

# Questions and answers in EBD Volume 18

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

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## Summaries

Topic	Question	Answer	Evidence level	Page
<b>Caries</b>				
	What is the efficacy and safety of fluoride mouthrinses for caries prevention?	This review found that supervised regular use of fluoride mouthrinse by children and adolescents is associated with a large reduction in caries increment in permanent teeth.	1A	11-12
	What is the clinical efficacy of professionally applied fluoride therapy in remineralising and arresting dental caries in children?	Professionally applied 5% sodium fluoride varnish shows the capability to remineralise early enamel caries in children. Silver diamine fluoride solution at 38% is effective in arresting active dentine caries.	1A	41-42
	Are school-based dental sealant (SBDS) programmes effective in reducing caries in children from low-income backgrounds?	SBDS programmes can be effective in preventing the development of carious lesions in school children, particularly those who come from low socioeconomic backgrounds and may, as a result, not be able to receive adequate oral health care in other settings outside the school.	1B	13-14
	Is silver diamine fluoride (SDF) effective in reducing caries in children?	SDF commonly used at a high concentration (38%, 44,800ppm fluoride) is effective in arresting caries among children. There is no consensus on its number and frequency of application to arrest caries.	2A	70
	What is the clinical effectiveness of aesthetic preformed crowns (APC) for restoring primary teeth compared to conventional fillings materials or other types of crowns?	Stainless steel crowns cannot be replaced by APCs for restoring decayed primary molar teeth due to the insufficient quality of evidence available.	2B	43-44
	Do arginine-containing dental products prevent or slow progression of caries?	At present there is insufficient evidence in support of a caries-preventive effect for the inclusion of arginine in toothpastes. More rigorous studies, and studies which are less dependent on commercial interests, are required.	2B	71
	Are developmental defects of enamel and dental caries in primary dentition associated?	The findings demonstrated an association between developmental defects of enamel and dental caries in the primary dentition.	N/A	72-73
<b>Dental Implants</b>				
	What is the most effective surgical regenerative treatment for peri-implantitis?	In conclusion both regenerative and non-regenerative therapies have been shown to reduce pocket depths, but there is only weak evidence as to which treatment is best since the clinical significance is only just measurable.	1A	79-81
	What is the methodological quality of published dental implant guidelines?	There is room to improve the quality of consensus guidelines published in highly ranked implant dentistry journals.	N/A	35-36
	What is the impact of peri-implant maintenance therapy (PIMT) upon the incidence of complications?	Within the limitations of the present systematic review it can be concluded that implant therapy must not be limited to the placement and restoration of dental implants but to the implementation of PIMT to potentially prevent biological complications and hence heighten the long-term success rate.	N/A	8-10
<b>Dental Trauma</b>				
	What is the best treatment for permanent teeth with intrusive luxation?	While the review suggests that spontaneous re-eruption should be the treatment of choice the quality of the available evidence is poor and the findings should be interpreted cautiously.	N/A	74
<b>Endodontics</b>				
	In teeth requiring endodontic retreatment is a surgical or non-surgical approach best?	Available evidence does not provide clinicians with reliable guidelines for treating periapical lesions. Further research is necessary to understand the effects of surgical versus non-surgical approaches, as well as to determine which surgical procedures provide the best results for periapical lesion healing and postoperative quality of life.	1A	75-76

