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Sent on: Fri Nov 9 11:46:16 2012

Search: dental occlusion OR centric relation OR temporomandibular joint disorders OR occlusal adjustment OR occlusal splints OR tooth abrasion OR bruxism AND 2011:2012[dp] AND english[la]

PubMed Results

Items 1 - 150 of 150(Display the 150 citations in PubMed)

1. Clin Toxicol (Phila). 2012 Sep;50(8):727-32. doi: 10.3109/15563650.2012.716158. Epub 2012 Aug 10.

Use and acute toxicity associated with the novel psychoactive substances diphenylprolinol (D2PM) and desoxypipradrol (2-DPMP).

Wood DM, Dargan PI.

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Abstract

INTRODUCTION:

Over the last decade there has been greater use of novel psychoactive substances ('legal highs') across Europe and the United States, including increasing reports of use of diphenylprolinol (D2PM) and desoxypipradrol (2-DPMP). This review will discuss the pharmacology and mechanisms of action of these two compounds, available data on their sources and prevalence of use and reports of acute toxicity and fatalities associated with their use.

METHODS:

PubMed was searched using the search terms 'D2PM', '2-DPMP', 'diphenyl-2-pyrrolidinyl-methanol', 'diphenylprolinol', '2-diphenylmethylpiperidine' and 'desoxypipradrol'. These searches identified 70 articles, only five of which were relevant. PHARMACOLOGY AND MECHANISMS OF ACTION: D2PM is a pyrrolidine analogue and 2-DPMP is a desoxy analogue of pipradrol. Animal studies have shown that 2-DPMP increases the release of dopamine and decreases dopamine re-uptake comparable to the effects of cocaine. The binding and activity of D2PM at the dopamine re-uptake transporter, based on currently published

data, is also similar to cocaine, although it appears that D2PM has less biological activity. SOURCES AND PREVALENCE OF USE: D2PM and 2-DPMP is available from internet-based suppliers and street level drug dealers; there is currently no systematic data to be able to determine the relative importance of these routes of supply. There is no population level, and limited subpopulation level, data on the prevalence of use of D2PM/2-DPMP. In one 2011 study, 1.6% of 315 individuals in 'gay friendly' nightclubs in South London reported that they had used a pipradrol: 1.0% had used within the last year and 0.6% had used or were planning to use a pipradrol on the night of the survey. ACUTE TOXICITY: Reports on internet discussion fora describe prolonged euphoria and stimulant effects including euphoria, sweating and bruxism with use of D2PM and 2-DPMP. The first report of analytically confirmed acute D2PM toxicity described chest pain and sympathomimetic features (hypertension and tachycardia). Five individuals with analytically confirmed acute D2PM toxicity developed agitation/anxiety and/or insomnia lasting 24-96 h in addition to sympathomimetic features (palpitations, anxiety and agitation). Reports of 49 enquiries relating to a 'legal high' product called 'Whack' (which on analysis was found to contain 2-DPMP and fluorotropacocaine) commonly described unwanted cardiovascular (hypertension in 10/49 and tachycardia in 12/49) and neuropsychiatric (agitation in 14/49 and psychosis in 13/49) effects; the neuropsychiatric effects were prolonged, and persisted for up to 5 days. No analysis of biological samples was undertaken so it is not possible to determine which of these agents if any was responsible for the clinical features. In a series of 26 cases related to the use of 'Ivory Wave' (analysis of a similar 'Ivory Wave' product showed that it contained 2-DPMP), 96% had neuropsychiatric features. Cases presented up to 1 week after use with tachycardia, dystonia, rhabdomyolysis, agitation, hallucinations and paranoia. Confirmatory biological sample analysis was either not available (85.3% of cases) or negative (2.9% of cases) for 2-DPMP; it was positive for 2-DPMP in four (11.8%) of the cases (80% of those where biological analysis was undertaken). D2PM AND 2-DPMP RELATED FATALITIES: Although 2-DPMP has been detected in three fatalities, its role in these deaths has not yet been established. There have been no reports of deaths directly attributed to either D2PM or 2-DPMP.

CONCLUSIONS:

There is emerging evidence of the use of D2PM and 2-DPMP in Europe. D2PM and 2-DPMP have sympathomimetic properties similar to cocaine and, in addition, prolonged and clinically significant neuropsychiatric symptoms have been reported.

PMID: 22882169 [PubMed - indexed for MEDLINE]

Related citations

2. Continuum (Minneap Minn). 2012 Aug;18(4):869-82.

Facial pain, cervical pain, and headache.

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Abstract

PURPOSE OF REVIEW:

This review discusses the role of musculoskeletal structures of the jaw and neck in perpetuating or triggering primary headache. Because treatments aimed at these structures often reduce headache, a better understanding of their role in headache is needed.

RECENT FINDINGS:

Central sensitization may result in changes in the afferent pathways, making communication from cervical and temporomandibular nociceptive neurons to the trigeminal nucleus possible. This provides the pathophysiologic basis for directing therapy to the neck or temporomandibular joint to alleviate primary headache.

SUMMARY:

Clinicians should recognize the significant role that musculoskeletal structures of the head and neck play in the perpetuation of headache and the importance of evaluating every patient for temporomandibular disorders and cervical abnormalities.
PMID: 22868547 [PubMed - indexed for MEDLINE]
Related citations

3. J Dent Res. 2012 Aug;91(8):745-52. doi: 10.1177/0022034512453324. Epub 2012 Jun 28.

TMJ disc removal: comparison between pre-clinical studies and clinical findings.

Hagandora CK, Almarza AJ.

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Abstract

The debate continues surrounding the use of disc removal (discectomy) as the primary surgical treatment for patients suffering from severe temporomandibular joint disorders. Furthermore, the effectiveness of pre-clinical animal models for predicting the response of the joint to discectomy in humans remains uncertain. This review compares the results of animal models with the most recent clinical findings while also focusing on investigations that use imaging as

an assessment tool. After a review of the literature from well-established animal studies to clinical findings, it was found that the results of animal models for discectomy corresponded to the clinical findings seen in patients. Overall, there is adaptive remodeling or degeneration of the TMJ following discectomy. Additionally, there is some reduction in pain but with various amounts of dysfunction remaining following disc removal. Noteworthy, in the most recent clinical studies, imaging was not used as an outcome to assess the success of discectomy at preventing further joint degeneration.
PMID: 22744995 [PubMed - indexed for MEDLINE]
Related citations

4. J Oral Maxillofac Surg. 2012 Aug;70(8):1918-34. doi: 10.1016/j.joms.2011.07.018. Epub 2011 Oct 19.

Pathophysiology and pharmacologic control of osseous mandibular condylar resorption.

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Abstract

PURPOSE:

When osseous mandibular condylar resorption occurs there can be many different diagnoses: inflammatory arthritis, TMJ compression, trauma, hormone imbalances, and others. While each diagnosis has its own original inciting event, the pathophysiological pathway for articular bone loss is the same. The aim of this article is to review the relevant literature on condylar resorption and the use of pharmacotherapy to control arthritic erosions and resorption.

MATERIALS AND METHODS:

The literature search was performed using PubMed database with various combinations of related keywords. Preference was given to clinical trials when reviewing articles.

RESULTS:

The literature reveals that common cellular level events associated with articular resorption include the activation of osteoblasts by cytokines, free radicals, hormone imbalances and/or potent phospholipid catabolites. The osteoblast then activates the recruitment of osteoclasts and promotes the release of matrix degrading enzymes from the osteoclast. Research into articular erosions has focused on elucidating the important steps in the bone destructive

pathways and interfering with them by pharmacological means. The use of antioxidants, tetracyclines, omega-3 fatty acids, non-steroidal anti-inflammatories and inflammatory cytokine inhibitors to aid in preventing and controlling articular bone loss including osseous mandibular condylar resorption has been successful.

CONCLUSION:

By understanding the known pathways that lead to condylar resorption and the individual patient's susceptibilities, targeted pharmacotherapy might be able to disturb these pathways and prevent further condylar resorption. Basic clinical investigations and randomized clinical trials are still required, but the present science is encouraging.

PMID: 22014941 [PubMed - indexed for MEDLINE]
Related citations
ELSEVIER FULL-TEXT ARTICLE

5. J Oral Maxillofac Surg. 2012 Jul;70(7):1636-42. Epub 2011 Aug 24.

Orthognathic surgery in primary myopathies: severe case of congenital fiber type disproportion with long-term follow-up and review of the literature.

Lehman H, Harari D, Tarazi E, Stheyer A, Casap N.

Department of Oral and Maxillofacial Surgery, Hebrew University-Hadassah School of Dental Medicine, Jerusalem, Israel. hlehman6@gmail.com
PMID: 21864970 [PubMed - indexed for MEDLINE]
Related citations
ELSEVIER FULL-TEXT ARTICLE

6. J Oral Rehabil. 2012 Jul;39(7):522-37. doi: 10.1111/j.1365-2842.2012.02305.x. Epub 2012 Apr 17.

Occlusion on implants - is there a problem?

Klineberg IJ, Trulsson M, Murray GM.

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Abstract

Oral rehabilitation restores form and function and impacts on general health. Teeth provide a discriminating sense of touch and directional specificity for occlusal perception, management of food with mastication and swallowing, and awareness of its texture and hardness. Peripheral feedback for control of jaw muscles includes the enamel-dentine-pulp complex and mechanoreceptors in the periodontal tissues. The implications of feedback from periodontal and other intra-oral mechanoreceptors as well as changes in central representation are significant for function and adaptation to oral rehabilitation. With implants, in the absence of the periodontium and periodontal mechanoreceptor feedback, fine motor control of mastication is reduced, but patients are still able to function adequately. Further, there is no significant difference in function with full-arch fixed prostheses on teeth in comparison with implants. Predictable implant outcomes depend on bone support. Optimum restoration design appears to be significant for bone remodelling and bone strains around implants with occlusal loading. Finite element analysis data confirmed load concentrations at the coronal bone around the upper section of the implant where bone loss is commonly observed clinically. Load concentration increased with steeper cusp inclination and broader occlusal table and decreased with central fossa loading and narrower occlusal table size. It is recommended that occlusal design should follow a narrow occlusal table, with central fossa loading in intercuspal contact and low cusp inclination to minimise lateral loading in function and parafunction. Acknowledging these features should address potential problems associated with the occlusion in implant therapy.

PMID: 22506541 [PubMed - indexed for MEDLINE]

Related citations

7. J Oral Rehabil. 2012 Jul;39(7):513-21. doi: 10.1111/j.1365-2842.2012.02303.x. Epub 2012 Apr 10.

Rehabilitation of occlusion - science or art?

Koyano K, Tsukiyama Y, Kuwatsuru R.

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Abstract

The primary objective of rehabilitating occlusion is to improve stomatognathic function in patients experiencing dysfunction in mastication, speech, and swallowing as a consequence of tooth loss. The procedure of occlusal treatment involves improving the morphology and the stomatognathic function. Several practical methods and morphological endpoints have been

described in occlusal rehabilitation. We made a selection of these (mandibular position, occlusal plane, occlusal guidance, occlusal contact, face-bow transfer, use of an adjustable articulator and occlusal support) and performed a literature review to verify the existence of compelling scientific evidence for each of these. A literature search was conducted using Medline/PubMed in March 2011. Over 400 abstracts were reviewed, and more than 50 manuscripts selected. An additional hand search was also conducted. Of the many studies investigating stomatognathic function in relation to specific occlusal schemes, most studies were poorly designed and of low quality, thus yielding ambiguous results. Overall, there is no scientific evidence that supports any specific occlusal scheme being superior to others in terms of improving stomatognathic function, nor that sophisticated methods are superior to simpler ones in terms of clinical outcomes. However, it is obvious that the art of occlusal rehabilitation requires accurate, reproducible, easy and quick procedures to reduce unnecessary technical failures and/or the requirement for compensatory adjustments. Therefore, despite the lack of scientific evidence for specific treatments, the acquisition of these general skills by dentists and attaining profound knowledge and skills in postgraduate training will be necessary for specialists in charge of complicated cases.

PMID: 22489962 [PubMed - indexed for MEDLINE]
Related citations

8. J Oral Rehabil. 2012 Jul;39(7):489-501. doi: 10.1111/j.1365-2842.2012.02298.x. Epub 2012 Apr 10.

Are bruxism and the bite causally related?

Lobbezoo F, Ahlberg J, Manfredini D, Winocur E.

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Abstract

In the dental profession, the belief that bruxism and dental (mal-)occlusion ('the bite') are causally related is widespread. The aim of this review was to critically assess the available literature on this topic. A PubMed search of the English-language literature, using the query 'Bruxism [Majr] AND (Dental Occlusion [Majr] OR Malocclusion [Majr])', yielded 93 articles, of which 46 papers were finally included in the present review*. Part of the included publications dealt with the possible associations between bruxism and aspects of occlusion, from which it was concluded that neither for occlusal interferences nor for factors related to the anatomy of the oro-facial skeleton, there is any evidence available that they are involved in the aetiology of bruxism. Instead, there is a growing awareness of other factors (viz.

psychosocial and behavioural ones) being important in the aetiology of bruxism. Another part of the included papers assessed the possible mediating role of occlusion between bruxism and its purported consequences (e.g. tooth wear, loss of periodontal tissues, and temporomandibular pain and dysfunction). Even though most dentists agree that bruxism may have several adverse effects on the masticatory system, for none of these purported adverse effects, evidence for a mediating role of occlusion and articulation has been found to date. Hence, based on this review, it should be concluded that to date, there is no evidence whatsoever for a causal relationship between bruxism and the bite.

PMID: 22489928 [PubMed - indexed for MEDLINE]
Related citations

9. J Oral Rehabil. 2012 Jul;39(7):502-12. doi: 10.1111/j.1365-2842.2012.02304.x. Epub 2012 Apr 9.

The dental occlusion as a suspected cause for TMDs: epidemiological and etiological considerations.

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Abstract

The relationship between the dental occlusion and temporomandibular disorders (TMDs) has been one of the most controversial topics in the dental community. In a large epidemiological cross-sectional survey - the Study of Health in Pomerania (Germany) - associations between 15 occlusion-related variables and TMD signs or symptoms were found. In other investigations, additional occlusal variables were identified. However, statistical associations do not prove causality. By using Hill's nine criteria of causation, it becomes apparent that the evidence of a causal relationship is weak. Only bruxism, loss of posterior support and unilateral posterior crossbite show some consistency across studies. On the other hand, several reported occlusal features appear to be the consequence of TMDs, not their cause. Above all, however, biological plausibility for an occlusal aetiology is often difficult to establish, because TMDs are much more common among women than men. Symptom improvement after insertion of an oral splint or after occlusal adjustment does not prove an occlusal aetiology either, because the amelioration may be due to the change of the appliance-induced intermaxillary relationship. In addition, symptoms often abate even in the absence of therapy. Although patients with a TMD history might have a specific risk for developing TMD signs, it appears more rewarding to focus on non-occlusal features that are known to have a potential for the predisposition, initiation or perpetuation of TMDs.

