

Questions and answers in EBD volume 7

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As in previous years we are highlighting the guidelines, questions and answers addressed by summaries in Evidence-based Dentistry.¹⁻⁴ Evidence levels⁵ are only given for those papers achieving level 3A and above.

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Guidelines

Subject	Page
Prevention and management of dental decay in the preschool child	4
Topical fluoride	62-64
Conscious sedation	90-91

Summaries

Topic	Question	Answer	Evidence level	Page
Dental caries				
	Does dental flossing reduce interproximal caries incidence?	Regular flossing of children's teeth by a trained adult can dramatically reduce interproximal caries in those at high risk of caries	1A	68
	How effective are school-based fluoride varnish programmes at preventing approximal caries?	When considered in conjunction with the Cochrane review, results here suggest a substantial caries-inhibiting effect of fluoride varnish	1B	9
	In preschool children is fluoride varnish application, in addition to counselling, more effective than counselling alone in preventing early childhood caries?	Topical fluoride varnish should be applied to the dentition at least twice/ year for preschool children who are thought at increased risk of dental caries	1B	65-66
	Is a 6-monthly application of 40% chlorhexidine varnish effective in reducing dental caries in primary molars?	This study shows that chlorhexidine has caries-reducing potential. Whether this benefit would persist in Western communities exposed to greater use of fluoride, and whether in such circumstances its use in a public health programme would be cost-effective or cost-efficient, requires further investigation	1B	93
Endodontics				
	When individuals undergo root canal treatment for apical periodontitis, does single-visit treatment result in a lower healing (success) rate than multiple-visit treatment?	The review shows that multiple visits for calcium hydroxide treatment do not improve clinical outcome and provides at least a minimal level of evidence for considering one versus two appointments when planning NSRCT procedures	1B	13
	How accurate are electronic apex locators in the determination of root canal length?	The study confirms the reliability of modern electronic apex locators to determine endodontic working length	1B	31
	Is MTA an effective root-end filling material in endodontic surgery?	No statistically significant differences were found between results from the two retrofilling materials	1B	33
	What are the effects of clindamycin prophylaxis in the prevention of postoperative wound infections in patients undergoing endodontic surgery?	No statistically significant difference was found between clindamycin prophylaxis and placebo with regard to the prevention of postoperative infection in endodontic surgical procedures	1B	72

Does pulp capping result in the formation of a hard tissue barrier?	Calcium hydroxide materials remain an effective method of pulp capping and may induce a hard tissue barrier following exposure of the pulp in noncarious teeth. Newer materials such as MTA show promising results but more research is required before it is used as an alternative to calcium hydroxide	N/A	95
Oral cancer			
Is a primary care screening programme for oral cancer cost-effective?	From the evidence available in this review, general dental practitioners are in the best position to perform oral screening for oral cancer and potentially malignant lesions. This should be incorporated into the general oral health history and examination, and form a routine part of an oral cancer risk assessment which should also include enquiry regarding oral cancer risk factors	1B	81
Oral health promotion			
Are tobacco cessation interventions effective when offered in the dental office or community setting?	Dental teams need to raise with their patients the impact of tobacco use on oral and general health and refer accordingly	1A	40
Oral medicine			
Is tongue scraping more effective than other interventions, such as mouthwashes, in controlling halitosis?	There is weak and unreliable evidence suggesting a small but statistically significant difference in reduction of VSC levels when tongue scrapers or cleaners rather than toothbrushes are used to reduce halitosis in adults	1A	78
What is the efficacy of nonantiepileptic drugs used to treat trigeminal neuralgia?	Trials of nonantiepileptic drugs for treating trigeminal neuralgia have all been limited by poor methodological quality or poor reporting. There is insufficient evidence from RCT to show significant benefit from nonantiepileptic drugs for trigeminal neuralgia	1A	107
How effective are prophylactic agents for oral mucositis in patients receiving treatment for cancer?	Several interventions were found to have some benefit, preventing or reducing the severity of mucositis associated with cancer treatment. The strength of the evidence was variable and implications for practice include consideration that benefits may be specific for certain cancer types and treatment. Well-designed RCT are needed, with sufficient numbers of participants to perform subgroup analyses by type of disease and chemotherapeutic agent	1A	104–105
What is the most effective intervention for the prevention of oral mucositis in patients undergoing treatment for cancer?	Both this review and the Cochrane review find that some of the interventions have some benefit, agreeing on three of them: amifostine, antibiotic paste or pastille, and oral cooling (ice chips)	1A	104–105
Is there an association between HCV and OLP?	This review usefully summarises aspects of an OLP–HCV association but there is no evidence to answer the question	1B	18
Do oral lichenoid lesions improve or resolve if amalgam restorations are replaced with an alternative material?	In some people who have oral lichenoid lesions, improvement or healing may be seen following replacement of amalgam restorations. The physical proximity of lesions to amalgam fillings is the best guide to a causal relationship	2B	74–75
Is there any association between areca nut use and OSF?	The very high odds ratios associated with OSF and use of areca nut agents suggests an aetiological link is highly likely. Effective public health initiatives are more likely to impact on the epidemiology than innovative research	N/A	79–80
What is the effect of a reservoir biteguard for artificial saliva on the oral health-related quality of life of people who have xerostomia?	This study suggests that reservoir biteguards are not useful in improving xerostomia sufferers' oral health-related quality of life. Further investigation of the biteguards' ability to alleviate the symptoms of dry mouth is warranted, however	1B	42

