Evidence to support the use of honey for prevention of oral mucositis in cancer patients is limited

Abstracted from

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Systematic review and meta-analysis on the use of honey to protect from the effects of radiation-induced oral mucositis. *Adv Skin Wound Care* 2012; **25**: 23–28.

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Question: Is honey effective in preventing oral mucositis in cancer patients?

Data sources PubMed, Medline, Embase, CINAHL via EBSCO and Cochrane library databases were searched.

Study selection Randomised controlled trials that investigated the protective effects of honey in head and neck cancer patients undergoing radiation therapy that used either the Radiation Therapy Oncology Group (RTOG) or World Health Organisation (WHO) criteria for evaluating the severity of the radiation mucositis were included. Risk of bias was assessed using the Cochrane methodology.

Data extraction and synthesis A meta-analysis was conducted using a fixed-effects model. Heterogeneity was assessed using the I^2 statistic.

Results Three randomised trials involving a total of 120 patients were included. The overall relative risk of developing mucositis was almost 80% lower (risk ratio, 0.19; 95% CI, 0.098 – 0.371) in the honey treatment group than in the control group.

Conclusions Despite promising results, the weaknesses of the individual studies highlight the need for further, more rigorous, randomised controlled trials. Future studies need to address the weakness of available studies by adequately describing the method of randomisation and allocation concealment.

Commentary

Oral mucositis is a common side effect of the treatment of malignancy with chemotherapy or radiotherapy. Two Cochrane reviews^{1, 2} have previously looked more broadly at interventions for prevention and treatment of this unpleasant side effect of treatment. The aim of this review was to assess the protective effect of honey in head and neck cancer patients undergoing radiation therapy.

The authors identified five trials, one was excluded as it only reported pain relief and another trial³ was excluded as it used a different measurement scale. The Montallebnjad study,³ excluded in this review was one of the three studies included in the earlier Cochrane review, while one additional study⁴ that did not appear in the Cochrane review is included.

The results of the meta-analysis for the effect of honey on patients with any mucositis for in the two reviews were similar, with the Cochrane review indicating an average 70% reduction in any mucositis. However, the Cochrane review suggests that the effects are less marked for patients suffering from moderate to severe, and severe mucositis, with reductions in relative risk of (RR) 0.48, 95% CI 0.31 to 0.74, $P = 0.0009$ and severe mucositis (RR = 0.26, 95% CI 0.13 to 0.52, $P = 0.0002$).

However the authors of both reviews highlight the fact that the original studies are at high risk of bias and consequently the currently available evidence only provides weak and unreliable evidence that honey may be beneficial for the prevention of mucositis in patients undergoing treatment for head and neck cancer.

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Evidence-Based Dentistry (2012) **13**, 74. doi:10.1038/sj.ebd.6400871