PMID: 22486535 [PubMed - indexed for MEDLINE]
Related citations


10. J Oral Rehabil. 2012 Jul;39(7):480-8. doi: 10.1111/j.1365-2842.2012.02289.x. Epub 2012 Mar 21.

Methodological challenges in the study of dental occlusion.

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Abstract

This narrative review describes the methodological challenges in the study of dental occlusion. The reigning confusion about the scope of this topic is discussed, and a conceptual framework for understanding dental occlusion research is suggested. The characteristics of clinical studies used in the study of dental occlusion are presented within this proposed framework consisting of a triad comprising the relative positions of the teeth-mandible-maxilla, the oral functions and oral appearance. Challenges in the preparation for a clinical study of dental occlusion are reviewed, which include a discourse on the objectives of a clinical study and appropriateness of different study designs. Guidelines are provided for the conduct of studies with a central focus on dental occlusion and diagnostic tests, prognosis, therapy and aetiology, respectively. Summarising chapters present methodological challenges in designing a clinical study of dental occlusion and threats to the proper conduct of a clinical study.

PMID: 22435482 [PubMed - indexed for MEDLINE]
Related citations


11. J Orofac Pain. 2012 Summer;26(3):233-9.

Does hypoxia-reperfusion injury occur in osteoarthritis of the temporomandibular joint?

Vos LM, Slater JJ, Leijsma MK, Stegenga B.

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Abstract

AIMS:

To determine the available evidence in the literature for whether hypoxia-reperfusion injury plays a role in the pathogenesis of joint diseases in general and of osteoarthritis (OA) of the temporomandibular joint (TMJ) in particular.

METHODS:

The electronic databases CENTRAL, PubMed, and EMBASE were systematically searched. The search strategy combined thesaurus terms "reperfusion injury" and "joints" and excluded "tourniquet," which possibly induces iatrogenic reperfusion injury. Inclusion and exclusion criteria were applied, data were extracted, and quality was assessed.

RESULTS:

Four studies could be included, investigating four different aspects of the hypoxia-reperfusion mechanism in joints. All studies investigated several arthritides in the knee or shoulder joint and were observational studies, except for one section of one of the studies, which was a randomized controlled trial. These studies do not provide any evidence to support or reject the hypothesis that hypoxia reperfusion occurs in TMJ OA. Positive but weak evidence is provided to support the hypothesis that hypoxia-reperfusion injury occurs in OA of the knee joint. Furthermore, some results of the included studies suggest differences between OA and other types of arthritis in relation to the hypoxia-reperfusion mechanism.

CONCLUSION:

There is no evidence to support or reject the hypothesis that hypoxia reperfusion occurs in TMJ OA, and limited evidence is provided to support that hypoxia-reperfusion injury occurs in OA of the knee joint. Since the studies suggest differences between OA and other types of arthritis in relation to hypoxia-reperfusion mechanisms, further research in this field needs to distinguish OA from other types of arthritis.

PMID: 22838008 [PubMed - indexed for MEDLINE]

Related citations

12. J Oral Implantol. 2012 Jun;38(3):298-307. Epub 2010 Nov 23.

A comparison between screw- and cement-retained implant prostheses. A literature review.

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Abstract

Implant-supported restorations can be secured to implants with screws (screw-retained), or they can be cemented to abutments which are attached to implants with screws (cement-retained). This literature review discusses the advantages and disadvantages of each method of retention from different aspects. These aspects include: ease of fabrication and cost, esthetics, access, occlusion, retention, incidence of loss of retention, retrievability, clinical prosthesis fit, restriction of implant position, effect on peri-implant tissue health, provisionalization, immediate loading, impression procedures, porcelain fracture, and clinical performance. Peer-reviewed literature published in the English language between 1955 and 2010 was reviewed using PubMed and hand searches. Since the choice of using either method of retention is still controversial, this review article offers some clinical situations that prefer one method of retention over the other. The review demonstrated that each method of retention has certain advantages and disadvantages; however, there are some clinical situations in which it is better to select one method of retention rather than the other.
PMID: 21091343 [PubMed - indexed for MEDLINE]
Related citations

13. J Oral Maxillofac Surg. 2012 Jun;70(6):1300-9. Epub 2012 Mar 6.

Ultrasonography for detection of disc displacement of temporomandibular joint: a systematic review and meta-analysis.

Li C, Su N, Yang X, Yang X, Shi Z, Li L.

Department of Oral and Maxillofacial Surgery, State Key Laboratory of Oral Diseases, West China College of Stomatology, Sichuan University, Chengdu, China.

Comment in

- Is ultrasonography of the temporomandibular joint ready for prime time? Is there a "window" of opportunity? [J Oral Maxillofac Surg. 2012]

Abstract

PURPOSE:

To assess the diagnostic efficacy of ultrasonography in detecting disc displacement of the

temporomandibular joint.

MATERIALS AND METHODS:

MEDLINE (using OVID, 1950 to April 2011), EMBASE (1980 to April 2011), and the Chinese Biomedical Literature Database (1978 to April 2011) were searched electronically. In addition, relevant journals and reference lists of the included studies were manually searched for any eligible studies on diagnostic accuracy. Two authors performed the study inclusion, data extraction, and risk of bias assessment in duplicate. Meta-analysis was performed with MetaDisc 1.4.

RESULTS:

Fifteen studies were included in this meta-analysis; 6 studies had a low risk of bias, 6 studies an unclear risk, and 3 studies a high risk. Meta-regression indicated that the detected results were not influenced by the types of ultrasonography, image dimensions, types of transducer, and ultrasonic image of the disc ($P > .05$). The Q* values of ultrasonography for the closed- and open-mouth positions were 0.79 and 0.91, respectively. The diagnostic efficacy of disc displacement with reduction had a sensitivity of 0.76, a specificity of 0.82, a positive likelihood ratio of 3.80, a negative likelihood ratio of 0.36, a diagnostic odds ratio of 10.95, an area under the curve of 0.83, and a Q* of 0.76. The diagnostic efficacy of disc displacement without reduction had a sensitivity of 0.79, a specificity of 0.91, a positive likelihood ratio of 80.5, a negative likelihood ratio of 0.25, diagnostic odds ratio of 36.80, an area under the curve of 0.97, and a Q* of 0.92.

CONCLUSIONS:

The diagnostic efficacy of ultrasonography is acceptable and can be used as a rapid preliminary diagnostic method to exclude some clinical suspicions. However, positive ultrasonographic findings should be confirmed by magnetic resonance imaging. Also, the ability of ultrasonography to detect lateral and posterior displacements is still unclear. More high-quality studies are needed to assess the diagnostic efficacies of some specific ultrasonographic methods. Standards and criteria for ultrasonographic techniques in the diagnosis of disc displacement should be established in the future.

PMID: 22398185 [PubMed - indexed for MEDLINE]
Related citations

14. J Oral Rehabil. 2012 Jun;39(6):463-71. doi: 10.1111/j.1365-2842.2012.02291.x. Epub 2012 Mar 21.

Dental occlusion, body posture and temporomandibular

disorders: where we are now and where we are heading for.

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Abstract

The aim of this investigation was to perform a review of the literature dealing with the issue of relationships between dental occlusion, body posture and temporomandibular disorders (TMD). A search of the available literature was performed to determine what the current evidence is regarding: (i) The physiology of the dental occlusion-body posture relationship, (ii) The relationship of these two topics with TMD and (iii) The validity of the available clinical and instrumental devices (surface electromyography, kinesiography and postural platforms) to measure the dental occlusion-body posture-TMD relationship. The available posturographic techniques and devices have not consistently found any association between body posture and dental occlusion. This outcome is most likely due to the many compensation mechanisms occurring within the neuromuscular system regulating body balance. Furthermore, the literature shows that TMD are not often related to specific occlusal conditions, and they also do not have any detectable relationships with head and body posture. The use of clinical and instrumental approaches for assessing body posture is not supported by the wide majority of the literature, mainly because of wide variations in the measurable variables of posture. In conclusion, there is no evidence for the existence of a predictable relationship between occlusal and postural features, and it is clear that the presence of TMD pain is not related with the existence of measurable occluso-postural abnormalities. Therefore, the use instruments and techniques aiming to measure purported occlusal, electromyographic, kinesiographic or posturographic abnormalities cannot be justified in the evidence-based TMD practice.

PMID: 22435603 [PubMed - indexed for MEDLINE]
Related citations

15. J Oral Rehabil. 2012 Jun;39(6):450-62. doi: 10.1111/j.1365-2842.2012.02290.x. Epub 2012 Mar 21.

Non-carious cervical lesions and occlusion: a systematic review of clinical studies.

Senna P, Del Bel Cury A, R©sing C.

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Abstract

Non-carious cervical lesions (NCCLs) are a group of lesions that affect the cervical area of the teeth. Different aetiological factors have been reported, among them tooth brushing force, erosive agents and occlusal forces. The aim of this study was to ascertain, by means of a systematic review, the association between NCCLs and occlusion. A search was performed in the MEDLINE database, retrieving a total of 286 articles. After title and abstract screening, the clinical investigations were read in full to select those that evaluated the occlusal aspects of NCCL aetiology. This systematic review describes the results of three prospective and 25 cross-sectional studies. As there is an extreme heterogeneity in design, diagnostic criteria, forms of analysis and associated factors, a meta-analysis was not possible. The wide variety of classification and diagnostic criteria reflects a high range of reported prevalence. An extensive heterogeneity of independent variables was noted, even in occlusal analysis, which helps to mask any conclusion about the role of occlusion in NCCL aetiology. The literature reveals that studies on this topic are subject to a substantial amount of bias, such as evaluation (use of non-blinded examiners) and confounding bias (no control of others aetiological factors). Up to now, it has been impossible to associate NCCLs with any specific causal agent, and the role of occlusion in the pathogenesis of non-carious cervical lesions seems as yet undetermined. Therefore, additional studies, properly designed to diminish bias, are warranted.

PMID: 22435539 [PubMed - indexed for MEDLINE]
Related citations

16. Neurol Sci. 2012 Jun;33(3):491-513. Epub 2011 Dec 28.

Sleep-related movement disorders.

Merlino G, Gigli GL.

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Abstract

Several movement disorders may occur during nocturnal rest disrupting sleep. A part of these complaints is characterized by relatively simple, non-purposeful and usually stereotyped movements. The last version of the International Classification of Sleep Disorders includes

these clinical conditions (i.e. restless legs syndrome, periodic limb movement disorder, sleep-related leg cramps, sleep-related bruxism and sleep-related rhythmic movement disorder) under the category entitled sleep-related movement disorders. Moreover, apparently physiological movements (e.g. alternating leg muscle activation and excessive hypnic fragmentary myoclonus) can show a high frequency and severity impairing sleep quality. Clinical and, in specific cases, neurophysiological assessments are required to detect the presence of nocturnal movement complaints. Patients reporting poor sleep due to these abnormal movements should undergo non-pharmacological or pharmacological treatments.
PMID: 22203333 [PubMed - indexed for MEDLINE]

Related citations

SpringerLink FULL-TEXT ARTICLE

17. Compend Contin Educ Dent. 2012 May;33(5):328-34; quiz 335-6.

"Rules of 10"--guidelines for successful planning and treatment of mandibular edentulism using dental implants.

Cooper LF, Limmer BM, Gates WD.

Department of Prosthodontics, University of North Carolina School of Dentistry, Chapel Hill, North Carolina, USA.

Abstract

The three "Rules of 10" for treatment planning dental implant therapy in the edentulous mandible are designed to improve the success of both the endosseous implants and the prosthesis. These "rules" acknowledge and provide a method to control the mechanical environment, addressing factors affecting implant and prosthesis longevity, including magnitude of forces, resistance of the prosthesis against these forces, and the biology of bone and its ability to respond to loading environments. The rules specify that for any IRO or ISFP, there must be a minimum of 10 mm of alveolar dimension (inferior/superior) and a minimum of 10 mm of interocclusal (restorative) dimension measured from the soft-tissue ridge crest to the occlusal plane. Additionally, for an ISFP, the anterior/posterior distribution of implants must be greater than 10 mm. This article provides support in the literature for these rules and illustrates their application in the treatment of mandibular edentulism.
PMID: 22616215 [PubMed - indexed for MEDLINE]

Related citations

18. Headache. 2012 May;52 Suppl 1:22-5. doi: 10.1111/j.1526-4610.2012.02134.x.

Temporomandibular disorders, facial pain, and headaches.

Bender SD.

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Abstract

Headaches and facial pain are common in the general population. In many cases, facial pain can be resultant from temporomandibular joint disorders. Studies have identified an association between headaches and temporomandibular joint disorders suggesting the possibility of shared pathophysiologic mechanisms of these 2 maladies. The aim of this paper is to elucidate potential commonalities of these disorders and to provide a brief overview of an examination protocol that may benefit the headache clinician in daily practice.

PMID: 22540201 [PubMed - indexed for MEDLINE]
Related citations

19. Cochrane Database Syst Rev. 2012 Apr 18;4:CD007261.

Interventions for the management of temporomandibular joint osteoarthritis.

de Souza RF, Lovato da Silva CH, Nasser M, Fedorowicz Z, Al-Muharraqi MA.

Department of Dental Materials and Prosthodontics, Ribeir©o Preto Dental School, University of S©o Paulo, Ribeir©o Preto, Brazil.raphaelfs@yahoo.com.br

Abstract

BACKGROUND:

Osteoarthritis (OA) is the most common form of arthritis of the temporomandibular joint (TMJ), and can often lead to severe pain in the orofacial region. Management options for TMJ OA include reassurance, occlusal appliances, physical therapy, medication in addition to several surgical modalities.

OBJECTIVES:

To investigate the effects of different surgical and non-surgical therapeutic options for the management of TMJ OA in adult patients.

SEARCH METHODS:

We searched the following databases: the Cochrane Oral Health Group Trials Register (to 26 September 2011); CENTRAL (The Cochrane Library 2011, Issue 3); MEDLINE via OVID (1950 to 26 September 2011); EMBASE via OVID (1980 to 26 September 2011); and PEDro (1929 to 26 September 2011). There were no language restrictions.

SELECTION CRITERIA:

Randomised controlled trials (RCTs) comparing any form of non-surgical or surgical therapy for TMJ OA in adults over the age of 18 with clinical and/or radiological diagnosis of TMJ OA according to the Research Diagnostic Criteria for Temporomandibular Disorders (RDC/TMD) guideline or compatible criteria.Primary outcomes considered were pain/tenderness/discomfort in the TMJs or jaw muscles, self assessed range of mandibular movement and TMJ sounds. Secondary outcomes included the measurement of quality of life or patient satisfaction evaluated with a validated questionnaire, morphological changes of the TMJs assessed by imaging, TMJ sounds assessed by auscultation and any adverse effects.

