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Review

Bruxism and prosthetic treatment: A critical review

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Abstract

Purpose: Based on the findings from available research on bruxism and prosthetic treatment published in the dental literature, an attempt was made to draw conclusions about the existence of a possible relationship between the two, and its clinical relevance.
Study selection: MEDLINE/PubMed searches were conducted using the terms 'bruxism' and 'prosthetic treatment', as well as combinations of these and related terms. The few studies judged to be relevant were critically reviewed, in addition to papers found during an additional manual search of reference lists within selected articles.
Results: Bruxism is a common parafunctional habit, occurring both during sleep and wakefulness. Usually it causes few serious effects, but can do so in some patients. The etiology is multifactorial. There is no known treatment to stop bruxism, including prosthetic treatment. The role of bruxism in the process of tooth wear is unclear, but it is not considered a major cause. As informed by the present critical review, the relationship between bruxism and prosthetic treatment is one that relates mainly to the *effect* of the former on the latter.
Conclusions: Bruxism may be included among the risk factors, and is associated with increased mechanical and/or technical complications in prosthodontic rehabilitation, although it seems not to affect implant survival. When prosthetic intervention is indicated in a patient with bruxism, efforts should be made to reduce the effects of likely heavy occlusal loading on all the components that contribute to prosthetic structural integrity. Failure to do so may indicate earlier failure than is the norm.

Keywords: Fixed dental prostheses; Implant-supported restorations; Oral parafunction; Removable dentures; Tooth wear; Prosthetic dentistry

Contents

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1. Introduction

Bruxism, which can be considered an umbrella term for clenching and grinding of the teeth, is the commonest of the many parafunctional activities of the masticatory system. Opinions on the cause of bruxism are numerous and widely varying. Current reviews indicate that the etiology is not fully known but that it is probably multifactorial [1]. Although intermittent clenching and grinding are extremely common, they usually pose no serious consequences for the oral structures. On the other hand, manifest bruxism can result in problems that are as frustrating for the patient as for the treating dentist. Sequelae of bruxism that have been proposed include tooth wear, signs and symptoms of temporomandibular disorders (TMD), headaches, toothache, mobile teeth, and various problems with dental restorations as well as with fixed and removable prostheses [2,3].

As the title of the paper suggests, this review is concerned with the relationships that may, directly or indirectly, exist between bruxism and prosthetic treatment. Although certain occlusal conditions and/or incorrectly prosthetically modified occlusions were historically believed to be potential causes of bruxism, this has largely ceased to be the case. Also, the assumption that ‘correction’ of such occlusal conditions could reverse bruxism has also been discredited. What is important in the present context, however, is the possible effect of bruxism on prosthetic restorations, a relationship upon which the dental literature would appear not to be conclusive.

It is, therefore, the purpose of this paper to critically review the dental literature regarding a possible relationship between bruxism and prosthetic treatment.

2. Materials and methods

MEDLINE/PubMed searches were conducted for articles using the terms ‘bruxism’ and ‘prosthetic treatment’. Since the literature on such broad subjects would be abundant, the review focused on selected combinations of the two search terms, focusing on the relationship between bruxism and prosthetic treatment, including fixed and removable prostheses and implant-supported and implant-retained prostheses. Publications considered to present the highest level of evidence, i.e. clinical randomized controlled trials (RCT) and systematic reviews of RCTs, were scarce or not available, and, therefore, studies of lower evidentiary strength were considered and critically evaluated. As regards review articles, the most recent one on a given topic was selected.

The search of PubMed for ‘bruxism’ and ‘prosthetic treatment’, not surprisingly, revealed extremely large numbers of titles and reviews of studies when the terms were used separately, but relatively small numbers when combined with other terms (Table 1). The titles listed by PubMed revealed that the majority were of no interest for the present purpose, and were, therefore, excluded. Only one relevant RCT was retrieved, and was the same article listed for three of the combinations of terms that were searched [4]. Abstracts of potentially relevant articles were read and eventually full papers were reviewed. In the Cochran Library, no review on the topics of interest was found. A manual search of the reference lists and textbooks referred to in the included PubMed listed articles was also performed. This additional search identified 20 relevant studies and reviews. A total of 66 relevant papers remained, and are discussed in the review that follows.

Table 1
Numbers of titles listed in PubMed (November 2010) for various combinations of the terms ‘bruxism’ and ‘prosthetic treatment’.

Search term	Citations	Reviews	RCTs[a]
Bruxism	2350	278	48
Prosthetic treatment	22,169	2502	463
Bruxism and prosthetic treatment	42	10	3(1)[b]
Bruxism and dental implants	69	13	1[b]
Bruxism and fixed dental prosthesis	54	5	1[b]
Bruxism and dentures	132	10	0

[a] Randomized controlled trial; in parentheses relevant article.
[b] Denotes the same paper (Ref. [4]).