Oral surgery

Is a clinical practice guideline on the management of asymptomatic impacted lower third molars effective in changing practice?	The study demonstrated that the method employed for dissemination and implementation of a guideline on asymptomatic, impacted mandibular third molars improved the knowledge of dentists on this topic, but did not improve their clinical decision-making skills	1B	8
Is there any difference in sensory disturbance of the lingual nerve after mandibular third molar surgery with or without lingual flap retraction?	Lingual nerve retraction should be avoided during surgical removal of mandibular third molars	1B	47
Is there any difference in the intra- and postoperative morbidities and complications between resorbable and titanium plating systems used for fixation in orthognathic surgery?	Resorbable osteofixation in orthognathic surgery reliably avoids implant removal, with comparable clinical morbidity to titanium fixation	1B	48-49
Is it necessary for a routine follow-up visit following third molar removal under intravenous sedation?	A routine follow-up visit after third molar removal under intravenous sedation is not necessary in patients 15–35 years of age. Pre-operative and postoperative instructions should be clear. Reviewing patients indirectly by telephone may reduce costs, a practice acceptable to patients but which does not allow the surgeon to perform a clinical examination and possibly reveal postoperative pathology unnoticed by the patient	1B	92

Orthodontics

Which topical fluoride preparations are best able to prevent decalcification around fixed orthodontic appliances?	The regular use of fluoride toothpaste should be reinforced during fixed appliance therapy and the use of additional topical fluoride encouraged	1A	38
Is CAL an effective method of teaching orthodontics?	More high-quality trials evaluating the effectiveness of CAL in orthodontics are needed. CAL programs in orthodontics elicit mostly positive responses and attitudes from students toward learning	1A	76
How effective are different retention procedures in maintaining tooth position after treatment by orthodontic appliances?	There are insufficient research data on which to base our clinical practice on retention at present. There is an urgent need for high-quality RCT in this crucial area of orthodontic practice	1A	100
What are the most effect adhesives to attach bands to teeth for fixed appliance treatment?	There is insufficient evidence to determine the most effective adhesive for attaching orthodontic bands to molar teeth in patients with full-arch fixed orthodontic appliances	1A	101–102
Has hypodontia increased in Caucasians during the twentieth century?	Limited available evidence suggests a trend of increased hypodontia through the twentieth century, although the timeframe considered is not adequate to define a secular trend	1B	15
Does rapid palatal expansion enhance the efficiency of maxillary protraction with a face mask in developing class III malocclusions?	Face mask protraction therapy provides effective correction in early class III malocclusion. The need for palatal expansion in the absence of a transverse discrepancy or a skeletal/dental crossbite is not supported by the results of the study. Correction results from a combination of skeletal and dental change with an overall improvement in the dentofacial complex	2A	16
Is early treatment of skeletal open-bite malocclusion effective?	The quality of studies in this area is insufficient to draw any evidence-based conclusions	N/A	103

Paedodontics

Can magic tricks improve co-operation in strong-willed children?	The study suggests that a magic trick may be useful addition in managing strong-willed children but further carefully constructed trials are needed	1B	76
Would MTA be a good replacement for formocresol in primary molar pulpotomies?	The authors conclude that MTA showed a higher but not statistically significant long-term clinical and radiographic success rate than formocresol but more data is required before anything definitive statements can be made	2A	35–36