DATA COLLECTION AND ANALYSIS:

Two review authors screened and extracted information and data from, and independently assessed the risk of bias in the included trials.

MAIN RESULTS:

Although three RCTs were included in this review, pooling of data in a meta-analysis was not possible due to wide clinical diversity between the studies. The reports indicate a not dissimilar degree of effectiveness with intra-articular injections consisting of either sodium hyaluronate or corticosteroid preparations, and an equivalent pain reduction with diclofenac sodium as compared with occlusal splints. Glucosamine appeared to be just as effective as ibuprofen for the management of TMJ OA.

AUTHORS' CONCLUSIONS:

In view of the paucity of high level evidence for the effectiveness of interventions for the management of TMJ OA, small parallel group RCTs which include participants with a clear diagnosis of TMJ OA should be encouraged and especially studies evaluating some of the possible surgical interventions.

PMID: 22513948 [PubMed - indexed for MEDLINE]

Related citations

20. Cranio. 2012 Apr;30(2):136-43.

New approaches to dental occlusion: a literature update.

Franco AL, de Andrade MF, Segalla JC, Gon&#65533;alves DA, Camparis CM.

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Abstract

Because the study of occlusion is a basic area in dentistry, its components, physiology and integration with the stomatognathic system (SS) have been the subject of interest in the scientific literature. However, the focus given to this issue has changed substantially. Currently, new approaches have been proposed in order to update concepts and to demonstrate the full integration and functionality of this system within the human body. With this approach, the authors proposed the following literature review aimed at gathering recent papers (published from 2000 to 2010) with innovative study design, methodology and/or results. The authors' intention is to show the main trends in the study of occlusion and the SS. The literature review was conducted in the PubMed database, using initially the term "dental occlusion" as a key-word. As items of interest were found, papers were grouped by categories according to their main subject matter. Forty-seven articles were selected and the main categories obtained were: 1. functional magnetic resonance imaging (fMRI); 2. brain activation; 3. masticatory/occlusal function; 4. body function and physical performance; 5. osseoperception; 6. finite element models; and 7. occlusion and pain. Observing the current literature, the authors found that recent studies present different methodologies for the study of occlusion. These studies have allowed scientists to obtain detailed information about the physiology of occlusion and the SS, as well as about its integration in the body. Research in this area should be continued in order to clarify, in detail, the role of each component of the SS and its interaction with human physiology.

PMID: 22606858 [PubMed - indexed for MEDLINE]

Related citations

21. Dent Clin North Am. 2012 Apr;56(2):475-84. Epub 2012 Mar 3.

Medical insurance for dental sleep medicine.

Lipsey MR.

Dental Sleep Med Systems, Inc, CA, USA. DrMarty@SnoringIsBoring.com

Abstract

Over the last 5 to 7 years, dental teams have mastered the art and science of processing dental insurance for their patients but have major difficulties learning how to help their patients when it comes to medical insurance. This article attempts to provide a basic guide for the dental team in coding, billing, and processing of major medical insurance for dental sleep medicine. Although there is certainly a learning curve for the dental team in this endeavor, the "patient and physician friendly" dental sleep medicine practice is a model that will help to

assure growth and success.

PMID: 22480815 [PubMed - indexed for MEDLINE]
Related citations


22. Dent Clin North Am. 2012 Apr;56(2):445-52. Epub 2012 Feb 21.

Use of portable monitoring for sleep-disordered breathing treated with an oral appliance.

Bailey DR.

Orofacial Pain and Dental Sleep Medicine Department, UCLA School of Dentistry, Los Angeles, CA, USA. RMC4E@aol.com

Abstract

The potential use of a portable monitor to assess the outcome of treatment with an oral appliance would ideally be performed by the dentist who is managing the patient's sleep-disordered breathing. Portable monitoring is one of the most cost-effective ways to assess the response to the oral appliance, to determine if further adjustment to the appliance is needed, and to retest to determine the current status following any adjustment. This article emphasizes the use of portable monitors primarily for follow-up care and assessment as opposed to diagnosis or, as it is sometimes referred to, screening.

PMID: 22480813 [PubMed - indexed for MEDLINE]
Related citations


23. Dent Clin North Am. 2012 Apr;56(2):433-44. Epub 2012 Mar 2.

Effectiveness and outcome of oral appliance therapy.

Pliska BT, Almeida F.

Department of Oral Health Sciences, University of British Columbia, 2199 Wesbrook Mall, Vancouver, British Columbia V6T 1Z3, Canada. pliska@dentistry.ubc.ca

Abstract

Oral appliances (OAs) are a primary treatment option for snoring and mild to moderate obstructive sleep apnea (OSA) and are implemented as a noninvasive alternative for patients with severe OSA who are unwilling or unable to tolerate continuous positive airway pressure for the management of their disease. Studies have demonstrated the ability of OAs to eliminate or significantly reduce the symptoms of OSA and produce a measurable influence on the long-term health effects of the disease. Most studies have evaluated one type of OAs, the mandibular advancement splints. This article describes the effectiveness and outcomes of mandibular advancement splints.

PMID: 22480812 [PubMed - indexed for MEDLINE]

Related citations

24. Dent Clin North Am. 2012 Apr;56(2):415-31.

Temporomandibular disorder pain and dental treatment of obstructive sleep apnea.

Merrill RL.

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Abstract

Treatment of sleep apnea with mandibular advancement devices (MADs) may be associated with the development of symptoms of temporomandibular disorder (TMD). This article discusses the different types of TMD and orofacial pain problems that may occur during treatment of obstructive sleep apnea (OSA) with a MAD. It is critical that the general dentist who is providing dental devices for OSA perform a thorough physical and neurologic assessment of the temporomandibular joint and associated structures before providing such a device so that preexisting problems are identified and discussed with the patient.

PMID: 22480811 [PubMed - indexed for MEDLINE]

Related citations

25. Dent Clin North Am. 2012 Apr;56(2):387-413.

Sleep bruxism: a comprehensive overview for the dental clinician interested in sleep medicine.

Carra MC, Huynh N, Lavigne G.

Faculty of Dental Medicine, Univerist&#65533; de Montr&#65533;al, CP 6128 Succursale Centre-Ville, Montreal, Quebec, H3C 3J7, Canada. maria.clotilde.carra@umontreal.ca

Abstract

Sleep bruxism (SB) is a common sleep-related motor disorder characterized by tooth grinding and clenching. SB diagnosis is made on history of tooth grinding and confirmed by polysomnographic recording of electromyographic (EMG) episodes in the masseter and temporalis muscles. The typical EMG activity pattern in patients with SB is known as rhythmic masticatory muscle activity (RMMA). The authors observed that most RMMA episodes occur in association with sleep arousal and are preceded by physiologic activation of the central nervous and sympathetic cardiac systems. This article provides a comprehensive review of the cause, pathophysiology, assessment, and management of SB.

PMID: 22480810 [PubMed - indexed for MEDLINE]
Related citations

26. Dent Clin North Am. 2012 Apr;56(2):343-57. Epub 2012 Feb 20.

Cone beam computed tomography: craniofacial and airway analysis.

Hatcher DC.

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Abstract

Imaging plays a role in the anatomic assessment of the airway and adjacent structures. This article discusses the use of 3-dimensional (3D) imaging (cone beam computed tomography [CBCT]) to evaluate the airway and selected regional anatomic variables that may contribute to obstructive sleep-disordered breathing (OSDB) in patients. CBCT technology uses a cone-shaped x-ray beam with a special image intensifier and a solid-state sensor or an amorphous silicon plate for capturing the image. Incorporation of 3D imaging into daily practice will allow practitioners to readily evaluate and screen patients for phenotypes associated with

OSDB.

PMID: 22480807 [PubMed - indexed for MEDLINE]
Related citations
ELSEVIER FULL-TEXT ARTICLE

27. J Am Dent Assoc. 2012 Apr;143(4):351-62.

Electromyography in diagnosing temporomandibular disorders.

Al-Saleh MA, Armijo-Olivo S, Flores-Mir C, Thie NM.

TMD/Orofacial Pain Clinic, School of Dentistry, Faculty of Medicine and Dentistry, University of Alberta, Edmonton, Alberta, Canada.

Abstract

BACKGROUND:

Although electromyography (EMG) has been used extensively in dentistry to assess masticatory muscle impairments in several conditions, especially temporomandibular disorders (TMDs), many investigators have questioned its psychometric properties and accuracy in diagnosing TMD.

TYPES OF STUDIES REVIEWED:

The authors conducted a systematic review to analyze the literature critically and determine the accuracy of EMG in diagnosing TMDs. They conducted an electronic search of MEDLINE, Embase, all Evidence-Based Medicine Reviews, Allied and Complementary Medicine, Ovid HealthSTAR and SciVerse Scopus. The authors selected abstracts that fulfilled the inclusion criteria, retrieved the original articles, verified the inclusion criteria and hand searched the articles' references. They used a methodological tool (Quality Assessment of Diagnostic Accuracy Studies [QUADAS]) to evaluate the quality of the selected articles.

RESULTS:

The electronic database search resulted in a total of 130 articles. The authors selected eight articles as potentially meeting eligibility for the review. Of these eight articles, only two fulfilled the study inclusion criteria, and the authors analyzed them. Investigators in both studies reported low sensitivity (values ranged from 0.15 to 0.40 in one study and a mean of 0.69 in the second study). In addition, investigators in the two studies reported contradictory levels of specificity (values ranged from 0.95 to 0.98 in one study, and the mean value in the

second study was 0.67). The likelihood ratios and predictive values were not helpful in diagnosing TMD by means of EMG. The quality of the two studies was poor on the basis of the QUADAS checklist.

CLINICAL IMPLICATIONS:

The authors of this systematic review found no evidence to support the use of EMG for the diagnosis of TMD.

PMID: 22467695 [PubMed - indexed for MEDLINE]

Related citations

28. Ann Anat. 2012 Mar 20;194(2):190-4. Epub 2011 Oct 14.

Morphofunctional aspects of dental implants.

Meyer G, Fangh□nel J, Proff P.

Department of Restorative Dentistry and Periodontology and Endodontology, Ernst Moritz Arndt University of Greifswald, Germany.

Abstract

Although oral implantology is among the most beneficial developments of modern dentistry, the widely spread opinion that the long-term outcome of implants is superior to that of natural teeth has been refuted. To evade uncritical extractions, the morphofunctional properties of natural teeth and implant-supported restorations are compared from a proprioceptive and occlusal trauma perspective. The periodontal ligament of natural teeth provides the central nerve system with feedback for sensory perception and motor control. Conversely, the lack of such proprioception causes lower tactile sensitivity and less coordinated masticatory muscle activity in implant-borne restorations and makes them more prone to occlusal overload and possible subsequent failure. Moreover, occlusal anomalies may be conducive to parafunctional activity, craniomandibular disorder, tinnitus, and headache. Oral implantology, therefore, has to take appropriate account of occlusal conditions and the biomechanical and neuromuscular aspects of masticatory function.

PMID: 22137145 [PubMed - indexed for MEDLINE]

Related citations

29. Ann Anat. 2012 Mar 20;194(2):200-7. Epub 2011 Oct 14.

Functional states of mandibular movements and synovial pumps of the temporomandibular joint. Is it possible to provide a biomechanically correct replacement for the TMJ?

Kubein-Meesenburg D, N&#65533;gerl H, Fialka-Fricke J, Hahn W, Weber S, H&#65533;nig J, Hansen C, Fangh&#65533;nel J, Thieme KM, Ihlow D.

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Abstract

Due to its complexity, there is currently an incomplete understanding of temporomandibular joint (TMJ) function, especially in relation to the morphological interplay of the condyle and the disc as well as the disc, the Os temporale and the lateral pterygoid muscle. This also holds true for synovial flow and synovial pumps, the existence of which we postulate and for which we present a theory of their mechanism. In view of the complexity of mandibular movements and the morphology and function of the TMJ, we need to know how precisely a reconstruction of the TMJ, if necessary, must be adapted to nature. An analysis of the morphology of the functional states of the mandible, as well as the synovial pump system, should at least provide a basis for moulding reconstructions.

PMID: 22079779 [PubMed - indexed for MEDLINE]
Related citations


30. Ann Anat. 2012 Mar 20;194(2):216-9. Epub 2011 Oct 5.

The two main theories on dental bruxism.

Behr M, Hahnel S, Faltermeier A, B&#65533;rgers R, Kolbeck C, Handel G, Proff P.

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Abstract

Bruxism is characterized by non-functional contact of mandibular and maxillary teeth resulting in clenching or grating of teeth. Theories on factors causing bruxism are a matter of controversy in current literature. The dental profession has predominantly viewed peripheral local morphological disorders, such as malocclusion, as the cause of clenching and gnashing.

This etiological model is based on the theory that occlusal maladjustment results in reduced masticatory muscle tone. In the absence of occlusal equilibration, motor neuron activity of masticatory muscles is triggered by periodontal receptors. The second theory assumes that central disturbances in the area of the basal ganglia are the main cause of bruxism. An imbalance in the circuit processing of the basal ganglia is supposed to be responsible for muscle hyperactivity during nocturnal dyskinesia such as bruxism. Some authors assume that bruxism constitutes sleep-related parafunctional activity (parasomnia). A recent model, which may explain the potential imbalance of the basal ganglia, is neuroplasticity. Neural plasticity is based on the ability of synapses to change the way they work. Activation of neural plasticity can change the relationship between inhibitory and excitatory neurons. It seems obvious that bruxism is not a symptom specific to just one disease. Many forms (and causes) of bruxism may exist simultaneously, as, for example, peripheral or central forms.

PMID: 22035706 [PubMed - indexed for MEDLINE]
Related citations
ELSEVIER FULL-TEXT ARTICLE

31. Aust Dent J. 2012 Mar;57 Suppl 1:109-18. doi: 10.1111/j.1834-7819.2011.01663.x.

Application of cone beam computed tomography for assessment of the temporomandibular joints.

Barghan S, Tetradis S, Mallya S.

Section of Oral and Maxillofacial Radiology, School of Dentistry, The University of California, Los Angeles, USA.

Abstract

Radiographic examination is essential for the diagnosis and management of temporomandibular joint (TMJ) disorders. The goals of TMJ radiography are to evaluate cortical and trabecular architecture of the bony structures and confirm their integrity, to assess the extent and monitor progression of osseous changes, and to evaluate the response to treatment. Accurate evaluation of the TMJ by conventional radiography is limited by structure superimposition. Cone beam computed tomography (CBCT) provides high-resolution multiplanar images and delivers substantially lower radiation dose, compared with multislice CT. CBCT allows examination of TMJ anatomy without superimposition and distortion to facilitate analysis of bone morphology, joint space and dynamic function in all three dimensions. This article will describe the role of CBCT imaging for the assessment of the TMJ osseous structures and present typical appearances of common pathological conditions of the TMJ.