3. Bruxism

‘Bruxism’ originates from the Greek word *brychein,* meaning to ‘gnash the teeth’. An early and common definition of bruxism was thus ‘‘gnashing and grinding of the teeth for non-functional purposes’’ [5]. Later definitions have been more specific, for example, ‘‘involuntary, non-functional, rhythmic or spasmodic gnashing, grinding, and clenching of teeth, usually during sleep’’ [6]. The same medical dictionary [6] adds that causes of bruxism may be related to repressed aggression, emotional tension, anger, fear, and frustration. In the dental literature, the etiology remains controversial up to now, even though earlier opinions that occlusal disturbances or other morphological factors are important causes may have been long since abandoned due to lack of evidence [7]. Instead, the focus has been on psychosocial, pathophysiologic and genetic factors. Even though the literature is still not conclusive, it is agreed today that bruxism has a multifactorial etiology [1,8].

Historically, occlusal/articulation and skeletal factors were believed to constitute the greatest risk for bruxism, but modern studies have failed to demonstrate a consistently significant relationship between such factors and bruxism. Factors which have been implicated as having an increased risk for bruxism include lower age, female gender, tobacco, alcohol and caffeine usage, psychosocial factors (e.g. stress and anxiety), sleeping disorders (e.g. obstructive sleep apnea), genetics and certain medications or drugs. Some authors have emphasized that bruxism during sleep and during wakefulness should be regarded as two separate entities, probably with different etiologies, and with different presumed risk factors. The American Academy of Sleeping Disorders proposed the terms *sleep and awake bruxism* [9]. Even though most of the literature does not differentiate between sleep and awake bruxism, studies in sleep-laboratories are thought to produce research of higher quality (sometimes called the ‘‘gold standard’’) than other types of studies, many of which are based on self-reports. It follows that self-report is not an adequate measure of sleep bruxism because of diagnostic bias and confounders [10–12]. At the practical level, however, the process of diagnosing sleep bruxism by means of polysomnography (PSG) is complicated, while detecting awake bruxism is easier as the patient can report it after becoming, or being made aware of the habit. However, there are some promising recent developments in portable EMG measuring devices for diagnosing bruxism which correlate well with the gold standard, viz. PSG [13,14].

The prevalence of bruxism in the population is difficult to estimate because of the wide variations in methods and diagnoses applied, types of bruxism considered, and differences between samples examined in published studies. Indeed, epidemiologic studies have reported prevalences of bruxism ranging from 6% to 91% of examined samples [3]. It is evident that clenching and grinding of teeth are extremely common, although the prevalence of manifest bruxism has been estimated to be about 10% [1].

3.1. Effects of bruxism on the masticatory system

Since bruxism is considered a possible etiological factor for TMD and tooth wear, its clinical importance is obvious. Other effects of bruxism may include tooth movement and tooth mobility, as well as changes in oral soft tissues and jawbone [2,3].

3.1.1. Tooth wear

Bruxism was for long considered a major cause of tooth wear. In recent years, however, the multifactorial etiology and the importance of other factors related to tooth wear, such as erosion, have been emphasized [15]. Nevertheless, a systematic review concluded that ''attrition seems to be co-existent with self-reported bruxism'' [16]. Rather than confirming a relationship, this may be indicative of a common perception among both patients and dentists. For example, a positive self-response to a question about bruxism may simply reflect a preconception on the part of the patient, or the dentist, about the *de facto* existence of a causative relationship between tooth wear, and/or TMD-related symptoms for that matter, and bruxism [10]. This may, therefore, be an important explanation for the significant correlation reported between self-reported bruxism, tooth wear and/or TMD in several studies [17–23]. Indeed, when nocturnal bruxism has been diagnosed more robustly, with polysomnography, no consistent relationship has been found between bruxism and tooth wear, or between bruxism and TMD. In fact, there have been suggestions that an inverse relationship may apply [24,25]. A recent review concluded that a number of published observations strengthen the concept of the multifactorial etiology of tooth wear. The review went on to state that it seemed fair to conclude that the overall significance of bruxism as a causative factor for tooth wear is not fully known, but it is even fairer to say that it is probably overestimated [15]. It follows that there are significant limitations with self-reports to provide a reliable diagnosis of sleep bruxism. Therefore, in much of the discussion that follows, the use of the term bruxism implies an acceptance of this limitation, and that what it refers to might equally be just heavy loading through high biting/chewing forces operating as a direct factor, rather than it being categorically due to parafunctional activity.

Irrespective of the etiology, restoration of worn teeth that will frequently involve prosthetic treatment will be needed in some patients. Because such treatment is typically complex and often extensive, there is a tendency to defer treatment until the tooth wear is well advanced. This complicates treatment further, and with greater mechanical vulnerability to the restoration provided. There is a scarcity of studies on the outcome of prosthetic restoration of worn dentitions, leading to widely differing opinions among prosthodontists in different countries about how these complex treatment situations should be managed [15,26].

3.1.2. Treatment of bruxism

Currently, no specific treatment exists that can stop sleep bruxism even though many methods, including prosthetic treatment, have been tried over the years. On the other hand, it has been suggested that various treatments, based on behavior modification such as habit awareness, habit reversal therapy, relaxation techniques, and biofeedback massed therapy, may eliminate awake bruxism. Although these methods are not harmful to the patients, there is no strong evidence that any of them is effective in the treatment of bruxism [27,28]. Nevertheless, even without strong scientific evidence, the simple measure of increasing the patient's awareness of the habit should be tried: it may help the patient to start controlling it and thereby possibly decreasing the frequency and/or intensity of daytime tooth contact and muscle tension.

