Br J Anaesthesia 1999; 85:761–771

This systematic review of several electronic databases, together with hand searching and contact with the manufactures identified 66 RCTs. The outcomes addressed were nausea, vomiting or nausea and vomiting and these were examined early (0–6 h) and late (0–48 h). The average number needed to treat to prevent one additional case of nausea and vomiting in adults was 7 and above and 6 and above in children (the group had previously defined a clinically useful result as a NNT of 5 or less). There was no evidence of a consistent dose-response.

The review showed no clinically significant antiemetic effect of metoclopramide in preventing nausea and vomiting at standard doses. As metoclopramide is widely used for this purpose, this suggests money is being wasted on an ineffective dose.

## Review: Interactive, but not didactic, continuing medical education is effective in changing physician performance

***Evidence-based Medicine,*** **March/April 2000 p 64**

Davis D, O'Brien MA, Freemantle N et al. Impact of formal continuing medical education. Do conference workshops, rounds and other traditional continuing education activities change physician behaviour or health care outcomes? JAMA 1999; 282:867–874

This review searched a ride range of available databases selecting only randomised-controlled trials, which used a

range of CME interventions and objectively assessed physician performance in the workplace, health care outcomes or both, excluding those which were coercive or provided incentives for learning. fourteen studies met all the criteria looking at 17 interventions. The authors concluded that formal interactive, but not didactic, continuing medical interventions are effective in changing physician performance.

The increasing importance of CME has led to a search for the delivery of an effective product. The conclusions are similar to previous publications and provide evidence for directing CME towards the practice place as a learning arena, empowering the learner and the value of learning for day-to-day patient encounters.