PMID: 22376103 [PubMed - indexed for MEDLINE]
Related citations


32. Aust Dent J. 2012 Mar;57(1):2-10. doi: 10.1111/j.1834-7819.2011.01640.x.

Clinical considerations for increasing occlusal vertical dimension: a review.

Abduo J, Lyons K.

Faculty of Dentistry, The University of Western Australia, Crawley, Western Australia, Australia. jaafar_abduo@hotmail.com

Abstract

The purpose of this article is to discuss the clinical considerations related to increasing the occlusal vertical dimension (OVD) when restoring a patient's dentition. Thorough extraoral and intraoral evaluations are mandatory to assess the suitability of increasing OVD. In the literature, multiple techniques have been proposed to quantify OVD loss. However, the techniques lack consistency and reliability, which in turn affects the decision of whether to increase the OVD. Therefore, increasing OVD should be determined on the basis of the dental restorative needs and aesthetic demands. In general, a minimal increase in OVD should be applied, though a 5 mm maximum increase in OVD can be justified to provide adequate occlusal space for the restorative material and to improve anterior teeth aesthetics. The literature reflects the safety of increasing the OVD permanently, and although signs and symptoms may develop, these are usually of an interim nature. Whenever indicated, the increase in OVD should be achieved with fixed restorations rather than a removable appliance, due to the predictable patient adaptation. The exception to this is for patients with TMD, where increasing the OVD should still be achieved using removable appliances to control TMD-associated symptoms before considering any form of irreversible procedure.

PMID: 22369551 [PubMed - indexed for MEDLINE]
Related citations


33. J Oral Maxillofac Surg. 2012 Mar;70(3):531-6. Epub 2011 Dec 30.

Operative management of temporomandibular joint ankylosis: a systematic review and meta-analysis.

Katsnelson A, Markiewicz MR, Keith DA, Dodson TB.

Department of Oral and Maxillofacial Surgery, Massachusetts General Hospital, Boston, MA 02114, USA.

Comment in

- Anesthetic implications for operative management of temporomandibular joint ankylosis. [J Oral Maxillofac Surg. 2012]

Abstract

PURPOSE:

Two common treatments of temporomandibular joint ankylosis are gap arthroplasty and ankylosis resection and reconstruction of the ramus-condyle unit with a costochondral graft. The purpose of the present study was to answer the following clinical question: "Among patients with temporomandibular joint ankylosis, do those patients who undergo gap arthroplasty, compared with those who undergo ankylosis resection and ramus-condyle unit reconstruction with a costochondral graft have better postoperative mandibular range of motion?"

METHODS:

A systematic search of the published data was performed to identify eligible studies. The primary predictor variable was treatment type (ie, gap arthroplasty or ankylosis resection and ramus-condyle unit reconstruction). The main outcome was the change in maximal incisal opening postoperatively. A random effects model was used to compute the pooled weighted mean difference between the pre- and postoperative maximal incisal opening in both treatment groups.

RESULTS:

Four studies met the inclusion criteria. Those undergoing gap arthroplasty had a significantly greater maximal incisal opening than the group undergoing ankylosis resection and ramus-condyle unit reconstruction. The weighted mean difference between the 2 groups was 2.4 mm (95% confidence interval 0.9 to 4.0; P = .002).

CONCLUSIONS:

Subjects with temporomandibular joint ankylosis who underwent gap arthroplasty had significantly better postoperative maximal incisal opening than those undergoing ankylosis resection and ramus-condyle unit reconstruction with a costochondral graft.

PMID: 22209104 [PubMed - indexed for MEDLINE]
Related citations


34. J Oral Rehabil. 2012 Mar;39(3):217-25. doi: 10.1111/j.1365-2842.2011.02257.x. Epub 2011 Sep 16.

Tooth wear and wear investigations in dentistry.

Lee A, He LH, Lyons K, Swain MV.

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Abstract

Tooth wear has been recognised as a major problem in dentistry. Epidemiological studies have reported an increasing prevalence of tooth wear and general dental practitioners see a greater number of patients seeking treatment with worn dentition. Although the dental literature contains numerous publications related to management and rehabilitation of tooth wear of varying aetiologies, our understanding of the aetiology and pathogenesis of tooth wear is still limited. The wear behaviour of dental biomaterials has also been extensively researched to improve our understanding of the underlying mechanisms and for the development of restorative materials with good wear resistance. The complex nature of tooth wear indicates challenges for conducting in vitro and in vivo wear investigations and a clear correlation between in vitro and in vivo data has not been established. The objective was to critically review the peer reviewed English-language literature pertaining to prevalence and aetiology of tooth wear and wear investigations in dentistry identified through a Medline search engine combined with hand-searching of the relevant literature, covering the period between 1960 and 2011.

PMID: 21923888 [PubMed - indexed for MEDLINE]
Related citations


35. J Oral Rehabil. 2012 Mar;39(3):161-9. doi: 10.1111/j.1365-2842.2011.02247.x. Epub 2011 Aug 18.

Classifying orofacial pains: a new proposal of taxonomy based on ontology.

Nixdorf DR, Drangsholt MT, Ettlin DA, Gaul C, De Leeuw R, Svensson P, Zakrzewska JM, De Laat A, Ceusters W; International RDC-TMD Consortium.

Division of TMD & Orofacial Pain and Department of Neurology, University of Minnesota, Minneapolis, MN, USA. nixdorf@umn.edu

Abstract

We propose a new taxonomy model based on ontological principles for disorders that manifest themselves through the symptom of persistent orofacial pain and are commonly seen in clinical practice and difficult to manage. Consensus meeting of eight experts from various geographic areas representing different perspectives (orofacial pain, headache, oral medicine and ontology) as an initial step towards improving the taxonomy. Ontological principles were introduced, reviewed and applied during the consensus building process. Diagnostic criteria for persistent dento-alveolar pain disorder (PDAP) were formulated as an example to be used to model the taxonomical structure of all orofacial pain conditions. These criteria have the advantage of being (i) anatomically defined, (ii) in accordance with other classification systems for the provision of clinical care, (iii) descriptive and succinct, (iv) easy to adapt for applications in varying settings, (v) scalable and (vi) transferable for the description of pain disorders in other orofacial regions of interest. Limitations are that the criteria introduce new terminology, do not have widespread acceptance and have yet to be tested. These results were presented to the greater conference membership and were unanimously accepted. Consensus for the diagnostic criteria of PDAP was established within this working group. This is an initial first step towards developing a coherent taxonomy for orofacial pain disorders, which is needed to improve clinical research and care.

PMCID: PMC3383028 **Free PMC Article**
PMID: 21848527 [PubMed - indexed for MEDLINE]
Related citations

36. Oral Maxillofac Surg. 2012 Mar;16(1):75-8. Epub 2010 Nov 12.

Chondroma in temporomandibular region--case report and therapeutic considerations.

Heitz C, Vogt BF, Bergoli RD, Hirsch WD, de Souza CE, Silva DN.

Pontifical Catholic University of Rio Grande do Sul, Av. Ipiranga, 6681 Pr©dio 6, sala 210, Porto Alegre, RS, Brazil 90619-900. cheitz@terra.com.br

Abstract

PURPOSE: Chondromas are benign tumors composed of mature hyaline cartilage. These tumors are quite common in the bones of the hands and feet but extremely rare in jaw bones, and few such cases are reported in the literature. The aim of the present study was to carry out a literature review and present a clinical case of a patient with a chondroma in the right mandibular condyle treated with excision of the tumor. CONCLUSIONS: The importance of early diagnosis and treatment in order to impede or minimize any lasting effects is discussed.

PMID: 21072549 [PubMed - indexed for MEDLINE]

Related citations

37. Clin Oral Implants Res. 2012 Feb;23 Suppl 5:80-2. doi: 10.1111/j.1600-0501.2011.02370.x.

Evidence-based knowledge on the biology and treatment of extraction sockets.

H�mmerle CH, Ara�jo MG, Simion M; Osteology Consensus Group 2011.

Collaborators: Ara�jo MG, Bosshardt D, Buser D, Giannobile WV, Gruber R, H�mmerle CH, Jung RE, Lang NP, Neukam F, Sanz M, Simion M, Watzek G.

Center of Dental Medicine, Clinic of Fixed and Removable Prosthodontics and Dental Material Science, University of Zurich, Zurich, Switzerland.
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Erratum in

- Clin Oral Implants Res. 2012 May;23(5):641.

Abstract

OBJECTIVES:

The fresh extraction socket in the alveolar ridge represents a special challenge in everyday clinical practice. Maintenance of the hard and soft tissue envelope and a stable ridge volume were considered important aims to allow simplifying subsequent treatments and optimizing their outcomes in particular, when implants are planned to be placed.

MATERIAL AND METHODS:

Prior to the consensus meeting four comprehensive systematic reviews were written on two topics regarding ridge alteration and ridge preservation following tooth extraction and implant placement following tooth extraction. During the conference these manuscripts were

discussed and accepted thereafter. Finally, consensus statements and recommendations were formulated.

RESULTS:

The systematic reviews demonstrated that the alveolar ridge undergoes a mean horizontal reduction in width of 3.8 mm and a mean vertical reduction in height of 1.24 mm within 6 months after tooth extraction. The techniques aimed at ridge preservation encompassed two different approaches: i) maintaining the ridge profile, ii) enlarging the ridge profile. Regarding timing of implant placement the literature showed that immediate implant placement leads to high implant survival rates. This procedure is primarily recommended in premolar sites with low esthetic importance and favorable anatomy. In the esthetic zone, however, a high risk for mucosal recession was reported. Hence, it should only be used in stringently selected situations with lower risks and only by experienced clinicians. In molar sites a high need for soft and hard tissue augmentation was identified.

CONCLUSIONS:

Future research should clearly identify the clinical and patient benefits resulting from ridge preservation compared with traditional procedures. In addition, future research should also aim at better identifying parameters critical for positive treatment outcomes with immediate implants. The result of this procedure should be compared to early and late implant placement.

PMID: 22211307 [PubMed - indexed for MEDLINE]
Related citations

38. Clin Oral Implants Res. 2012 Feb;23 Suppl 5:1-21. doi: 10.1111/j.1600-0501.2011.02375.x.

A systematic review of post-extractional alveolar hard and soft tissue dimensional changes in humans.

Tan WL, Wong TL, Wong MC, Lang NP.

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Abstract

BACKGROUND:

Removal of teeth results in both horizontal and vertical changes of hard and soft tissue

dimensions. The magnitude of these changes is important for decision-making and comprehensive treatment planning, with provisions for possible solutions to expected complications during prosthetic rehabilitation.

OBJECTIVES:

To review all English dental literature to assess the magnitude of dimensional changes of both the hard and soft tissues of the alveolar ridge up to 12 months following tooth extraction in humans.

METHODS:

An electronic MEDLINE and CENTRAL search complemented by manual searching was conducted to identify randomized controlled clinical trials and prospective cohort studies on hard and soft tissue dimensional changes after tooth extraction. Only studies reporting on undisturbed post-extraction dimensional changes relative to a fixed reference point over a clearly stated time period were included. Assessment of the identified studies and data extraction was performed independently by two reviewers. Data collected were reported by descriptive methods. Weighted means and percentages of the dimensional changes over time were calculated where appropriate.

RESULTS:

The search provided 3954 titles and 238 abstracts. Full text analysis was performed for 104 articles resulting in 20 studies that met the inclusion criteria. In human hard tissue, horizontal dimensional reduction (3.79 ± 0.23 mm) was more than vertical reduction (1.24 ± 0.11 mm on buccal, 0.84 ± 0.62 mm on mesial and 0.80 ± 0.71 mm on distal sites) at 6 months. Percentage vertical dimensional change was 11-22% at 6 months. Percentage horizontal dimensional change was 32% at 3 months, and 29-63% at 6-7 months. Soft tissue changes demonstrated 0.4-0.5 mm gain of thickness at 6 months on the buccal and lingual aspects. Horizontal dimensional changes of hard and soft tissue (loss of 0.1-6.1 mm) was more substantial than vertical change (loss 0.9 mm to gain 0.4 mm) during observation periods of up to 12 months, when study casts were utilized as a means of documenting the changes.

CONCLUSIONS:

Human re-entry studies showed horizontal bone loss of 29-63% and vertical bone loss of 11-22% after 6 months following tooth extraction. These studies demonstrated rapid reductions in the first 3-6 months that was followed by gradual reductions in dimensions thereafter.

PMID: 22211303 [PubMed - indexed for MEDLINE]
Related citations

39. Clin Oral Investig. 2012 Feb;16(1):295-303. Epub 2010 Dec 3.

Methodological quality of a systematic review on physical therapy for temporomandibular disorders: influence of hand search and quality scales.

Craane B, Dijkstra PU, Stappaerts K, De Laat A.

Faculty of Kinesiology and Rehabilitation Sciences, Department of Rehabilitation Sciences, Catholic University of Leuven, Leuven, Belgium. bart.craane1@telenet.be

Abstract

The validity of a systematic review depends on completeness of identifying randomised clinical trials (RCTs) and the quality of the included RCTs. The aim of this study was to analyse the effects of hand search on the number of identified RCTs and of four quality lists on the outcome of quality assessment of RCTs evaluating the effect of physical therapy on temporomandibular disorders. In addition, we investigated the association between publication year and the methodological quality of these RCTs. Cochrane, Medline and Embase databases were searched electronically. The references of the included studies were checked for additional trials. Studies not electronically identified were labelled as "obtained by means of hand search". The included RCTs (69) concerning physical therapy for temporomandibular disorders were assessed using four different quality lists: the Delphi list, the Jadad list, the Megens & Harris list and the Risk of Bias list. The association between the quality scores and the year of publication were calculated. After electronic database search, hand search resulted in an additional 17 RCTs (25%). The mean quality score of the RCTs, expressed as a percentage of the maximum score, was low to moderate and varied from 35.1% for the Delphi list to 54.3% for the Risk of Bias list. The agreement among the four quality assessment lists, calculated by the Interclass Correlation Coefficient, was 0.603 (95% CI, 0.389; 0.749). The Delphi list scored significantly lower than the other lists. The Risk of Bias list scored significantly higher than the Jadad list. A moderate association was found between year of publication and scores on the Delphi list (r = 0.50), the Jadad list (r = 0.33) and the Megens & Harris list (r = 0.43).

PMCID: PMC3259329 **Free PMC Article**
PMID: 21128088 [PubMed - indexed for MEDLINE]
Related citations

40. Int Dent J. 2012 Feb;62(1):1-5. doi: 10.1111/j.1875-595X.2011.00085.x.

Efficacy of botulinum toxins on bruxism: an evidence-based review.

Long H, Liao Z, Wang Y, Liao L, Lai W.

Department of Orthodontics, Sichuan University, Chengdu, Sichuan, China.