The absence of a definitive treatment to permanently eliminate bruxism has led to the development of strategies to reduce its deleterious effects. The most common method used to prevent the destructive effects of bruxism is through different types of interocclusal appliances (e.g. occlusal splints, night-guards, etc.). Recent reviews have concluded that interocclusal appliances are useful adjuncts in the management of sleep bruxism but do not offer a definitive or ''curative'' treatment of bruxism, or the signs and symptoms of TMD [29]. Similarly, their efficacy in reducing nocturnal muscle activity and craniofacial pain is unclear [30].

Occlusal splints are commonly used to prevent tooth wear caused by bruxism and/or heavy loading. A survey among general dental practitioners in Sweden showed that they considered the first indication for hard interocclusal appliances was for protecting the dentition from wear, followed by for managing TMD problems [31]. An earlier long-term study of patients with extensive tooth wear provided with stabilization splints showed that usage patterns by patients varied widely [32]. Only a few patients continued to use the splints for the whole follow-up period and the mean period of usage was approximately 2 years. In most patients, tooth wear progression rate over 6–10 years was slow and the amount was small. The role of the splints in the minimal continuing tooth wear observed was not conclusive: in general, the splints were used for less than a third of the follow-up period and, besides bruxism, several other possible causes of tooth wear were evident [32]. Nevertheless, in spite of the paucity of strong

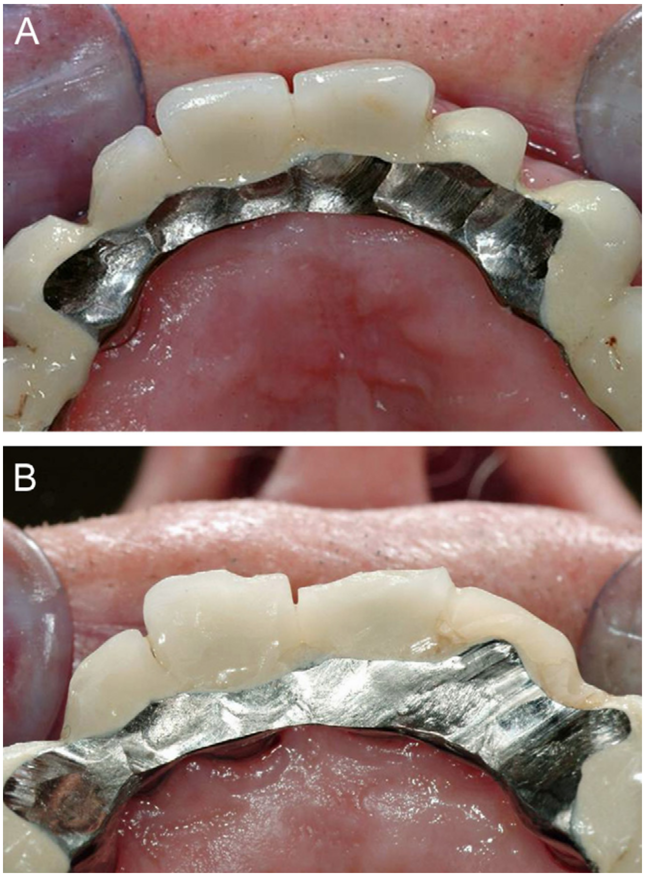

Fig. 1. A 60-year-old man with a long history of fractures of different types of fixed dental prostheses, including metal–ceramic and gold–acrylic constructions, most likely due to excessive loading and bruxism. A newly cemented metal–ceramic prosthesis (A) and suffering several porcelain fractures after 1 year (B).

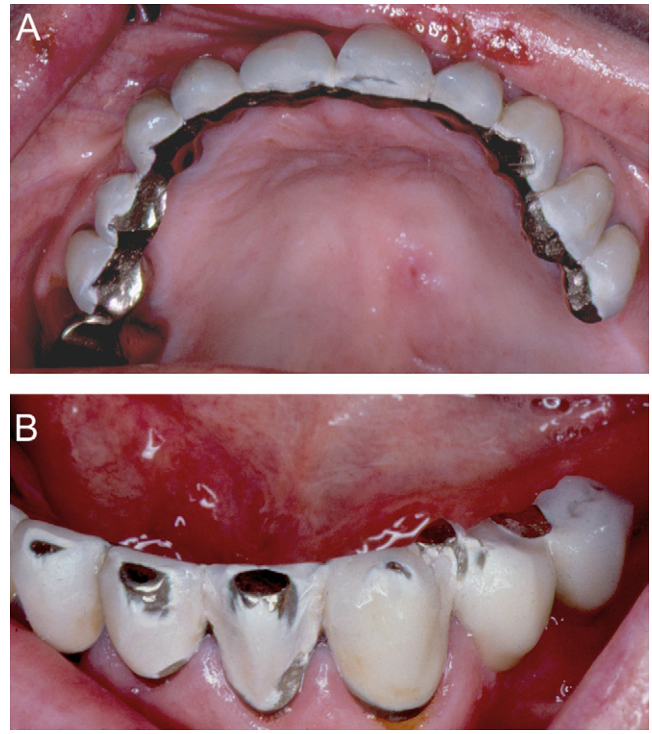

Fig. 2. A 49-year-old woman with 3-year-old metal–ceramic fixed dental prostheses (FDPs) in both maxillary and mandibular jaws (A and B). Extensive porcelain fractures developed rapidly, especially in the mandible probably due to inadequate metal support, compared to the palatal metal support provided in the maxillary FPD (B). These FDPs were remade because of similar failures with a previous set of FDPs.