## TOOLBOX

	Is non surgical root canal therapy (NSRCT) more likely to fail in older patients?	The moderate evidence indicated that increased patient age does not decrease the success of NSRCT.	2A	47
<b>Oral Cancer</b>				
	What is the risk of developing Oral Potentially Malignant Disorders (OPMDs) in users of Smokeless Tobacco (SLT)?	The findings of our study point towards a strong association between some forms of OPMDs and SLT use in South Asia.	N/A	54-55
<b>Oral Health</b>				
	Does good oral hygiene reduce the incidence of ventilator-associated pneumonia?	The results from high quality evidence found that oral hygiene care (OHC), including chlorhexidine mouthwash or gel, reduces the risk of developing ventilator-associated pneumonia in critically ill patients from 25% to about 19%. However, there is no evidence of a difference in the outcomes of mortality, duration of mechanical ventilation or duration of ICU stay	1A	113-114
	Are essential oils-containing mouthwashes an effective adjunct to mechanical plaque control?	The mouthwashes demonstrate statistically significant improvements in plaque and gingivitis scores but clinical important is more difficult to assess.	1A	39-40
	Does school dental screening improve oral health?	There is currently no evidence to support or refute the clinical benefits or harms of dental screening.	2B	66-67
<b>Oral Medicine</b>				
	What treatments for leukoplakia are effective in preventing oral cancer?	There is no evidence that any of the active treatments included work better than placebo in reducing the risk of developing oral cancer	2B	92-93
<b>Oral Surgery</b>				
	Are topical or systemic treatments better for the treatment of burning mouth syndrome (BMS)?	There is insufficient evidence to support or refute the use of any particular intervention for the management of BMS.	1A	57-58
	What is the best treatment for bisphosphonate-related osteonecrosis of the jaw (BRONJ)?	The authors concluded that there is insufficient evidence to support a particular regimen for the treatment of BRONJ.	1B	56
	Is an epinephrine impregnated gauze as effective as aluminium chloride for haemostasis during periapical surgery?	Aluminum chloride may be more beneficial in achieving haemostasis in periapical surgery compared to gauze impregnated with epinephrine. Further studies are required to build on the limited evidence.	2B	50-51
	What is the safety and effectiveness of treatments for oro-antral fistulae?	Very low quality evidence from a small single study provided insufficient proof to judge if there is a difference in the effectiveness of the interventions.	2B	90-91
	In field hockey players, what are the prevalence and characteristics of dentofacial trauma and mouthguard use?	After considering the limitations of the review, it is still safe to recommend mouthguards for the prevention of dentofacial injuries in field hockey players.	2C	48-49
	Is any intervention superior to another for treating bleeding that lasts 8-12 hours after tooth removal?	No randomised controlled trials were identified. In view of the lack of reliable evidence on this topic, clinicians must use their clinical experience to determine the most appropriate means of treating this condition, depending on patient-related factors.	N/A	52-53
<b>Orthodontics</b>				
	Are fixed orthodontic retainers better than removable retainers in terms of periodontal health, failure rates, patient reported outcomes and cost-effectiveness?	There is a lack of high-quality evidence to endorse the use of one type of orthodontic retainer based on their effect on periodontal health, risk of failure, patient-reported outcomes and cost-effectiveness.	1A	103-104
	Does presenting information to orthodontic patients via social media improve knowledge?	Presenting audiovisual information through the YouTube web site to orthodontic patients resulted in a significant improvement in patient knowledge. Supplementation of verbal and written patient information with audiovisual information via the Internet is therefore worthy of consideration.	1B	59-60
	Are lingual fixed orthodontic appliances associated with greater or fewer adverse effects than buccal appliances	Lingual orthodontics appliances, though aesthetically better compared to buccal appliances, are associated with higher levels of discomfort, speech difficulties and oral hygiene issues for longer duration	2A	101-102
	What is the level of compliance with removable orthodontic appliances?	Compliance with removable orthodontic appliances is suboptimal. Patients wear appliances for considerably less time than stipulated and self-reported. Compliance may be increased when patients are aware of monitoring; however, further research is required to identify effective interventions and possible barriers in order to improve removable orthodontic appliance compliance	2A	105-106

	Do non-surgical adjuncts reduce the time required for orthodontic treatment?	There is very little clinical research concerning the effectiveness of non-surgical interventions to accelerate orthodontic treatment. The available evidence is of very low quality and so it is not possible to determine if there is a positive effect of non-surgical adjunctive interventions to accelerate tooth movement.	2A	26-27
	What is the effectiveness of temporary intraoral skeletal anchorage devices compared to conventional anchorage augmentation during space closure by retraction of anterior teeth?	The results of the meta-analysis showed that TISADs are more effective than conventional methods of anchorage reinforcement. The average difference of 2mm seems not only statistically but also clinically significant. However, the results should be interpreted with caution because of the moderate quality of the included studies. More high-quality studies on this issue are necessary to enable drawing more reliable conclusions.	2A	82-85
	Have the current scanning systems for complete arch digital impressions been tested under clinical conditions for their reliability, accuracy & reproducibility?	The literature lacks sufficient evidence to comment on the use of intraoral scanners under clinical conditions.	3A	24-25
<b>Paediatric dentistry</b>				
	Do preoperative analgesics reduce intraoperative or postoperative pain in children and adolescents having dental treatment?	From the available evidence, we cannot determine whether or not preoperative analgesics are of benefit in paediatric dentistry for procedures under local anaesthetic. There is probably a benefit in using preoperative analgesics prior to orthodontic separator placement. The quality of the evidence is low.	1A	17-18
	What is the aetiology of molar incisor hypomineralisation (MIH)?	Prenatal and perinatal factors are infrequently associated with MIH. However, despite a lack of prospective studies, early childhood illness (in particular fever) appears to be associated with MIH.	N/A	15-16
	What is the impact of dental treatment under general anaesthesia on children's oral health-related quality of life?	The studies included in the review showed that dental treatment under GA had an overall improvement on OHRQoL of children, although further high-quality studies are needed.	N/A	68-69
<b>Periodontal disease</b>				
	Does intra-pocket anaesthesia compared to a placebo influence the pain during probing or, SRP in adult patients?	The risk and intensity of pain during probing and SRP as well as the need for additional rescue anaesthesia using the same anaesthetic gel and/or injected anaesthetics is reduced with the application of topical intra-pocket anaesthetic gel.	1A	111-112
	Does chlorhexidine mouthwash used as an adjunct to oral hygiene procedures improve the control of plaque and gingivitis?	There was high quality evidence for a reduction in gingivitis in patients with mild to moderate disease although the level of reduction achieved was not considered to be clinically important	1A	37-38
	For patients with gingival recession; which treatment modality is recommended to improve root coverage?	Treatment of recession defects is best achieved with a coronally advanced flap combined with a connective tissue graft	1A	6-7
	What role do psychological constructs play in adherence to oral hygiene instruction in patients with periodontal disease?	Practitioners should consider that oral hygiene advice based on a psychological construct may be more effective than oral health advice without.	2A	3-4
	What is the short-term clinical influence of probiotic as an adjunctive therapy to scaling and root planing (SRP)?	The meta-analysis shows some beneficial effect of <i>Lactobacillus reuteri</i> with reduction of PPD especially in deep periodontal pockets, CAL gain was similar to other adjuncts. <sup>1,2</sup> However, studies with larger number of patients and longer-term follow-up are needed to confirm these findings.	2A	109-110
	Does previous history of periodontal disease affect dental implant outcomes?	Implants placed in patients treated for periodontal disease are associated with higher incidence of biological complications and lower success and survival rates than those placed in periodontally healthy patients.	2A	5
<b>Prosthetic Dentistry</b>				
	What is the survival rate of the different removable prosthetic options in partially edentulous patients?	Within the limitations of this study, it seems that removable partial dentures, (RPD), given suitable pretreatment and follow-up regimes, can provide a satisfactory treatment option. Based on only one paper, they revealed acceptable results even over a very long observation period (25 years)	2A	117-118
<b>Radiography</b>				
	Can cone-beam computed tomography reliably detect root fractures?	It remains uncertain what is the reliability in diagnosing root fractures for the scanners used in the review, especially when applied to clinical scenarios.	1A	23
	Can panoramic radiographs help predict inferior alveolar nerve injury after third molar surgery(MM3)?	For all seven signs, the added value of panoramic radiography is too low to consider it appropriate for ruling out postoperative IAN in the decision-making before MM3 surgery. The added value of panoramic radiography for determining the presence of diversion of the canal, interruption of the white line of the canal and darkening of the root can be considered sufficient for ruling in the risk of postoperative IAN injury in the decision-making before MM3 surgery.	1A	88-89