Abstract

The objective of this study was to assess the efficacy of botulinum toxins on bruxism. Electronic databases (PubMed, Embase and Science Citation Index), websites (Cochrane Central Register of Controlled Trials and ClinicalTrials.gov) and the literature database of SIGLE (System for Information on Grey Literature in Europe) were searched from January 1990 to April 2011 for randomised controlled trials or nonrandomised studies assessing the efficacy of botulinum toxins on bruxism. There was no language restriction. Through a predefined search strategy, we retrieved 28 studies from PubMed, 94 from Embase, 60 from the Science Citation Index, two ongoing clinical trials and two from the Cochrane Central Register of Controlled Trials. Of these, only four studies met our inclusion criteria and were finally included. Of the four included studies, two were randomised controlled trials and two were controlled before-and-after studies. These studies showed that botulinum toxin injections can reduce the frequency of bruxism events, decrease bruxism-induced pain levels and satisfy patients' self-assessment with regard to the effectiveness of botulinum toxins on bruxism. In comparison with oral splint, botulinum toxins are equally effective on bruxism. Furthermore, botulinum toxin injections at a dosage of <100 U are safe for otherwise healthy patients. Botulinum toxin injections are effective on bruxism and are safe to use. Therefore, they can be used clinically for otherwise healthy patients with bruxism.

PMID: 22251031 [PubMed - indexed for MEDLINE]
Related citations

41. J Calif Dent Assoc. 2012 Feb;40(2):159-67.

Neurology of sleep and sleep-related breathing disorders and their relationships to sleep bruxism.

Simmons JH.

University of California, Los Angeles' Sleep Center, USA.

Abstract

Conditions that affect sleep can impact overall health. More than 70 million Americans suffer from problems with sleep. The purpose of this article is to provide the basic science of sleep physiology and how it relates to disorders that are pertinent to dentistry. Concepts are

presented that explain airway dynamics and how the jaw and tongue influence airway obstruction. Additionally, explanation is given on an association between temporomandibularj aw dysfunction and bruxism during sleep.
PMID: 22416635 [PubMed - indexed for MEDLINE]
Related citations

42. J Calif Dent Assoc. 2012 Feb;40(2):131-9.

Somnology 101: a primer on sleep disorders, their impact on society, and a role for dentistry.

Simmons MS.

Department of Oral Medicine and Orofacial Pain, School of Dentistry, University of California, Los Angeles 90024, USA.

Abstract

Sleep is necessary for our existence. It is one-third of a commitment to health along with nutrition and exercise. While we spend one-third of our lives asleep, studies show one-third of the U.S. population suffers with a significant sleep disorder at some point in their lifetime. This manuscript introduces sleep and sleep disorders, focuses on those sleep disorders within the domain of dentistry, and addresses contributions the dental community can make toward specific sleep problems.
PMID: 22416632 [PubMed - indexed for MEDLINE]
Related citations

43. J Esthet Restor Dent. 2012 Feb;24(1):10-23. doi: 10.1111/j.1708-8240.2011.00487.x. Epub 2011 Nov 17.

Abfraction, abrasion, biocorrosion, and the enigma of noncarious cervical lesions: a 20-year perspective.

Grippo JO, Simring M, Coleman TA.

Department of Biomedical Engineering, Western New England University, Springfield, MA 01119, USA.

Comment in

- Commentary. Abfraction, abrasion, biocorrosion, and the enigma of noncarious cervical lesions: a 20-year perspective. [J Esthet Restor Dent. 2012]

Abstract

Hitherto, noncarious cervical lesions (NCCLs) of teeth have been generally ascribed to either

toothbrush-dentifrice abrasion or acid "erosion." The last two decades have provided a plethora of new studies concerning such lesions. The most significant studies are reviewed and integrated into a practical approach to the understanding and designation of these lesions. A paradigm shift is suggested regarding use of the term "biocorrosion" to supplant "erosion" as it continues to be misused in the United States and many other countries of the world. Biocorrosion embraces the chemical, biochemical, and electrochemical degradation of tooth substance caused by endogenous and exogenous acids, proteolytic agents, as well as the piezoelectric effects only on dentin. Abfraction, representing the microstructural loss of tooth substance in areas of stress concentration, should not be used to designate all NCCLs because these lesions are commonly multifactorial in origin. Appropriate designation of a particular NCCL depends upon the interplay of the specific combination of three major mechanisms: stress, friction, and biocorrosion, unique to that individual case. Modifying factors, such as saliva, tongue action, and tooth form, composition, microstructure, mobility, and positional prominence are elucidated. CLINICAL SIGNIFICANCE: By performing a comprehensive medical and dental history, using precise terms and concepts, and utilizing the Revised Schema of Pathodynamic Mechanisms, the dentist may successfully identify and treat the etiology of root surface lesions. Preventive measures may be instituted if the causative factors are detected and their modifying factors are considered.

PMID: 22296690 [PubMed - indexed for MEDLINE]
Related citations

44. J Oral Maxillofac Surg. 2012 Feb;70(2):367-72. Epub 2011 Jul 13.

Pigmented villonodular synovitis of the temporomandibular joint presenting as a middle cranial fossa tumor.

Liu YK, Chan JY, Chang CJ, Huang JS.

Department of Neurosurgery, Cathay General Hospital, Taipei, Taiwan.
PMID: 21741744 [PubMed - indexed for MEDLINE]
Related citations

45. J Prosthodont. 2012 Feb;21(2):141-54. doi: 10.1111/j.1532-849X.2011.00819.x.

Prosthetic requirements for immediate implant loading: a review.

Ghoul WE, Chidiac JJ.

Clinical Instructor, Department of Prosthodontics, School of Dentistry, Lebanese University, Beirut, Lebanon.

Abstract

PURPOSE:

The aim of this article is to review the current literature with regard to prosthetic considerations and their influence on the outcome of immediately loaded implants.

MATERIALS AND METHODS:

A broad search of the published literature was performed using MEDLINE and PubMed to identify pertinent articles.

RESULTS:

One hundred fifty six references were selected. They were mainly descriptive, prospective, follow-up studies. They were reviewed and were categorized with respect to 6 factors that influence immediate loading: cross-arch stability and micromovements, interim prostheses, definitive restorations inserted immediately, screw- or cement-retained prostheses, occlusion, and number and distribution of implants in overdentures and fixed prostheses.

CONCLUSION:

Immediate loading seems to be a relatively safe procedure. From the prosthodontic point of view, there are specific guidelines to follow. They are: implants should be splinted with a metallic bar and acrylic interim prostheses until full osseointegration occurs. To have a successful outcome, screw-retained interim prostheses are recommended. CAD/CAM systems can improve the placement of implants with minimum risk. Regarding occlusion, there is a disagreement on when and how to provide occlusal contacts, but all authors agree on keeping centric contacts only. Finally, concerning the number of implants required for an immediate overdenture, no conclusive evidence could be found.

PMID: 22380648 [PubMed - indexed for MEDLINE]
Related citations


46. Br J Oral Maxillofac Surg. 2012 Jan;50(1):8-12. Epub 2010 Oct 20.

Pathogenesis of post-traumatic ankylosis of the

temporomandibular joint: a critical review.

Arakeri G, Kusanale A, Zaki GA, Brennan PA.

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Comment in

- Re: Pathogenesis of post-traumatic ankylosis of the temporomandibular joint: a critical review. [Br J Oral Maxillofac Surg. 2012]

Abstract

Many factors have been implicated in the development of bony ankylosis following trauma to the temporomandibular joint (TMJ) or ankylosis that recurs after surgical treatment for the condition. Although many reports have been published, to our knowledge very little has been written about the pathogenesis of the process and there are few scientific studies. Over the last 70 years various treatments have been described. Different methods have been used with perceived favourable outcomes although recurrence remains a problem in many cases, and ankylosis presents a major therapeutic challenge. We present a critical review of published papers and discuss the various hypotheses regarding the pathogenesis of the condition.

PMID: 20970228 [PubMed - indexed for MEDLINE]

Related citations

ELSEVIER FULL-TEXT ARTICLE

47. Chin J Dent Res. 2012;15(1):17-20.

The relationship between temporomandibular joint ankylosis and condylar fractures.

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Abstract

Trauma is the predominant causal factor for temporomandibular joint (TMJ) ankylosis. However, the relationship between condylar fracture and TMJ ankylosis is complicated. It is believed that post-traumatic TMJ ankylosis arises from TMJ intracapsular changes, including

damaged cartilage, displaced or disrupted discs, haematoma formation and subsequent fibrosis and calcification in the joint. In this review, the relationship between TMJ ankylosis and condylar fracture is discussed based on clinical characteristics and animal studies. The management of TMJ ankylosis is also reviewed and discussed.
PMID: 22866277 [PubMed - indexed for MEDLINE]
Related citations

48. Dent Mater. 2012 Jan;28(1):102-11. doi: 10.1016/j.dental.2011.09.012.

Standardizing failure, success, and survival decisions in clinical studies of ceramic and metal-ceramic fixed dental prostheses.

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Abstract

The recent increase in reports from clinical studies of ceramic chipping has raised the question of which criteria should constitute success or failure of total-ceramic prostheses. Terminologies such as minor chipping [1], partial chipping, technical complications [2,3], and biological complications have crept into the dental terminology and they have complicated our classification of success and failure of these crown and bridge restorations. Some journals have permitted the reporting of fractures as "complications" and they are not necessarily classified as failures in the study. One study has attempted to classify chipping fractures according to their severity and subsequent treatment [4]. This is a promising approach to resolve the challenges to the classification of chipping fracture. The term 'chipping fracture' is more descriptive than 'chipping' since the latter term tends to imply an event of minor consequence. Two types of statistics are reported routinely in these studies, i.e., percent success, which is a measure of restorations that survive without any adverse effects, and percent survival, which is a measure of all restorations that survive even though they may have exhibited chipping fracture or they may have been repaired. Why has this scenario occurred? One possible explanation is that many of these types of fractures are very small and do not affect function or esthetics. Another reason is that corporate sponsors prefer to use the term chipping since it does not connote failure in the sense that the term fracture does. In any event, we need to be more precise in our scientific observations of fracture and classifications of the various types of fracture including details on the location of fracture and the prosthesis design configuration. Because of the lack of standardized methods for describing chipping fractures, materials scientists are unable to properly analyze the effect of material properties and design factors on the time-dependent survival probability of ceramic fixed dental prostheses (FDPs). Based on the review of clinical trials and systematic reviews of these trials, the present study was designed to develop guidelines for classifying the functional performance, success, survival, and susceptibility to chipping fracture, and subsequent treatment of ceramic and metal-ceramic restorations. OBJECTIVE: To develop

comprehensive descriptive guidelines and a clinical reporting form to assist dental scientists in their analyses of chipping fracture behavior of metal-ceramic and all-ceramic prostheses with particular emphasis on veneered-zirconia restorations. These guidelines are required to optimize the recording of fracture features that can be used to differentiate ceramic chipping fracture from bulk fracture and to assist dentists in identifying subsequent treatment that may minimize the need to replace affected restorations. A recording form for clinical fracture observations must be sufficiently clear and complete so that dental health professionals can translate the most relevant information in a context that allows their patients to fully understand the potential risks and benefits of treatment with ceramic restorations. It should clearly allow a clinician to determine whether or not a ceramic fracture constitutes a failure, which requires replacement of the prosthesis, or whether the fracture surface is relatively small or located in a nonfunctional area, i.e., one that is not contribute to occlusion, esthetics, proximal contacts, or food impaction. To accomplish this task, a review of the relevant publications of clinical trials was necessary to identify the variability in reporting of fracture events. The reviews were focused on clinical research studies of zirconia-based FDPs and PFM FDPs, which had been monitored through recall exams for three years or more. These reports and systematic reviews of all relevant publications were published in English dental journals between 2004 and 2010.The primary focus in this review was on the susceptibility to chipping fracture or bulk fracture of veneered zirconia-based fixed dental prostheses (FDPs) and metal-ceramic FDPs, which are also referred to in this paper as porcelain-fused-to-metal (PFM) FDPs.

PMCID: PMC3271854 [Available on 2013/1/1]
PMID: 22192254 [PubMed - indexed for MEDLINE]
Related citations


49. Dent Mater. 2012 Jan;28(1):87-101. doi: 10.1016/j.dental.2011.09.003.

Longevity of posterior composite restorations: not only a matter of materials.

Demarco FF, Corr©a MB, Cenci MS, Moraes RR, Opdam NJ.

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Abstract

Resin composites have become the first choice for direct posterior restorations and are increasingly popular among clinicians and patients. Meanwhile, a number of clinical reports

in the literature have discussed the durability of these restorations over long periods. In this review, we have searched the dental literature looking for clinical trials investigating posterior composite restorations over periods of at least 5 years of follow-up published between 1996 and 2011. The search resulted in 34 selected studies. 90% of the clinical studies indicated that annual failure rates between 1% and 3% can be achieved with Class I and II posterior composite restorations depending on several factors such as tooth type and location, operator, and socioeconomic, demographic, and behavioral elements. The material properties showed a minor effect on longevity. The main reasons for failure in the long term are secondary caries, related to the individual caries risk, and fracture, related to the presence of a lining or the strength of the material used as well as patient factors such as bruxism. Repair is a viable alternative to replacement, and it can increase significantly the lifetime of restorations. As observed in the literature reviewed, a long survival rate for posterior composite restorations can be expected provided that patient, operator and materials factors are taken into account when the restorations are performed.

PMID: 22192253 [PubMed - indexed for MEDLINE]
Related citations

50. Eur J Oral Implantol. 2012;5 Suppl:S91-103.

Identifying occlusal overload and how to deal with it to avoid marginal bone loss around implants.

Fu JH, Hsu YT, Wang HL.

Department of Periodontics, National University of Singapore, Singapore.

Abstract

BACKGROUND:

Occlusal overloading is the primary cause of biomechanical implant complications, which include fracture and/or loosening of the implant fixture and/or prosthetic components. It may also disrupt the intricate bond between the implant surface and bone, leading to peri-implant bone loss and eventual implant failure.

PURPOSE:

This paper was aimed at identifying and evaluating clinical and radiographic parameters relevant for diagnosing occlusal overloading of oral implants. It also discusses its

management in order to prevent peri-implant marginal bone loss.

MATERIALS AND METHODS:

An electronic literature search for relevant studies, examining the relationship between occlusal overloading and peri-implant bone loss, was conducted in the PubMed database. Clinical human studies published in English with a minimum of 10 implants were included.

RESULTS:

Seven articles were identified. Occlusal overloading was found to be positively associated with peri-implant marginal bone loss.

CONCLUSION:

Preventing occlusal overloading involves conducting comprehensive examinations, treatment planning, precise surgical and prosthetic treatment executions, and regular maintenance. If occlusal overloading occurs, management of biomechanical implant complications and preventing/treating peri-implant bone loss involves surgical and prosthetic treatment modalities. They include occlusal treatment, repair and replacement of defective prosthetic components, and surgical treatment of the bony craters.