evidence, a recent book on bruxism states that there is ''total consensus that bruxism splints play a positive role in protecting dental hard tissues'' [28].

Given the foregoing background about the real difficulties of treating bruxism definitively or predictably, or for that matter, being able to adequately protect the teeth from its effects, the association between bruxism and prosthetic treatment, as suggested in the title of this paper, will of necessity refer to the effects of bruxism on prosthetic reconstructions (Fig. 1).

3.2. *Effects of bruxism on prosthetic restorations on natural teeth*

Fixed dental prostheses (FDP) are successful prosthetic restorations in partially dentate patients. Systematic reviews have demonstrated survival rates of conventional FDPs of 94% after 5 years and 89% after 10 years [33,34]. The most common technical failures reported included loss of retention and fracture of material. It is often suggested that the occurrence of such failures is greatest in patients with bruxing habits. For example, when prosthetic restoration is being provided for a worn dentition (usually with teeth having short clinical crowns), it will be difficult to achieve adequate mechanical retention and resistance forms for conventionally cemented restorations. Furthermore, the potentially greater load on restorations if there is bruxism, heavy chewing forces, or unfavourable loading directions between teeth, means that great caution is needed in the design of the restoration if the risk of mechanical failure is to be reduced. We found no controlled study in this regard, although several reports have noted the possible association between bruxism and survival of FDPs [35,36].

Likewise, the literature on the materials recommended for use in FDP fabrication in patients with severe bruxism is sparse, and the choice needs often to be made on the basis of commonsense rather than on scientific data [37,38]. The choice of material to be used could be critical if, for example, it is opposed by natural teeth [39,40]. Some anecdotal reports of wear on natural teeth and prosthetic restorations opposing various materials have appeared, and a few examples of such occurrences are shown in Figs. 2 and 3. The process of wear that affects restorative materials is almost always studied experimentally in laboratory trials. Results are then extrapolated to the extremely variable intraoral conditions, whereas only long-term clinical investigations can demonstrate the true outcome [41]. With an opposing occlusion of tooth enamel, most clinicians and researchers agree that a metal occlusal surface, and preferably one of high noble content, is preferred in order to minimize wear of the natural dentition. Unpolished ceramics could be especially hazardous to opposing natural teeth. It is also necessary to consider other factors which influence the

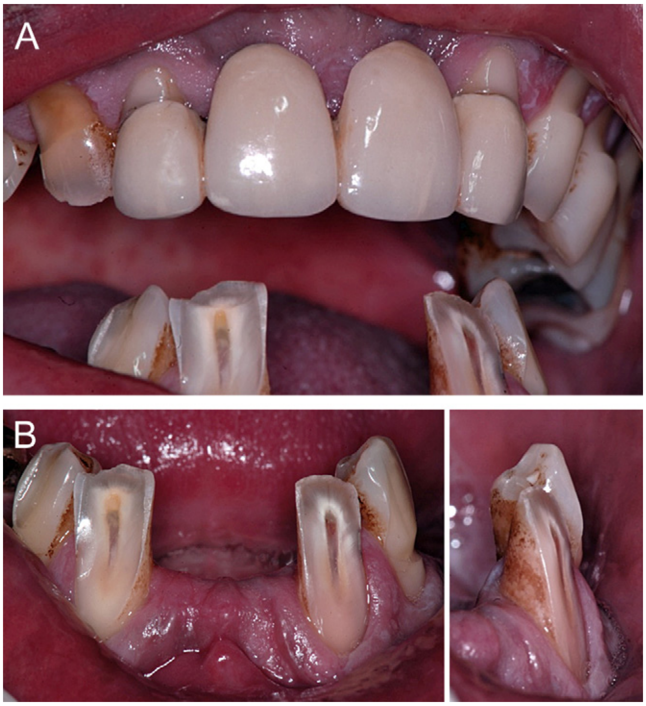

Fig. 3. (A and B) A 58-year-old man with severe lower anterior tooth wear caused by a combination of different factors, including increased load produced by bruxism and/or heavy load due to loss of posterior support, opposing unglazed porcelain, and most likely dental erosion as another contributing factor (Courtesy of the Department of Prosthodontics, School of Oral Health Science, Faculty of Health Sciences, University of the Witwatersrand, Johannesburg, South Africa).