<b>Restorative dentistry</b>				
	Does overdenture treatment provide greater improvement in nutrient intake and nutritional status than treatment with a conventional denture?	The modifying effect of overdenture treatment on nutritional status might be limited. Further studies are needed to evaluate the effectiveness and efficacy of denture treatments.	1A	115-116
	In the treatment of non-carious cervical lesions does use of self-etch (SE) or etch-and-rinse (ER) affect postoperative sensitivity, retention rates and marginal discoloration?	Both etch-and-rinse and self-etch systems resulted in similar post-op sensitivity and retention. Etch-and-rinse system performed better in marginal discoloration at follow-up 18 months and after	1A	119-120
	Is there a difference in clinical longevity between direct vs indirect resin composite restorations?	The results of the review indicate that there is no statistically significant difference in failure rate of direct resin composites vs indirect resin composites.	1A	46
	Does rubber dam isolation compared to other forms of isolation improve the outcomes of restorations?	We found some very low-quality evidence, from single studies, suggesting that rubber dam usage in dental direct restorative treatments may lead to a lower failure rate of the restorations, compared with the failure rate for cotton roll usage.	1B	19-20
	Corded or cordless techniques for haemostasis and gingival displacement during restorative treatment?	Both techniques are reliable in achieving gingival retraction. The review supports the observation that gingival retraction paste can more effectively help to achieve a dry field and at the same time be less injurious to soft tissues, however its ability to displace gingival tissues, compared to retraction cord, was compromising. Rather than considering the cost of material or the individual preference of the operator, choosing the right technique to maximise clinical efficiency should be based on scientific evidence. It seems that impregnated gingival cords are more effective on thick gingival tissue whereas paste is more effective when minimal retraction is required for haemostasis control, preservation of the gingiva and less tissue displacement.	2A	21-22
	Is there a difference in the longevity of direct versus indirect composite inlays and onlays in or on posterior teeth?	There is insufficient evidence to favour the direct or indirect technique for the restoration of posterior teeth with inlays and onlays.	2A	121-122
	Is there any difference in service performance and longevity in the use of adhesive bonding compared to no use of bonding in dental amalgam restorations?	There is no evidence either to claim or to refute a difference in survival between bonded and non-bonded amalgam restorations.	2B	45
	Is a simplified approach to dentures construction effective?	Current scientific evidence suggests that a simplified fabrication method can replace or partly replace the conventional method to produce dentures	N/A	77-78
<b>Special Care dentistry</b>				
	What is the effectiveness of adjuvant antifibrinolytic agents in the prevention of bleeding for patients with haemophilia or Von Willibrand disease (VWD) undergoing oral or dental procedures?	Low quality evidence exists to support the use of adjuvant antifibrinolytic therapy to reduce perioperative bleeding in patients with haemophilia undergoing dental extraction.	1A	28-29
<b>Temporomandibular disease</b>				
	Is there an association between features of dental occlusion and temporomandibular disorders (TMD)?	Overall, this paper suggests that there is very little clinically relevant evidence to support an occlusal cause for TMD.	3A	86-87