PMID: 22834398 [PubMed - indexed for MEDLINE]

Related citations

51. Front Oral Biol. 2012;16:147-54. Epub 2012 Jun 25.

Future directions: molecular approaches provide insights into palatal clefting and repair.

Liu KJ.

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Abstract

Normal development of the palate depends on spatial and temporal coordination of complex cellular processes and tissue-tissue interactions. Because these processes are quite sensitive to environmental and genetic perturbation, clefts of the palate are among the most common congenital anomalies seen in live births. The clinical burden of cleft palate is significant, as conventional treatments include surgical repair combined with long-term rehabilitation. Affected children may require multiple operations and often have secondary problems such as perturbed speech development, dental occlusion, maxillary growth deficiencies and otitis media. Recent reports, from patient studies and mouse models, have implicated a number of genes in palatogenesis. It is difficult to pinpoint the direct pathological effects of specific genes in humans; therefore, the majority of mechanistic insights have derived from murine

models. Furthermore, recent technological advances have made mice an ideal system for studying the signalling events associated with cleft palate. This review discusses several illustrative examples of genetic or molecular studies in which in utero reversal of cleft palate reveals sequential requirements in palate formation. As we develop a more comprehensive understanding of the genetic mechanisms underlying normal and pathological palate development, we can begin to consider the possibility of molecular tools to complement or even replace surgical interventions.

PMID: 22759678 [PubMed - indexed for MEDLINE]
Related citations

52. Front Oral Biol. 2012;16:111-23. Epub 2012 Jun 25.

Orthodontic treatment in the management of cleft lip and palate.

Cash AC.

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Abstract

The orthodontic treatment of patients with all types of cleft lip and palate, a resume of facial growth and discussion on dental and occlusal development is presented. A fully integrated cleft team provides life-long interdisciplinary holistic treatment for patients born with an orofacial cleft. To understand the team approach to cleft care, this article should be read in close conjunction with those on speech therapy, surgery and alveolar bone grafting to determine the synergy required between these and other clinical specialties. Team working is essential to produce successful patient outcomes. Cleft teams and their constituent clinicians are at the forefront of patient outcome assessment and any aspiring cleft team member must understand how the continuous evaluation of outcome and burden of care will further refine clinical protocols for future patients.

PMID: 22759675 [PubMed - indexed for MEDLINE]
Related citations

53. Int J Oral Maxillofac Surg. 2012 Jan;41(1):94-102. Epub 2011 Nov 15.

Autogenous grafts for condylar reconstruction in treatment of TMJ ankylosis: current concepts and considerations for the future.

Khadka A, Hu J.

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Abstract

Temporomandibular joint (TMJ) ankylosis is characterized by difficulty or inability to open the mouth due to fusion of the temporal and the mandible, resulting in facial symmetry/deformity, malocclusion and dental problems. The only treatment option for TMJ ankylosis is surgical with or without condylar reconstruction. Various autogenous grafts are available for condylar reconstruction after freeing the ankylotic mass such as costochondral, sternoclavicular, fibular, coronoid, and metatarsophalangeal. Costochondral graft is preferred by surgeons, but distraction osteogenesis is slowly gaining popularity and may ultimately become the standard procedure, providing a cost-effective approach with low morbidity and excellent functional outcomes. Tissue engineering is another budding field which has shown promising results in animal studies but has not been applied to humans. To date, there is no ideal autogenous graft for condylar reconstruction that satisfies the complex anatomy and the myriad of functions of a missing condyle.

PMID: 22088390 [PubMed - indexed for MEDLINE]
Related citations

54. Int J Oral Maxillofac Surg. 2012 Jan;41(1):46-54. Epub 2011 Sep 17.

Submental intubation: a literature review.

Jundt JS, Cattano D, Hagberg CA, Wilson JW.

Department of Oral and Maxillofacial Surgery, The University of Texas Dental Branch at Houston, USA. Jonathon.Jundt@uth.tmc.edu

Comment in

- 'Submental intubation: a literature review' by Jundt et al. [Int. J. Oral Maxillofac. Surg. 41 (2012) 46-54]. [Int J Oral Maxillofac Surg. 2012]

Abstract

A literature review was performed to analyse the evidence supporting submental intubation and to aid in the development of a new airway algorithm in craniofacial surgery patients. A systematic search of Pub Med, OVID, the Cochrane Database and Google Scholar between

January 1984 and April 2011 was performed. Measured variables included the outcome, complications, publishing specialty journal and method of intubation including technique modifications, indications for the procedure, devices utilized and the total procedure time to complete the submental intubation. Of the 842 patient cases from 41 articles represented in the review, the success rate was 100%. Minor complications were reported in 60 patients and included superficial skin infections (N=23), damage to the tube apparatus (N=10), fistula formation (N=10), right mainstem bronchus tube dislodgement/obstruction (N=5), hypertrophic scarring (N=3), accidental extubation in paediatric patients (N=2), excessive bronchial flexion (N=2), lingual nerve paresthesia (N=1), venous bleeding (N=2), mucocele (N=1), and dislodgement of the throat pack sticker in the submental wound (N=1). The average reported time to complete a submental intubation was 9.9 min. Submental intubation is a safe, effective and time efficient method for securing an airway when increased surgical exposure or restoration of occlusion is a priority.

PMID: 21930363 [PubMed - indexed for MEDLINE]
Related citations

55. J Craniofac Surg. 2012 Jan;23(1):333-7.

Gene therapy: implications for craniofacial regeneration.

Scheller EL, Villa-Diaz LG, Krebsbach PH.

Department of Biologic and Materials Sciences, School of Dentistry, University of Michigan, Ann Arbor, Michigan 48109-1078, USA.

Abstract

Gene therapy in the craniofacial region provides a unique tool for delivery of DNA to coordinate protein production in both time and space. The drive to bring this technology to the clinic is derived from the fact that more than 85% of the global population may at one time require repair or replacement of a craniofacial structure. This need ranges from mild tooth decay and tooth loss to temporomandibular joint disorders and large-scale reconstructive surgery. Our ability to insert foreign DNA into a host cell has been developing since the early uses of gene therapy to alter bacterial properties for waste cleanup in the 1980s followed by successful human clinical trials in the 1990s to treat severe combined immunodeficiency. In the past 20 years, the emerging field of craniofacial tissue engineering has adopted these techniques to enhance regeneration of mineralized tissues, salivary gland, and periodontium and to reduce tumor burden of head and neck squamous cell carcinoma. Studies are currently pursuing research on both biomaterial-mediated gene delivery and more clinically efficacious, although potentially more hazardous, viral methods. Although

hundreds of gene therapy clinical trials have taken place in the past 20 years, we must still work to ensure an ideal safety profile for each gene and delivery method combination. With adequate genotoxicity testing, we can expect gene therapy to augment protein delivery strategies and potentially allow for tissue-specific targeting, delivery of multiple signals, and increased spatial and temporal control with the goal of natural tissue replacement in the craniofacial complex.

PMCID: PMC3282143 [Available on 2013/1/1]
PMID: 22337437 [PubMed - indexed for MEDLINE]
Related citations

56. J Craniofac Surg. 2012 Jan;23(1):81-7.

Le Fort-based maxillofacial transplantation: current state of the art and a refined technique using orthognathic applications.

Gordon CR, Susarla SM, Peacock ZS, Kaban LB, Yaremchuk MJ.

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Abstract

Following encouraging results from the first 6 maxillofacial allotransplants, there has been a dramatic rise in interest worldwide. Numerous groups are now devoting resources to increase the frequency of these complex procedures, and with this, the craniomaxillofacial surgeon should become familiar with the emerging state of the art. This article reviews the evolution of Le Fort-based cadaveric studies pertaining to maxillofacial allotransplantation, briefly describes the clinical reports through 2010, and introduces a refined technique applying orthognathic applications. Preliminary studies over the last 5 years have highlighted the challenges associated with transplanting skeletal components, and clinical results presented thus far have been extremely promising. However, a notable area for improvement is suboptimal facial-skeletal harmony and profile in the context of sagittal skeletal projection and maxillomandibular relation. To our knowledge, orthognathic planning as applied to osteocutaneous face transplantation has not been described. Many recipients seen thus far demonstrate some degree of malocclusion and suboptimal harmony, as expected, given the donor-to-recipient skeletal/jaw discrepancies. Given that the goal is to improve function as well as form, the importance of orthognathic planning cannot be overstated with respect to optimizing harmony, profile, and occlusion. Preoperative planning, including generation of donor/recipient dental cast models, as described herein for the first time, is essential.
PMID: 22337380 [PubMed - indexed for MEDLINE]
Related citations

57. J Gastroenterol Hepatol. 2012 Jan;27(1):21-7. doi: 10.1111/j.1440-1746.2011.06945.x.

Oral manifestations of gastroesophageal reflux disease.

Ranjitkar S, Smales RJ, Kaidonis JA.

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Abstract

Numerous case-control and other studies involving confirmation of gastroesophageal reflux disease (GERD) by esophageal pH-metry and the assessment of dental erosions have shown significant associations between the two conditions in both adults and children. By contrast, when asked to vote on whether GERD may cause dental erosions, only 42% of physicians strongly agreed that such an association existed in adults, and just 12.5% strongly agreed for children, respectively in two global consensus reports. Part of this divergence between the perceptions of physicians and the findings of research publications may reflect a general lack of oral health education during medical training, and cursory oral examinations being made under less-than-ideal conditions. Adequate salivary secretions are essential for the protection of the teeth and the oropharyngeal and esophageal mucosa. The quantity and quality of the saliva require monitoring as many drugs, including several of the proton pump inhibitors (PPIs), can cause hyposalivation. In addition, PPIs do not always result in adequate acid suppression. Therefore, collaboration between physicians and dentists is strongly advocated to prevent or ameliorate possible adverse oral effects from both endogenous and exogenous acids, and to promote adequate saliva production in patients with GERD.

PMID: 22004279 [PubMed - indexed for MEDLINE]

Related citations

Full Text Online WILEY ONLINE LIBRARY

58. J Oral Maxillofac Surg. 2012 Jan;70(1):60-7. Epub 2011 Aug 19.

Tophaceuos calcium pyrophosphate dihydrate deposition disease of the temporomandibular joint: the preferential site?

Zweifel D, Ettlin D, Schuknecht B, Obwegeser J.

Department of Craniomaxillofacial and Oral Surgery, University Hospital Zurich, Zurich, Switzerland. d.zweifel@gmx.ch
PMID: 21855194 [PubMed - indexed for MEDLINE]
Related citations


59. J Oral Maxillofac Surg. 2012 Jan;70(1):37-44. Epub 2011 Aug 6.

Inferior or double joint spaces injection versus superior joint space injection for temporomandibular disorders: a systematic review and meta-analysis.

Li C, Zhang Y, Lv J, Shi Z.

Department of Oral and Maxillofacial Surgery, State Key Laboratory of Oral Diseases, West China College of Stomatology, Sichuan University, Chengdu, China.

Comment in

- Methodological limitations of a systematic review evaluating inferior or double joint spaces injection versus superior joint space injection for temporomandibular disorders. [J Oral Maxillofac Surg. 2012]

Abstract

PURPOSE:

To compare the effect and safety of inferior or double temporomandibular joint spaces drug injection versus superior temporomandibular joint space injection in the treatment of temporomandibular disorders.

MATERIALS AND METHODS:

MEDLINE (via Ovid, 1948 to March 2011), CENTRAL (Issue 1, 2011), Embase (1984 to March 2011), CBM (1978 to March 2011), and World Health Organization International Clinical Trials Registry Platform were searched electronically; relevant journals as well as references of included studies were hand-searched for randomized controlled trials comparing effect or safety of inferior or double joint spaces drug injection technique with those of superior space injection technique. Risk of bias assessment with the tool recommended by Cochrane Collaboration, reporting quality assessment with CONSORT and data extraction, were carried out independently by 2 reviewers. Meta-analysis was delivered with RevMan 5.0.23.

RESULTS:

Four trials with 349 participants were included. All the included studies had moderate risk of bias. Meta-analysis showed that inferior or double spaces injection technique could significantly increase 2.88 mm more maximal mouth opening (P = .0001) and alleviate pain intensity in the temporomandibular area on average by 9.01 mm visual analog scale scores (P = .0001) compared with superior space injection technique, but could not markedly change synthesized clinical index (P = .05) in the short term; nevertheless, they showed more beneficial maximal mouth opening (P = .002), pain relief (P < .0001), and synthesized clinical variable (P < .0001) in the long term than superior space injection. No serious adverse events were reported.

CONCLUSIONS:

Inferior or double temporomandibular joint spaces drug injection technique shows better effect than superior space injection technique, and their safety is affirmative. However, more high-quality studies are still needed to test and verify the evidence.

PMID: 21824703 [PubMed - indexed for MEDLINE]
Related citations

60. J Oral Rehabil. 2012 Jan;39(1):55-62. doi: 10.1111/j.1365-2842.2011.02239.x. Epub 2011 Aug 9.

The effectiveness of cognitive-behavioural therapy for temporomandibular disorders: a systematic review.

Liu HX, Liang QJ, Xiao P, Jiao HX, Gao Y, Ahmetjiang A.

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Abstract

Cognitive-behavioural therapy (CBT) and its effects on temporomandibular disorders (TMD) have been examined in several studies. We are trying to combine results of these studies and to explore the effectiveness. MEDLINE, EMBASE, Cochrane Central Register of Controlled Trial, Pubmed and the Chinese Biomedical Literature Data were searched to collect randomised and semi-randomised controlled trials (RCTs), comparing CBT with any control group receiving other dental treatments. Two authors independently retrieved, extracted and assessed the quality of included studies. The search strategy resulted in 323 studies, of which five met the inclusion criteria, including three RCTs and two semi-RCTs. The quality of the

included studies was diverse. Meta-analysis was not performed owing to five studies involving different comparison groups and follow-up periods. The effect of CBT on patients with TMD is inconsistent among the studies, so no firm conclusion could be drawn in this systematic review. There is insufficient evidence to make firm recommendations for the use of CBT over other intervention for the treatment of TMD. Further high-quality RCTs are clearly needed for this theme.

PMID: 21827522 [PubMed - indexed for MEDLINE]
Related citations

61. J Orofac Pain. 2012 Winter;26(1):26-32.

Topical nonsteroidal anti-inflammatory medications for treatment of temporomandibular joint degenerative pain: a systematic review.

Senye M, Mir CF, Morton S, Thie NM.

University of Alberta, Edmonton, Canada.

Abstract

AIMS:

To evaluate the efficacy of topical nonsteroidal anti-inflammatory drugs (NSAID) to relieve temporomandibular joint (TMJ) degenerative joint disease (DJD) pain.