Fig. 4. (A–C) A 55-year-old man with maxillary metal–ceramic crowns and a deep bite. Heavy load due to bruxism and an absence of posterior support, opposing porcelain crowns, in combination with dental erosion have most likely contributed to the excessive wear seen on the mandibular incisors.

wear resistance of natural teeth, viz. erosive influences, salivary secretory and lubricatory factors, among others. In cases of heavy occlusal load such as, for example, in bruxers, the situation becomes very complex as we need to consider not only the risk for wear of the restorative material itself and the opposing dentition, but also the need for sufficient strength in all the components of the superstructure to be able to withstand the applied load. Besides the risk of mechanical failures and loss of retention under conditions of excessive load, biological failures are even more likely, e.g. caries, marginal degradation, and endodontic problems [38]. The sequence of these events may be difficult to determine, and it may be that loss of retention occurs first and is then followed by caries and the other biological problems [42]. All things considered, metal or metal–ceramic restorations seem to be the safest choice in cases of high load conditions [37], although under extreme conditions, there is no material that will last for too long (Figs. 4–6). Because of the risk of chipping of ceramic veneers in metal–ceramic restorations, many clinicians prefer gold–acrylic FDPs for heavy bruxers. The few clinical studies published on wear of materials in bruxers indicate only small differences in wear resistance of gold and ceramic materials, whereas resin-based materials showed 3–4 times more substance loss than gold or ceramics [37,40]. During the last few years, new ceramics, for example zirconia, have demonstrated improved mechanical properties in laboratory studies and may be promising in the treatment of bruxism-related tooth wear [43,44]. However, a systematic review of zirconia FDPs has shown that there are complications when the material meets clinical reality. Improvement of the veneering systems is especially required as chipping was the most frequent mechanical complication [45].

3.2.1. Biomechanical factors

Aside from the possible effects of bruxism on the occlusal and materials-related aspects of FDPs just discussed, certain design and structural considerations for planned restorations in a patient with bruxism and/or heavy loading can be mentioned. In this scenario, restorations will be vulnerable to failure as a result of stress concentration from differential wear and poorly planned or faulty occlusal contacts. Thus, for conventional fixed prosthodontics, single crowns should be constructed whenever possible and FDPs should be of minimal extension. An effective way to increase the retention of conventionally retained crowns on short, worn abutments is to include in the preparation, boxes and grooves, or parallel pins [37,46,47]. Splinting should be avoided whenever possible, especially in

Fig. 5. (A and B) Severe wear on the anterior mandibular teeth restored with a variety of dental materials. The opposing maxillary teeth are restored with metal–ceramic crowns.

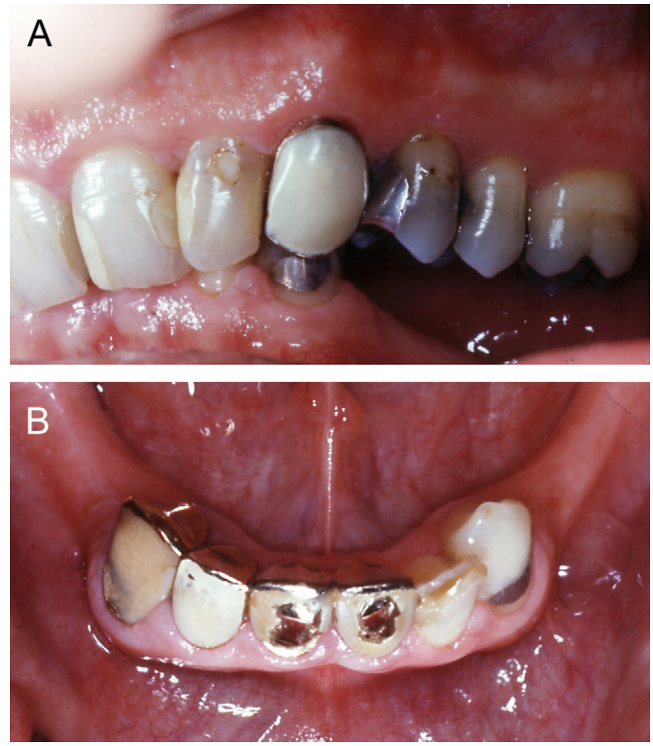

Fig. 6. (A and B) Wear of metal crowns veneered with acrylic opposing natural teeth. Unfavourable occlusal loading without molar support probably explains the extensive wear.

cases of confirmed bruxism. Similarly, splinted secondary abutments as compensation for a short, poorly retentive primary abutment is contraindicated: the chances of cementation failure, rather than being reduced, will probably be as great as at the short abutment. In this way, physiologic tooth mobility will be unrestrained; additionally, torqueing forces are minimized and, in case of cementation failure, the condition would be more easily detected, and be more easily correctable [15]. A further argument that favours restorations that are not rigidly connected is that the rich sensory information provided by the periodontal mechanoreceptors of unsplinted teeth is preserved. This was recently suggested based on the results of clinical neurophysiologic experiments in subjects with natural teeth compared to patients with extensive tooth-borne or implant-supported FDPs [48].

