

12. Wu X, Yu X. Influence of usage history, instrument complexity and different cleaning procedures on the cleaning of blood-contaminated dental surgical instruments. *Infect Control Hosp Epidemiol* 2009; **30**: 702-704.
13. Ebner W, Eitel A, Scherrer M, Daschner F D. Can household dishwashers be used to disinfect medical equipment? *J Hosp Infect* 2000; **45**: 155-159.
14. Perakaki K, Mellor A C, Qualtrough A J. Comparison of an ultrasonic cleaner and a washer disinfectant in the cleaning of endodontic files. *J Hosp Infect* 2007; **67**: 355-359.
15. Department of Health. Engineering and Science Advisory Committee into the Decontamination of Surgical Instruments Including Prion Removal. London, 2006.

DOI: 10.1038/sj.bdj.1085

JUMPING THE GUN

Sir, I was surprised to read in the letter from V. Ballal entitled *Oil therapy* (*BDJ* 2009; **207**: 193) that the literature has reported that swishing sunflower oil around the mouth for 15 minutes a day can 'effectively treat ... meningitis, heart and kidney disorders, women's hormonal disorders, and chronic diseases like cancer, AIDS etc.' However, no references were provided and a cursory search of the literature found only studies examining oil pulling as a means of managing oral bacteria. The claims of effectiveness against a long list of unrelated conditions, as well as the references to toxins, healing 'all organs simultaneously' and an unknown mechanism, are all reminiscent of the language used to promote unproven or disproven alternative remedies.

Oil pulling may or may not prove a useful technique, but for traditional remedies to enter the folds of evidence-based medicine it is important to investigate any real effects they may have without being distracted by illusory effects ascribed to them by their advocates. Without strong evidence that oil pulling has an effect beyond those of placebo and a thorough oral rinse, the suggested research to discover the source of this effect would seem to be jumping the gun.

A. Taylor
By email

DOI: 10.1038/sj.bdj.1086

NOT RECOMMENDED

Sir, with reference to the letter *Oil therapy* published in your journal (*BDJ* 2009; **207**: 193) we would like to share our experience on this.

We treated a case of severe inflammatory gingival enlargement in a 48-



Fig. 1 Non-erythematous, non-tender lesion on right lower border of mandible

year-old female. She was suffering from swollen and bleeding gums for which was suggested, as treatment, oil pulling (OP) using refined sunflower oil by a friend who was also practising OP. She had performed OP for three months and had observed that her problem was worsening. When we saw her, we noticed generalised gingival enlargement, multiple false deep periodontal pockets and mild sub-gingival calculus deposits. She was healthy and was not taking any kind of medication. We suggested she stop OP and reviewed her case after three weeks; her gingival inflammation had substantially reduced. Following this she was treated with conventional periodontal therapy and her gingival health became normal. We feel because of the retention of oil particles in her sub-gingival tissues her gingival health had worsened.

OP therapy has been shown to reduce plaque index¹ as well as *Streptococcus mutans* count in plaque and saliva.² We are of the opinion that until the benefits and indications for OP are documented and established scientifically it should not be recommended.

N. Ravikumar
S. Suhas
Tumkur

1. Asokan S, Emmadi P, Chamundeswari R. Effect of oil pulling on plaque induced gingivitis: a randomized, controlled, triple-blind study. *Indian J Dent Res* 2009; **20**: 47-51.
2. Asokan S, Rathana J, Muthu M S *et al*. Effect of oil pulling on streptococcus mutans count in plaque and saliva using Dentocult SM Strip mutans test: a randomized, controlled, triple-blind study. *J Indian Soc Pedod Prev Dent* 2008; **26**: 12-17.