METHODS:

A search of the literature was made using electronic databases complemented with a manual search. Clinical trials comparing topical NSAID with either placebo or an alternative active treatment to treat TMJ DJD pain were identified. Outcomes evaluated were pain reduction/pain control and/or incidence of side effects.

RESULTS:

A single study (double-blind randomized placebo-controlled trial) with 20 patients was identified that evaluated the efficacy of a topically prepared NSAID over a 12-week duration, measuring functional pain intensity, voluntary and assisted mouth opening, pain disability index, and a brief pain inventory analysis. This study revealed a pain intensity decrease

within treatment groups but no significant difference between treatment groups.

CONCLUSION:

Presently, there is insufficient evidence to support the use of topically applied NSAID medications to palliate TMJ DJD pain.
PMID: 22292137 [PubMed - indexed for MEDLINE]
Related citations

62. J Prosthodont Res. 2012 Jan;56(1):3-10. Epub 2012 Jan 20.

Early in contrast to recent methods to evaluate masticatory function in implant patients.

Carlsson GE.

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Abstract

PURPOSE:

The aim was to describe early and a few recent methods to evaluate masticatory function in patients before and after implant treatment.

STUDY SELECTION:

Three Swedish doctoral theses from the early era of osseointegration and a recent Swedish doctoral thesis studying oral function in implant patients are reviewed. Furthermore, a PubMed search was conducted to identify studies published during the last 3 years related to masticatory function in implant patients.

RESULTS:

The first studies used questionnaires and methods for assessing bite force and chewing efficiency before and after implant treatment. Subsequent studies included methods evaluating dietary selection, psychological problems, occlusal perception, oral stereognosis, oral motor ability and phonetics. The results demonstrated overwhelming improvement, both subjectively and objectively, of oral functions, and in the patients' lives, after implant treatment. The methods employed appear to have been adequate and they have continued to be utilized, only slightly modified, in a number of subsequent and recent studies. New methods using custom-made equipment to monitor changes in bite force, jaw movements and muscle activity during various tasks demonstrated the important role of periodontal mechanoreceptors in biting and chewing. These methods promise to be valuable in ongoing

and future prosthodontic research.

CONCLUSIONS:

The early methods used for assessment of masticatory function appear to have been adequate and they have, with only slight modifications, continued to be utilized. New methods monitoring bite force, jaw movements and muscle activity have deepened the knowledge of masticatory functions and promise to be valuable in future prosthodontic research.

PMID: 22264673 [PubMed - indexed for MEDLINE]
Related citations

63. Med Oral Patol Oral Cir Bucal. 2012 Jan 1;17(1):e160-3.

Virtual articulator for the analysis of dental occlusion: an update.

Maestre-Ferr©n L, Romero-Mill©n J, Pe©arrocha-Oltra D, Pe©arrocha-Diago M.

Faculty of Medicine and Dentistry, University of Valencia, Valencia, Spain.

Abstract

The future of dental practice is closely linked to the utilization of computer-based technology, specifically virtual reality, which allows the dental surgeon to simulate true life situations in patients. The virtual articulator has been designed for the exhaustive analysis of static and dynamic occlusion, with the purpose of substituting mechanical articulators and avoiding their errors. These tools will help both odontologists and dental prosthetists to provide the best individualized treatment for each patient. The present review analyzes the studies published in the literature on the design, functioning and applications of virtual articulators. A Medline-PubMed search was made of dental journals, with the identification of 137 articles, of which 16 were finally selected. The virtual articulator can simulate the specific masticatory movement of the patient. During mandibular animation, the program calculates the sites where the opposing teeth come into contact. The studies made to assess the reliability of the virtual articulator show good correspondence in visualization of the number and position of the dynamic contacts. The virtual articulator is a precise tool for the full analysis of occlusion in a real patient.

PMCID: PMC3448198 **Free PMC Article**
PMID: 22157663 [PubMed - indexed for MEDLINE]
Related citations

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64. Arch Ital Biol. 2011 Dec 1;149(4):467-77. doi: 10.4449/aib.v149i4.1358.

Bruxism and nocturnal groaning.

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Abstract

Sleep bruxism (SB) is a sleep-related movement disorder, characterized by tooth grinding and/or clenching. The causes of SB range from psychosocial factors to an excessive sleep arousal response. Some studies showed that SB episodes during sleep are under the influences of transient activity of the brainstem arousal. Nocturnal groaning (NG) is a parasomnia characterized by an expiratory monotonous vocalization occurring during sleep, especially in REM sleep and during the second half of the night. The pathogenesis of NG remains still unclear and many hypotheses arose, ranging from the persistence of a vestigial ventilatory pattern rather than an expiratory upper airways' obstruction. Sleep microstructure fluctuation might modulate the NG, since the end of the NG episode usually is synchronized with a cortical arousal and an autonomic activation. Further studies should clarify the pathophysiology of SB and NG, especially when the two phenomena are associated.

Free Article

PMID: 22205592 [PubMed - indexed for MEDLINE]

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65. Arch Oral Biol. 2011 Dec;56(12):1440-65. Epub 2011 May 8.

Face sensorimotor cortex and its neuroplasticity related to orofacial sensorimotor functions.

Avivi-Arber L, Martin R, Lee JC, Sessle BJ.

Department of Prosthodontics, Faculty of Dentistry, University of Toronto, Toronto, Ontario, Canada. limor.avivi.arber@utoronto.ca

Comment in

- Sensory motor cortex, maladaptative changes and impaired orofacial functions. [Arch

Oral Biol. 2011]

Abstract

This review describes evidence in subprimates and primates that the face primary somatosensory cortex (face SI) and primary motor cortex (face MI) are involved in sensorimotor integration and control of orofacial motor functions that include semiautomatic movements (e.g., chewing, swallowing) and voluntary movements (e.g., jaw-opening). The review also notes that the neuroplastic capabilities of the face SI and face MI have recently been documented, and may reflect or allow for functional adaptation (or maladaptation) of the orofacial sensorimotor system to an altered oral state or oral motor behaviour. They may contribute to the processes whereby patients undergoing oral rehabilitation can (or cannot) restore the lost orofacial sensorimotor functions. Such understanding is important since pain, injuries to the oral tissues, and alterations to the dental occlusion induced by tooth loss or attrition are common occurrences in humans that may sometimes be accompanied by impaired oral sensorimotor functions. Furthermore, impaired oral sensorimotor functions are common in many neurological disorders, sometimes making the most vital functions of eating, swallowing and speaking difficult and thereby reducing the patient's quality of life. It has also been well documented that such negative consequences can be improved following oral rehabilitation as patients adapt, for example, to a new dental prosthesis aimed at restoring function. Therefore, understanding the mechanisms and cortical neuroplastic processes underlying orofacial sensorimotor functions and adaptation is also important for the development of new therapeutic strategies to facilitate recovery of patients suffering from orofacial pain and sensorimotor disorders and improve their quality of life.

PMID: 21550585 [PubMed - indexed for MEDLINE]

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Taking care of the challenging tension headache patient.

Mathew PG, Mathew T.

Department of Neurology, John R. Graham Headache Center, Harvard Medical School, Brigham and Women's/Faulkner Hospital, Boston, MA 02130, USA. pmathew@partners.org

Abstract

Tension type headache (TTH) is the most common primary headache disorder, but it is a diagnosis for which patients infrequently present for evaluation in the outpatient setting. Performing a thorough evaluation and establishing the correct diagnosis is essential in

formulating an effective treatment plan. There are many complex issues that, although not causative, may play an exacerbating role in TTH. This article reviews the epidemiology, diagnosis, and pharmacologic treatment of TTH. In addition, nonpharmacologic treatment approaches, sleep dysfunction, and temporomandibular dysfunction are reviewed.
PMID: 21845469 [PubMed - indexed for MEDLINE]
Related citations
SpringerLink FULL-TEXT ARTICLE

67. Oral Oncol. 2011 Dec;47(12):1099-104. Epub 2011 Aug 27.

Dental implant placement after mandibular reconstruction by microvascular free fibula flap: current knowledge and remaining questions.

Anne-Ga€lle B, Samuel S, Julie B, Renaud L, Pierre B.

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Abstract

Mandibular reconstruction by microvascular free fibula flap has dramatically improved the quality of life of patients treated by interruptive surgery. A simple prosthesis can be used for dental rehabilitation but in many cases, these prostheses remain nonfunctional. The use of osseointegrated implants restores both function and aesthetics. The technique for implantation in fibula flap is very similar to the technique in native mandible but access to the bone is the most difficult step of the surgery. The success rate for osteointegration ranges from 86% to 99% but the success rate of the prosthesis is much lower. This difference could be explained by the vertical discrepancy between the graft and the remaining mandible, which leads to an unfavourable implant-crown ratio. The quality of soft tissues is also a limiting factor for the prosthesis, and hypertrophy often appears after the placement of the abutments. The type of the prosthesis (fixed or removable) should also be discussed. Occlusal considerations should be highlighted as occlusion remains abnormal in many cases. Three-dimensional imaging might help in the planning of these complex reconstructions. A close collaboration between the maxillo-facial surgeon, the oral surgeon and the prosthodontist is necessary to obtain good results.

PMID: 21873106 [PubMed - indexed for MEDLINE]
Related citations
ELSEVIER FULL-TEXT ARTICLE

68. Sleep Med. 2011 Dec;12 Suppl 2:S27-32.

Parasomnias and nocturnal frontal lobe epilepsy (NFLE): lights and shadows--controversial points in the differential diagnosis.

Bisulli F, Vignatelli L, Provini F, Leta C, Lugaresi E, Tinuper P.

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Abstract

Nocturnal frontal lobe epilepsy (NFLE) is characterized by seizures with complex, often bizarre, violent behaviour arising only or mainly during sleep. These unusual seizures and their occurrence during sleep are often accompanied by normal EEG tracings and neuroradiological findings, making it difficult to distinguish NFLE seizures from other non-epileptic nocturnal paroxysmal events, namely parasomnias. NFLE was described for the first time in 1981, but, as its epileptic origin was controversial, the condition was called nocturnal paroxysmal dystonia. Even though many aspects of parasomnias and NFLE have been clarified in the last two decades, the problem of differential diagnosis remains a challenge for clinicians. This paper discusses some controversial points still under debate. The difficulties in distinguishing nocturnal epileptic seizures from parasomnias reflect just one aspect of the intriguing issue of the pathophysiological relationships between all types of paroxysmal motor behaviours during sleep.

PMID: 22136895 [PubMed - indexed for MEDLINE]
Related citations

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Psychosocial interventions for the management of chronic orofacial pain.

Aggarwal VR, Lovell K, Peters S, Javidi H, Joughin A, Goldthorpe J.

Oral Health Unit, School of Dentistry, The University of Manchester, Manchester, UK. vishal.r.aggarwal@manchester.ac.uk.

Comment in

- Weak evidence supports the use of psychosocial interventions for chronic orofacial pain. [Evid Based Dent. 2012]

Abstract

BACKGROUND:

Psychosocial factors have a role in the onset of chronic orofacial pain. However, current management involves invasive therapies like occlusal adjustments and splints which lack an evidence base.

OBJECTIVES:

To determine the efficacy of non-pharmacologic psychosocial interventions for chronic orofacial pain.

SEARCH METHODS:

The following electronic databases were searched: the Cochrane Oral Health Group Trials Register (to 25 October 2010), the Cochrane Central Register of Controlled Trials (CENTRAL) (The Cochrane Library 2010, Issue 4), MEDLINE via OVID (1950 to 25 October 2010), EMBASE via OVID (1980 to 25 October 2010) and PsycINFO via OVID (1950 to 25 October 2010). There were no restrictions regarding language or date of publication.

SELECTION CRITERIA:

Randomised controlled trials which included non-pharmacological psychosocial interventions for adults with chronic orofacial pain compared with any other form of treatment (e.g. usual care like intraoral splints, pharmacological treatment and/or physiotherapy).

DATA COLLECTION AND ANALYSIS:

Data were independently extracted in duplicate. Trial authors were contacted for details of randomisation and loss to follow-up, and also to provide means and standard deviations for outcome measures where these were not available. Risk of bias was assessed and disagreements between review authors were discussed and another review author involved where necessary.

MAIN RESULTS:

Seventeen trials were eligible for inclusion into the review. Psychosocial interventions improved long-term pain intensity (standardised mean difference (SMD) -0.34, 95% confidence interval (CI) -0.50 to -0.18) and depression (SMD -0.35, 95% CI -0.54 to -0.16). However, the risk of bias was high for almost all studies. A subgroup analysis revealed that cognitive behavioural therapy (CBT) either alone or in combination with biofeedback

improved long-term pain intensity, activity interference and depression. However the studies pooled had high risk of bias and were few in number. The pooled trials were all related to temporomandibular disorder (TMD).

AUTHORS' CONCLUSIONS:

There is weak evidence to support the use of psychosocial interventions for chronic orofacial pain. Although significant effects were observed for outcome measures where pooling was possible, the studies were few in number and had high risk of bias. However, given the non-invasive nature of such interventions they should be used in preference to other invasive and irreversible treatments which also have limited or no efficacy. Further high quality trials are needed to explore the effects of psychosocial interventions on chronic orofacial pain.
PMID: 22071849 [PubMed - indexed for MEDLINE]
Related citations

70. Arch Ital Biol. 2011 Nov 7;149(4):478-91. doi: 10.4449/aib.v149i4.1317.

Masseter EMG activity during sleep and sleep bruxism.

Kato T, Masuda Y, Yoshida A, Morimoto T.

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Abstract

The masseter muscle is involved in the complex and coordinated oromotor behaviors such as mastication during wakefulness. The masseter electromyographic (EMG) activity decreases but does not disappear completely during sleep: the EMG activity is generally of low level and inhomogeneous for the duration, amplitude and intervals. The decreased excitability of the masseter motoneurons can be determined by neural substrates for NREM and REM sleep. The masseter EMG activity is increased in association with the level of arousal fluctuations within either sleep state. In addition, there are some motor events such as REM twitches, swallowing and rhythmic masticatory muscle activity (RMMA), whose generation might involve the additional activation of specific neural circuits. Sleep bruxism (SB) is characterized by exaggerated occurrence of RMMA. In SB, the rhythmic activation of the masseter muscle can reflect the rhythmic motor inputs to motoneurons through, at least in part, common neural circuits for generating masticatory rhythm under the facilitatory influences of transient arousals. However, it remains elusive as to which neural circuits determine the genesis of sleep bruxism. Based on the available knowledge on the masseter EMG activity during sleep, this review presents that the variety of the masseter EMG phenotypes during sleep can result from the combinations of the quantitative, spatial and temporal neural factors eventually sending net facilitatory inputs to trigeminal motoneurons

under sleep regulatory systems.

Free Article
PMID: 22205593 [PubMed - indexed for MEDLINE]
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71. Arch Oral Biol. 2011 Nov;56(11):1181-91. Epub 2011 May 4.