Among clinicians as well as in textbooks, it is often proposed that patients with severe tooth wear and rehabilitated with extensive FDPs, should receive a protective occlusal splint for use at night [49]. Even if this seems to be a prudent recommendation (and giving the dentist a clear conscience, but perhaps also a false sense of security), no controlled studies of the efficacy of such a protective device in prosthetic treatment by means of FDPs on natural teeth have been published. Regarding implant-supported restorations, one study reported a higher frequency of ceramic/porcelain fractures in bruxism patients not wearing a protective occlusal device [50].

In a study of 11 patients, conducted 3 years after rehabilitation with large FDPs because of extensive tooth wear, it was found that the mandibular movement pattern had changed after the prosthetic treatment. Two patients displayed obvious wear of the restorative material and one FDP had to be remade because of fracture of abutment teeth. Interestingly, despite the changed movement pattern at the group level, the heavy occlusal load was still present, at least in some of the patients, after the prosthetic rehabilitation [51].

3.3. *Effects of bruxism on implant restorations*

In contrast with the paucity of studies on bruxism and prosthetic treatment on natural teeth, a number of publications were found relating to bruxism and implant restorations. Early papers on survival of fixed prostheses on osseointegrated implants often referred to bruxism and heavy occlusal loading as the cause of implant failures [52]. But, in a prospective 15-year follow-up study of mandibular implant-supported fixed prostheses, smoking and poor oral hygiene had a significant influence on bone loss, while occlusal loading factors such as bruxism, maximal bite force and length of cantilevers were of minor importance [53]. Further, a study using occlusal wear as a proxy for bruxism, gave no indication that implants in patients with occlusal wear have an increased rate of bone loss or higher Periotest value [54].

Systematic reviews have concluded that a causative relationship between occlusal forces and loss of osseointegration has never been demonstrated [55,56]. Although bruxism was included among risk factors, and was associated with increased mechanical and/or technical complications, it had no impact on implant survival [57]. However, several studies have indicated that patients with bruxism have a higher incidence of complications on the superstructures of both of fixed and removable implant-supported restorations [35,58–60] (Figs. 7 and 8). Once again the unreliability of self-reported bruxism has to be stressed: the complications reported in the various studies may well have been caused by other load-increasing factors, poorly planned occlusion or inadequate mechanical design of the reconstructions. Equally, without a definitive diagnosis of bruxism having been established, it is acknowledged that some of the outcomes illustrated in some of the

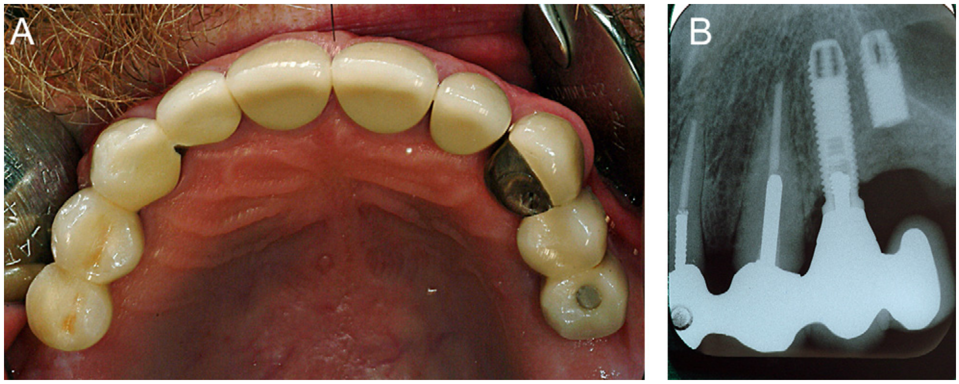

Fig. 7. A 57-year-old man (A) with implant fracture in the region of 25 (B) due to overloading.

clinical cases that appear in this paper may be due to such load-increasing or materials-related factors, rather than to bruxism *per se*.

The only RCT found that related to bruxism and prosthetic therapy was a 1-year follow-up study of implant survival after 1- and 2-stage sinus inlay bone grafts. Bruxism and postoperative infections were the only parameters that could be related to implant failure [4]. However, the diagnosis of bruxism was based on self-report, the number of patients was small, and the observation period was short, all of which indicate that the results should be interpreted with caution.

Table 2
Conclusions of a study of occlusal activity, including bruxism, in subjects with moderately shortened dental arches with or without mandibular distal extension removable partial dentures and subjects with complete dentitions [65].

Similar frequencies for reported awareness of bruxism
Similar occlusal wear of lower anterior teeth; in contrast, premolars had significantly more occlusal tooth wear
Similar frequencies of signs and symptoms related to TMD
No clinically relevant differences of anterior relationships in terms of vertical and horizontal overlap
Posterior occlusal support by mandibular distal extension RPDs in terms of occlusal contacts in intercuspal position was limited; the more posterior the denture teeth, the less occlusal contacts

3.4. *Effects of bruxism on removable dentures*

Systematic studies on the effects of bruxism on removable dentures do not seem to be available in the literature.

3.4.1. *Complete dentures*

Textbooks on complete denture fabrication often mention that clinical experience indicates that bruxism is a frequent cause of complaint of soreness of the denture-bearing mucosa. The relationship between oral parafunctions and residual ridge resorption has not been investigated, but it is tempting, even if anecdotally, to include parafunctions as a possible factor related to the magnitude of ridge reduction [61] (Figs. 9 and 10).