DOI: 10.1038/sj.bdj.1087

TUBERCULOSIS DIAGNOSIS

Sir, a 37-year-old woman was referred by her general medical practitioner with

a two-month history of an increasing right-sided facial swelling. She has been resident in the UK for ten years with no history of cough, weight loss or recent travel. On examination, there was a 3 cm raised, fluctuant lesion on the lower border of the mandible (Fig. 1). The orthopantomogram and chest X-ray were unremarkable. Computed tomography showed a cystic collection at level 1b. Fine needle aspiration proved inconclusive. An excisional biopsy showed tuberculous lymphadenitis.¹ Persistent lymphadenopathy of over four weeks' duration in people other than white UK-born should be regarded as tuberculosis until proven otherwise.²

I. Al-Hadad, A. Ujam, B. Speculand
Birmingham

1. Kokosali K, Lloyd R E. Tuberculous cervical lymphadenitis: an unusual case. *Dent Update* 2006; **33**: 306-308, 311.
2. National Collaborating Centre for Chronic Conditions. *Tuberculosis: clinical diagnosis and management of tuberculosis, and measures for its prevention and control*. London: Royal College of Physicians, 2006.

DOI: 10.1038/sj.bdj.1088

HELP TO QUIT

Sir, tobacco use is one of the major preventable causes of health damage and death in India. It is estimated that tobacco will kill 6 million people annually from 2010, 80% of which will happen in low and middle income countries like India.¹ The most susceptible age for initiating tobacco use in India is during adolescence and early childhood with most users starting use before the age of 18 years, while some start as young as ten years. Studies show that if people do not begin to use tobacco during adolescence, there is a good chance they never will. Each day about 5,500 children in India start using tobacco and join about 5 million children under the age of 15 years who are already addicted to tobacco. Adolescent tobacco use is characterised by being driven by relationships, activities, positive and negative emotions and social ramifications while adult tobacco use is defined by nicotine dependence.

According to the Global Youth Tobacco Survey (GYTS) (2000-2004) including students from grades 8-10 in India, 17.5% were current users of tobacco in any form, 14.6% were using smokeless

tobacco and 8.3% were current smokers.²⁻⁴ The survey reported the misconception in many youths that smoking is good for teeth and health and nearly half of smokeless tobacco users needed the tobacco first thing in the morning. The survey also reported that 68.5% of students who smoked wanted to stop and 71.4% had tried during the past year. This is a strong indicator of common quit attempts in youths and they should be provided with help to quit.

Dentists and other oral health professionals are recognised as ideally positioned to counsel against the use of tobacco products and should be encouraged to do so in India and other low and middle income countries.

R. K. Singh, S. Singh
Lucknow

1. World Health Organisation. Report on the Global Tobacco Epidemic, 2008: The MPOWER package. Geneva: WHO, 2008.
2. Prevalence of tobacco use among the youth. In Reddy K S, Gupta P C (eds). *Report on tobacco control in India*. New Delhi: Ministry of Health and Family Welfare, 37. pp 61-67. Government of India, 2004.
3. Sinha D N, Gupta P C, Pednekar M S. Tobacco use among students in eight North-Eastern states in India. *Indian J Cancer* 2003; **40**: 43-59.
4. Tobacco use and reproductive outcomes. In Reddy K S, Gupta P C (eds). *Report on tobacco control in India*. New Delhi: Ministry of Health and Family Welfare. pp 108-110. Government of India, 2004.

DOI: 10.1038/sj.bdj.1089

LIQUORICE ALERT

Sir, we bring to your attention concerns regarding possible adverse clinical effects of an innovative anti-caries lollipop containing a liquorice derivative.

Much fanfare has heralded the introduction of a new cavity-fighting lollipop containing a liquorice root extract that inhibits the growth of *Streptococcus*, important in initiating dental caries.^{1,2} Should global consumption of this liquorice-flavoured candy be adopted the prevalence of dental decay may be reduced. However, excessive lollipop use is cautioned because overconsumption of liquorice has potential clinical risks. Liquorice is a ubiquitously employed food flavourant that also possesses therapeutic properties.³ As such its commercial use is at an all-time high. The major active ingredient of liquorice, glycyrrhizin, is 100-200 times sweeter than processed sugar. In addition to its flavour-enhancing

qualities, glycyrrhizin exerts many pharmacological actions, such as its anti-cariogenic effects.