Periodontology

What is the effect of professional mechanical plaque removal (PMPR) on clinical and patient-centred outcomes related to the prevention of periodontal diseases in adults?	There appears to be little value in providing PMPR without oral hygiene instruction (OHI). In fact, repeated OHI might have a similar effect to PMPR. Some forms of PMPR may achieve greater patient satisfaction. There is little difference in beneficial or adverse effects of different methods of PMPR	1A	69–70
Can behavioural educational interventions based on the self-regulation theory improve periodontitis patients' compliance with proper dental care?	These data showed that the behavioural education intervention, based on information and training about prophylactic techniques, is more effective than a classical intervention and that it is effective in improving most patients' plaque indices to normal levels	1B	11
In type-1 diabetics, is nonsurgical periodontal treatment with adjunctive doxycycline more effective than nonsurgical periodontal treatment alone?	In type 1 diabetes patients, doxycycline given adjunctively to SRP has a limited additional clinical benefit	1B	pp?
Does diabetes mellitus affect the extent and severity of periodontal diseases?	This review provides some evidence to support an association between diabetes and severity of periodontal diseases but should not be used to infer a cause–effect relationship	3A	45
What is the risk of having periodontal defects on the distal of the mandibular second molar after third molar removal?	Practitioners should be circumspect in removing third molars in healthy periodontal patients	N/A	46
Are self-reported measures of periodontal disease valid?	Results from self-reported studies should be interpreted with caution. No single question will correctly reveal whether an individual has periodontitis or not. Higher validity will be obtained by the use of combinations of several self-reported questions	N/A	71
How effective is surgical therapy compared with nonsurgical therapy in the treatment of chronic periodontitis?	If PPD reduction is the main aim, surgical therapy will be the treatment of choice for moderate and deep pockets. If the objective is to increase the clinical attachment level, nonsurgical therapy is of greater benefit for moderate pockets (<6 mm), and open flap debridement for deep pockets (>6 mm). The predictability of treatment outcome at sites with furcation involvement or angular defects	N/A	69

Preventive dentistry

Do custom-made mouthguards really prevent injuries?	The study provides evidence supporting the effectiveness of custom-made thermoformed polyvinyl acetate-polyethylene mouthguards, when worn when playing or training, in reducing head or orofacial injuries	1B	44
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Prosthetics

When complete dentures are required, are simplified techniques as effective as complex traditional ones for their manufacture?	Simple complete denture-making techniques can provide patient satisfaction for many edentulous patients. More studies are needed to determine the relative efficacy of complete denture techniques	1B	12
How happy are patients with their implant-retained overdentures?	Patients are highly satisfied with implant-supported dentures at 2 years, although ball-retained overdentures require more maintenance than bar-clip retained overdentures	1B	34

Restorative dentistry

Is minimal (ultraconservative) caries removal as effective as complete caries removal?	Partial caries removal appears preferable to complete caries removal in deep lesions to reduce the risk of carious exposure	1A	94
Do the location of and design used when preparing metal-free polymer crowns influence their survival and complication rate?	This study shows the potential of polymer crowns in the short term but longer term performance needs to be evaluated	1B	30
Do implant-supported prostheses provide greater relief from problems in social and sexual activities in edentulous adults than conventional prostheses?	If one accepts the Social Impact Questionnaire is a valid measure of social and sexual activity (and there is little evidence to support this), this study contains some very interesting findings. Namely, edentulism has a negative impact on social and sexual life and mandibular overdentures provide less unease in intimate activities than conventional mandibular dentures	1B	73
Are implant-retained mandibular overdentures better than conventional complete dentures?	There were no significant post-treatment differences between the groups, but a treatment effect may be masked by the intent-to-treat analysis. The pre-/post-treatment Oral Health Impact Profile change-scores were significantly greater for people receiving implants than for those who refused	1B	96
Which clinical factors are predictive of root canal treatment following full-cast crowns?	The age of a patient and the extent of coronal and root destruction can be used to predict future need for root canal treatment on teeth for which a single-cast crown is planned	3A	98

Special care dentistry

Is there any difference in postoperative morbidities for 24 h, following dental care under day-stay general anaesthesia using sevoflurane or halothane, in intellectually disabled children?	Sevoflurane is a safe alternative to halothane and is appropriate in the provision of general anaesthesia for children who have learning disabilities.	1B	37
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Temporomandibular disorders

How effective are the two common splints (centric and distraction) in the therapy of anterior disc displacement without reduction of the temporomandibular joint?	Centric seem to be more effective than distraction splints. Therefore, before the surgical treatment of anterior disc displacement without reduction, centric splints should be used instead of distraction splints	1B	50
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NSRCT, non-surgical root canal treatment; VSC, volatile sulphur compound; RCT, randomised controlled trial; HCV, hepatitis C virus; OLP, oral lichen planus; OSF, oral submucous fibrosis; CAL, computer-aided learning; MTA, mineral trioxide aggregate; OHI, oral hygiene instruction; GAP, generalised aggressive periodontitis; tid, three times daily; bid, two times daily; PPD, probing pocket depth.

1. Lawrence A, Richards D. Questions answered in EBD volumes 1 and 2. *Evid Based Dent* 2002; 3:27–29.
2. Richards D. Questions and answers in EBD volumes 3 and 4. *Evid Based Dent* 2003; 4:94–97.
3. Richards D. Questions and answers and guidelines in EBD volume 5. *Evid Based Dent* 2004; 5:110–112.
4. Richards D. Questions and answers and guidelines in EBD volume 6. *Evid Based Dent* 2005; 6:104–107.
5. Richards D. Not all evidence is created equal — so what is good evidence? *Evid Based Dent* 2003; 4:17–18.