3.4.2. *Removable partial dentures*

The question of restoring lost posterior support by means of mandibular distal extension removable partial dentures (RPDs) in moderately shortened dental arches remains controversial [62]. However, systematic reviews have concluded that shortened dental arches comprising anterior and premolar teeth generally fulfill the requirements of a functional dentition without the need for prosthodontic extension, especially in older patients [63,64]. In this regard, the findings of a study of occlusal activity, including bruxism, in subjects with moderately shortened dental arches with or without mandibular distal extension removable partial dentures and subjects with complete dentitions are listed in Table 2 [65].

In a similar way as described for complete denture wearers, heavy bruxism may have detrimental effects on the residual dentition and the denture-bearing tissues in patients with RPDs, although this has not been systematically studied.

A paper described the management of four patients with severe sleep bruxism, and who were using conventional RPDs. Each patient was provided with a splint-like RPD, called a night denture, and followed-up for 2–6 years using the night denture. The authors concluded that the night denture appeared to be effective in managing problems related to sleep bruxism in patients with RPDs [66].

4. Discussion

Research focusing on the relationship between bruxism and prosthetic therapy is scarce. Only one RCT was found [4], but even this was of only limited value for the present review. Relatively few relevant articles with the search terms used were listed in PubMed, and additional valuable texts were found by means of manual searching of the reference lists of articles found and in recent textbooks.

There is no evidence that prosthetic therapy, or any other available treatment, can eliminate bruxism. Equally, there is no evidence that bruxism can be caused by prosthetic therapy. The

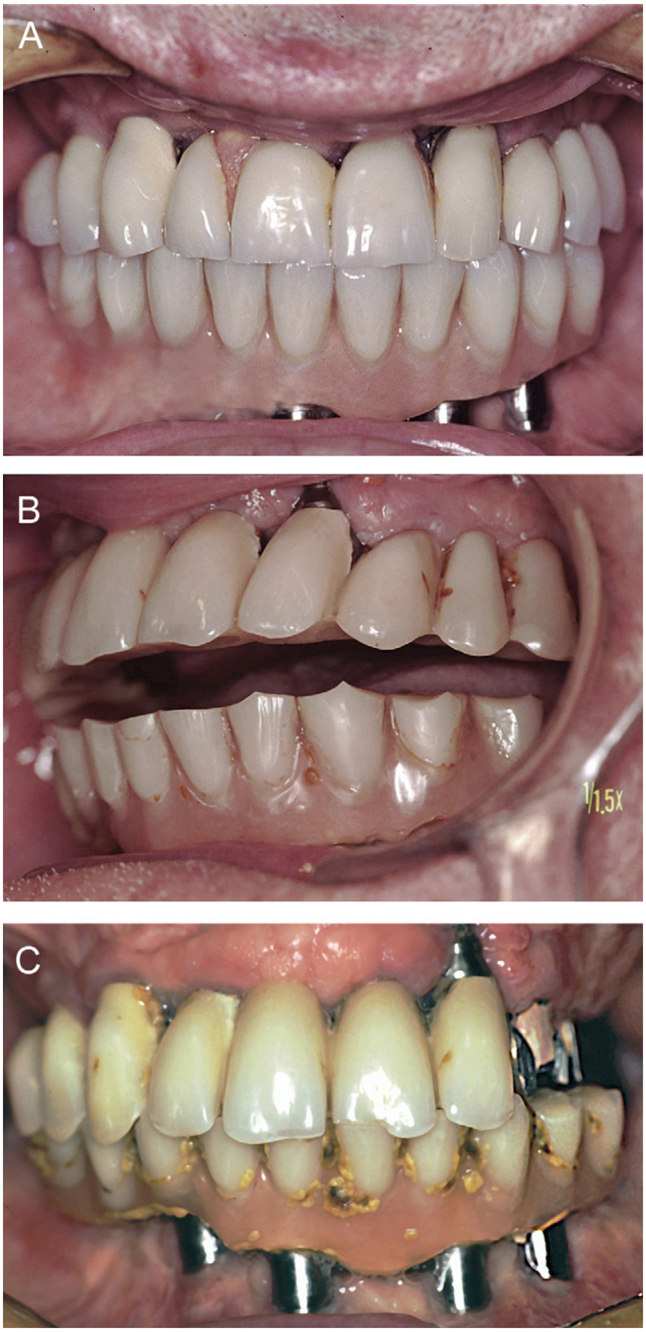

Fig. 8. A 72-year-old man with maxillary and mandibular implant supported fixed dental acrylic prostheses (FDPs) at delivery (A). Patient is probably a bruxer and after only 2 years a definite wear pattern emerged, which is indicative of heavy load and function (B). Four years later the FDP fractured (C) (Courtesy of Dr. Alf Eliasson, Postgraduate Center for Dental Education, Örebro, Sweden).

review was, therefore, directed towards the *effects* of bruxism on various kinds of prosthodontic restorations. But even here, the evidence was concentrated in certain areas, for example implant-supported prostheses, and the effects of excessive loading on opposing natural teeth, restorative materials and the structural integrity of prostheses. The need for research in this area is clearly great.