Excessive intake of glycyrrhizin is associated with adverse side effects including increased blood pressure, hypernatraemia and hypokalaemia. Glycyrrhizin blocks the activity of the enzyme, 11 beta-hydroxysteroid dehydrogenase type 2, that converts cortisol to inactive cortisone. Cortisol, in turn, binds to mineralocorticoid receptors (MR), promoting sodium reabsorption, potassium excretion and hypertension, a clinical triad characteristic of liquorice-induced pseudoaldosteronism,⁴ which is becoming a more frequent phenomenon with increased use of liquorice as flavourants.

Dosage needs consideration when assessing glycyrrhizin-related risks. The Joint FAO/WHO Expert Committee on Food Additives and the European Community's Scientific Committee on Food recommend a maximum of 100 mg/day. Glycyrrhizin consumption levels in USA are 0.03-3.6 mg/kg/d and at its upper limit, would exceed the above recommendations in individuals over 30 kg. Allowable glycyrrhizin content varies amongst foods: lowest in baked goods, highest in hard candy. Many published cases of pseudoaldosteronism involve excessive consumption of liquorice/glycyrrhizin. One could argue that these levels are higher than could be achieved through even heavy consumption of the anti-caries lollipops. Although the glycyrrhizin concentration in these lollipops is not available and it is reasonable to assume that each lollipop contains low levels of glycyrrhizin, cumulative effects of multiple lollipops and other sources of ingested glycyrrhizin (tobacco, herbal medicines, candy), may raise levels beyond the recommended limit.

Marketing of these lollipops is largely targeting children and the elderly, two sub-populations particularly susceptible to the mineralocorticoid actions of liquorice. For instance, with the rising incidence of childhood obesity and accompanying health complications including diabetes and hypertension, excessive liquorice intake in children may compound pre-existing health risks.

We feel that cavity-fighting lollipops are innovative anti-caries products, appealing to the public and economically attractive to the health care system. The fact that liquorice and its derivatives are exempt from FDA regulation may inadvertently project a false sense that liquorice ingestion is safe at even high levels. Here, we raise concerns regarding overconsumption of liquorice-containing food and medicinal products. We alert the dental community of the potential clinical risks of excessive or prolonged use of these lollipops and the importance of educating patients on complying with specified doses for the lollipops (ie two per day, for up to ten days).

K. Takami, L. Z. G. Touyz, R. M. Touyz
Canada

1. Belt D. Licorice root lollipop shows sweet promise in reducing tooth decay. *J Calif Dent Assoc* 2008; **36**: 243-249.
2. Segal R, Pisanty S, Wormser R, Azaz E, Sela M N. Anticariogenic activity of licorice and glycyrrhizine I: Inhibition of *in vitro* plaque formation by *Streptococcus mutans*. *J Pharm Sci* 1985; **74**: 79-81.
3. Isbrucker R A, Burdock G A. Risk and safety assessment on the consumption of Licorice root (*Glycyrrhiza sp.*), its extract and powder as a food ingredient, with emphasis on the pharmacology and toxicology of glycyrrhizin. *Regul Toxicol Pharmacol* 2006; **46**: 167-192.
4. Sontia B, Mooney J, Gaudet L, Touyz R M. Pseudo-hyperaldosteronism, liquorice, and hypertension. *J Clin Hypertens (Greenwich)* 2008; **10**: 153-157.

DOI: 10.1038/sj.bdj.1090

VOICING SUPPORT

Sir, I write in response to a letter from Patel, Evans and McKechnie (*Fundamental training*; *BDJ* 2009; **207**: 51) to voice support for the fundamental training currently provided for our UK graduates. I believe that the authors have highlighted an important value of postgraduate training; however, are they confusing a lack of confidence with incompetence?

Dentists are now expected to be competent but not confident in all aspects of the profession upon graduation. It is well recognised that acquiring and improving skills ought to be a lifelong process. Continual professional development is significant from the outset of a dental career and this can be initiated by a two-year structured training pathway as set out in 'A Curriculum for UK Dental Foundation Programme Training'.¹ I urge all readers to familiarise