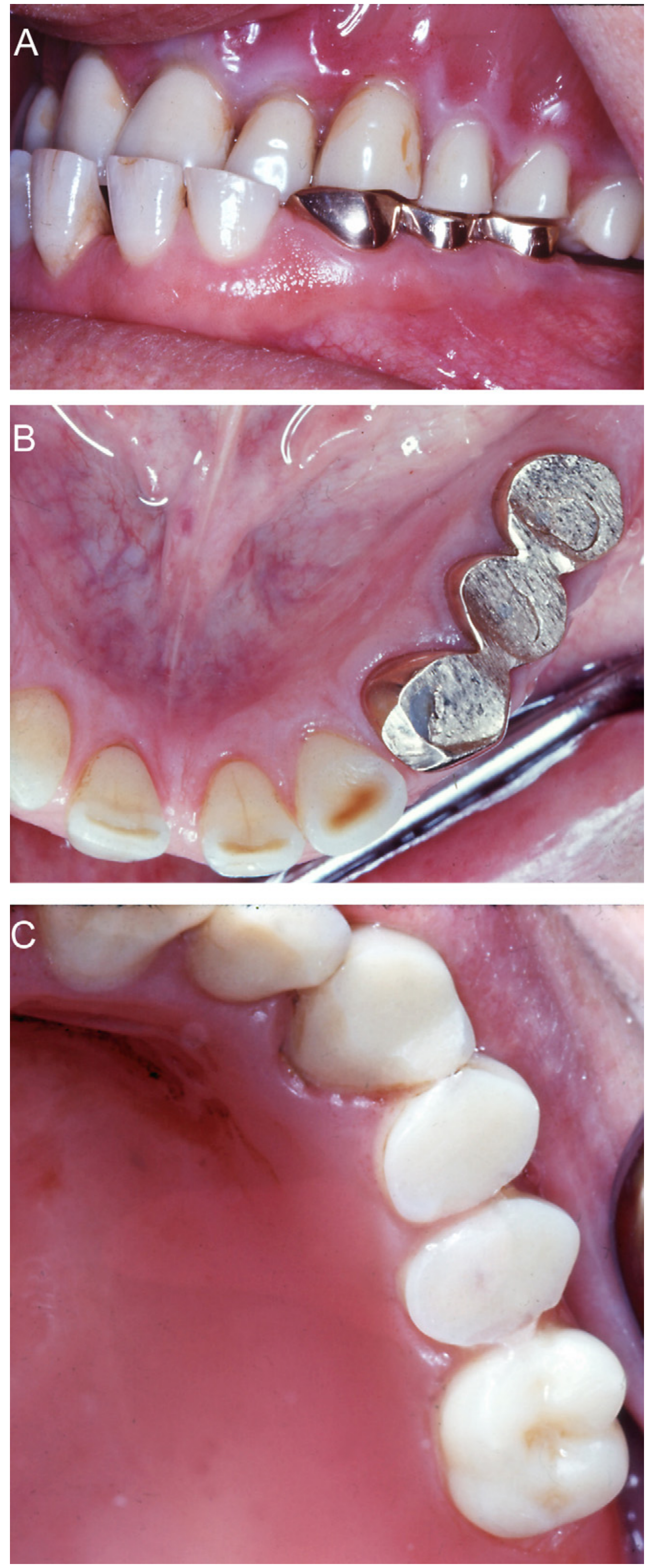

Fig. 9. Wear of acrylic teeth of a maxillary complete denture (A and C) and opposing metal crowns (B) in a 65-year-old man. The prosthetic treatment had been provided 3 years earlier because of a history of extensive wear of similar previous reconstructions.

Fig. 10. Wear of porcelain teeth of complete dentures in a 55-year-old woman. The reason why she had dentures with porcelain teeth fabricated 5 years ago was because she had previously rapidly worn down the acrylic teeth on her dentures.

5. Conclusions

Bruxism is a common parafunctional habit, occurring both during sleep and wakefulness, and sleep bruxism and awake bruxism should be differentiated.

Bruxism usually has no serious effects, but may, in some patients, have pathological consequences.

The etiology of bruxism is not well known, but it is agreed that it is multifactorial.

There is no specific treatment available at this time to stop bruxism, so that the focus has been to reduce the adverse effects of the habit.

The use of interocclusal appliances is the most common and accepted way to prevent wear of teeth and prosthodontic restorations in spite of lack of strong evidence for its efficacy.

The role of bruxism in the multifactorial process of tooth wear is not clear, but it is in general not the major cause, as has been a frequently stated earlier view.

Tooth wear is a natural and generally slow process, and worn teeth seldom need prosthetic rehabilitation. In extensive tooth wear, the decision to treat or not should be based on the patient's perceived need, the severity of the wear and risk of its progression with respect to the patient's age.

When prosthetic intervention is indicated in a patient with bruxism, efforts should be made to reduce the effects of heavy occlusal loading on all the components that contribute to prosthetic structural integrity.

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