Genomics and the new perspectives for temporomandibular disorders.

Meloto CB, Serrano PO, Ribeiro-DaSilva MC, Rizzatti-Barbosa CM.

Department of Prosthesis and Periodontology, Dental College of Piracicaba, State University of Campinas, Avenida Limeira 901, 13414-903 Piracicaba, S&#65533;o Paulo, Brazil.

Abstract

The field of temporomandibular disorders (TMD) is experiencing significant changes in terms of aetiology and treatment. Researchers and clinicians are becoming increasingly aware of the possibility that genetic variations may play a role in pain perception and onset of TMD. In this review, we purpose to briefly describe these allelic variants, how they may be involved in TMD pathophysiology and how they may affect TMD treatment. Studies have already pointed the association between TMD and genetic polymorphisms in the oestrogen receptor alpha, adrenergic receptor beta 2, serotonin receptor, serotonin transporter and catechol-O-methyltransferase genes, and other candidate genes continue to emerge. The main implication of these findings refers to the promising possibilities of "genome/omics-based personalised care", which consists of tailoring individual treatment based on personalised medication, depending on the individual genetic differences and early diagnosis and prognosis of the disorder, preventing acute pain conditions from becoming chronic. The following years of research shall focus on collecting and endorsing these findings if we are to provide patients in pain with efficient and successful TMD treatments.

PMID: 21536254 [PubMed - indexed for MEDLINE]
Related citations


72. Ear Nose Throat J. 2011 Nov;90(11):E20-2.

Giant cell tumor of the masticator space: case report and

literature review.

Somers ML, McLean SA, Torres F.

Department of Otolaryngology-Head and Neck Surgery, Henry Ford Health System, Detroit, MI 48202, USA. mlgorges@hotmail.com

Abstract

Giant cell tumors of the head and neck are rare. We describe the case of a 50-year-old man who presented with otalgia and eustachian tube dysfunction. After his symptoms persisted despite aggressive medical management, further investigation revealed the presence of a firmness in his left parotid tail. Computed tomography identified a heterogeneously enhancing mass in the left masticator space. The tumor was removed surgically, and it was diagnosed on histopathology as a giant cell tumor. The patient recovered uneventfully and was closely followed for signs of recurrence. To the best of our knowledge, ours is the first reported case of a giant cell tumor in the masticator space. We review the literature on giant cell tumors of the head and neck, with particular attention given to cases involving the temporomandibular joint.

PMID: 22109928 [PubMed - indexed for MEDLINE]

Related citations

73. Int J Oral Maxillofac Surg. 2011 Nov;40(11):1314-22. Epub 2011 Apr 6.

Pigmented villonodular synovitis of the temporomandibular joint: a case report and the literature review.

Cai J, Cai Z, Gao Y.

Department of Oral and Maxillofacial Surgery, Peking University School & Hospital of Stomatology, Beijing, China.

Abstract

Pigmented villonodular synovitis (PVNS) is an uncommon benign proliferative disorder of synovium that may involve joints, tendon sheaths, and bursae. It most often affects the knees, and less frequently involves other joints. It presents in the temporomandibular joints (TMJs) extremely rarely. The authors report an elderly female patient with PVNS of the TMJ with skull base extension, who had traumatic history in the same site. It was diagnosed through core-needle biopsy, which was not documented in the literature. Radical excision and follow-up for 7-8 years was recommended because of the reported malignant transformation and high recurrence rate. This case and previously reported cases in the literature are reviewed and discussed.

PMID: 21474285 [PubMed - indexed for MEDLINE]
Related citations


74. J Altern Complement Med. 2011 Nov;17(11):995-1000. Epub 2011 Nov 9.

The relationship between dental occlusion/temporomandibular joint status and general body health: part 1. Dental occlusion and TMJ status exert an influence on general body health.

Moon HJ, Lee YK.

Moon Dental Hospital, Seoul, Korea.

Abstract

BACKGROUND:

There have been varied studies that have suggested a relationship between dental occlusion/temporomandibular joint (TMJ) status and general body health. Therefore, it is important to elucidate the systematic relationships and corresponding action mechanisms between them.

OBJECTIVES:

The purpose of this part of study was to review the relationships between dental occlusion/TMJ status and systemic body health based on the published literature.

METHODS:

This study, based mostly on peer-reviewed specialist articles, has determined that dental occlusion/TMJ status exerts an influence on (1) synchronization of head and jaw muscles with the muscles from other body sites for proper body posture; (2) body stability such as body equilibrium (balance), center of gravity fluctuation, and gaze stability; and (3) physical performance along with physical fitness.

CONCLUSIONS:

Therefore, these relationships should be further investigated and extended to the whole body, and the action mechanisms should be elucidated.

PMID: 22070442 [PubMed - indexed for MEDLINE]

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Modest improvement in temporomandibular disorder-related pain associated with use of hard stabilization appliances compared with use of nonoccluding appliances or no therapy.

Pandis N.

Corfu, Greece. npandis@yahoo.com
PMID: 22041416 [PubMed - indexed for MEDLINE]
Related citations

Full Text J Am Dent Assoc

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Spectrum of radiological appearances of necrotising external otitis: a pictorial review.

Mehrotra P, Elbadawey MR, Zammit-Maempel I.

Department of Radiology, Freeman Hospital, Newcastle upon Tyne, UK. mehr75@doctors.org.uk

Abstract

Necrotising external otitis, also known as malignant otitis externa, is an aggressive, resorptive osteomyelitis of the temporal bone. Although rare, necrotising external otitis is a potentially fatal disease, with complications which include temporomandibular joint osteomyelitis, sigmoid sinus thrombosis and meningitis. Imaging findings may be subtle, particularly in the early stages. We present a broad range of imaging findings which may occur in necrotising external otitis cases.
PMID: 21846417 [PubMed - indexed for MEDLINE]
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Synovial chondromatosis of temporomandibular joint: journey

through 25 decades and a case report.

Shah SB, Ramanojam S, Gadre PK, Gadre KS.

Department of Oral and Maxillofacial Surgery, Bharati Vidyapeeth Dental College and Hospital, Pune, Maharashtra, India. drshishirshah@yahoo.co.in
PMID: 21470750 [PubMed - indexed for MEDLINE]
Related citations


78. J Pain. 2011 Nov;12(11 Suppl):T102-7. doi: 10.1016/j.jpain.2011.08.009.

Summary of findings from the OPPERA baseline case-control study: implications and future directions.

Fillingim RB, Slade GD, Diatchenko L, Dubner R, Greenspan JD, Knott C, Ohrbach R, Maixner W.

University of Florida, College of Dentistry, and North Florida/South Georgia Veterans Health System, Gainesville, FL 32610-3628, USA. rfilling@ufl.edu

PMCID: PMC3232405 **Free PMC Article**
PMID: 22074748 [PubMed - indexed for MEDLINE]
Related citations


79. Prog Orthod. 2011 Nov;12(2):132-42. Epub 2011 Jul 22.

An insight into four orthodontic treatment need indices.

Borzabadi-Farahani A.

Division of Dentistry, Children's Hospital Los Angeles, University of Southern California, Los Angeles, CA 90027, USA. farahani@faraortho.com

Abstract

Occlusal indices have been introduced and used to rank or categorize the occlusion. According to Dr. William Shaw and colleagues (1995), there are five types of occlusal indices, diagnostic, epidemiologic, orthodontic treatment need, orthodontic treatment outcome, and treatment complexity indices. Orthodontic treatment need indices are used to rank the malocclusion. They were devised to minimize the subjectivity associated with the

diagnosis, referral and complexity assessment of malocclusion. Some are also multifunctional and used to assess the outcome of orthodontic treatment. The overall aim of the present article is to provide an overview on four commonly used American and European orthodontic treatment need indices, review their modifications, advantages, and limitations. These indices are the Index of Orthodontic Treatment Need (IOTN), the Dental Aesthetic Index (DAI), the Handicapping Labio-Lingual Deviation index (HLD), and the Index of Complexity, Outcome and Need (ICON).

PMID: 22074838 [PubMed - indexed for MEDLINE]
Related citations


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Bruxism: overview of current knowledge and suggestions for dental implants planning.

Manfredini D, Bucci MB, Sabattini VB, Lobbezoo F.

TMD Clinic, Department of Maxillofacial Surgery, School of Dentistry, University of Padova, Italy. daniele.manfredini@tin.it

Abstract

Bruxism is commonly considered a detrimental motor activity, potentially causing overload of the stomatognathic structures and representing a risk factor for dental implant survival. The available literature does not provide evidence-based guidelines for the management of bruxers undergoing implant-retained restorations. The present paper reviewed current concepts on bruxism etiology, diagnosis and management, underlining its effects on dental implants in an attempt to provide clinically useful suggestions based on scientifically sound data. Unfortunately, very little data exists on the subject of a cause-and-effect relationship between bruxism and implant failure, to the point that expert opinions and cautionary approaches are still considered the best available sources for suggesting good practice indicators. By including experimental literature data on the effects of different types of occlusal loading on peri-implant marginal bone loss along with data from studies investigating the intensity of the forces transmitted to the bone itself during tooth-clenching and tooth-grinding activities, the authors were able to compile the suggestions presented here for prosthetic implant rehabilitations in patients with bruxism.
PMID: 22128671 [PubMed - indexed for MEDLINE]
Related citations

81. J Oral Rehabil. 2011 Oct;38(10):754-80. doi: 10.1111/j.1365-2842.2010.02197.x. Epub 2011

Jan 17.

Assessment of mastication with implications for oral rehabilitation: a review.

van der Bilt A.

Department of Oral-Maxillofacial Surgery, Prosthodontics and Special Dental Care, University Medical Center Utrecht, Utrecht, The Netherlands. a.vanderbilt@umcutrecht.nl

Comment in

- Mastication in humans: finding a rationale. [J Oral Rehabil. 2011]

Abstract

During chewing, food is reduced in size, while saliva moistens the food and binds the masticated food into a bolus that can be easily swallowed. Characteristics of the oral system, like number of teeth, bite force and salivary flow, will influence the masticatory process. Masticatory function of healthy persons has been studied extensively the last decades. These results were used as a comparison for outcomes of various patient groups. In this review, findings from literature on masticatory function for both healthy persons and patient groups are presented. Masticatory function of patients with compromised dentition appeared to be significantly reduced when compared with the function of healthy controls. The influence of oral rehabilitation, e.g. dental restorations, implant treatment and temporomandibular disorder treatment, on masticatory function will be discussed. For instance, implant treatment was shown to have a significant positive effect on both bite force and masticatory performance. Also, patient satisfaction with an implant-retained prosthesis was high in comparison with the situation before implant treatment. The article also reviews the neuromuscular control of chewing. The jaw muscle activity needed to break solid food is largely reflexly induced. Immediate muscle response is necessary to maintain a constant chewing rhythm under varying food resistance conditions. Finally, the influence of food characteristics on the masticatory process is discussed. Dry and hard products require more chewing cycles before swallowing than moist and soft foods. More time is needed to break the food and to add enough saliva to form a cohesive bolus suitable for swallowing.

PMID: 21241351 [PubMed - indexed for MEDLINE]
Related citations

Effectiveness of low-level laser therapy in temporomandibular disorders: a systematic review and meta-analysis.

Petrucci A, Sgolastra F, Gatto R, Mattei A, Monaco A.

Gnathology Department, School of Dentistry, University of L'Aquila, L'Aquila, Italy. petrucci.ambra@gmail.com

Abstract

AIM:

To assess the scientific evidence on the efficacy of low-level laser therapy (LLLT) in the treatment of temporomandibular disorders (TMD).

METHODS:

The databases of PubMed, Science Direct, Cochrane Clinical Trials Register, and PEDro were manually and electronically searched up to February 2010. Two independent reviewers screened, extracted, and assessed the quality of the publications. A meta-analysis- was performed to quantify the pooled effect of LLLT on pain and function in patients with chronic TMD.

RESULTS:

The literature search identified 323 papers without overlap between selected databases, but after the two-phase study selection, only six randomized clinical trials (RCT) were included in the systematic review. The primary outcome of interest was the change in pain from baseline to endpoint. The pooled effect of LLLT on pain, measured through a visual analog scale with a mean difference of 7.77 mm (95% confidence interval [CI]: -2.49 to 18.02), was not statistically significant from placebo. Change from baseline to endpoint of secondary outcomes was 4.04 mm (95% CI 3.06 to 5.02) for mandibular maximum vertical opening; 1.64 mm (95% CI 0.10 to 3.17) for right lateral excursion and 1.90 mm (95% CI: -4.08 to 7.88) for left lateral excursion.

CONCLUSION:

Currently, there is no evidence to support the effectiveness of LLLT in the treatment of TMD.

PMID: 22247925 [PubMed - indexed for MEDLINE]

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Annual review of selected scientific literature: report of the

committee on scientific investigation of the American Academy of Restorative Dentistry.

Donovan TE, Anderson M, Becker W, Cagna DR, Hilton TJ, Rouse J.

Department of Operative Dentistry, University of North Carolina, Chapel Hill, NC 27599, USA. Terry_Donovan@dentistry.unc.edu

Erratum in

- J Prosthet Dent. 2012 Jul;108(1):14.

PMID: 21962584 [PubMed - indexed for MEDLINE]
Related citations

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The controversial issue of centric relation: a historical and current dental perspective?

Chhabra A, Chhabra N, Makkar S, Sharma A.

Department of Prosthodontics and Oral Implantology, ITS Dental College, Hospital and Research Centre, Greater Noida, Uttar Pradesh, India. i_ac80@yahoo.co.in

Abstract

Human mandible is related to the anatomic skull in several positions among these; centric relation is a significant spatial position. It contributes not only as a reference position to build optimal occlusion in artificial dentition, but is also related to sound periodontal health and stomatognatic function. The purpose of this article is to critically discuss the historical and current definitions of centric relation, the different methods used for recording the same and its clinical implication in the restorative dental practice.
PMID: 22082858 [PubMed - indexed for MEDLINE]
Related citations

85. Oral Surg Oral Med Oral Pathol Oral Radiol Endod. 2011 Oct;112(4):453-62. Epub 2011 Aug 11.

Research diagnostic criteria for temporomandibular disorders: a systematic review of axis I epidemiologic findings.

Manfredini D, Guarda-Nardini L, Winocur E, Piccotti F, Ahlberg J, Lobbezoo F.

TMD Clinic, Department of Maxillofacial Surgery, University of Padova, Padova, Italy. daniele.manfredini@tin.it

Abstract

OBJECTIVES:

The aim of this study was to summarize and systematically review the literature on the prevalence of different research diagnostic criteria for temporomandibular disorders (RDC/TMD) version 1.0 axis I diagnoses in patient and in the general populations.

STUDY DESIGN:

For each of the relevant papers, the following data/information were recorded for meta-analysis and discussion: sample size and demographic features (mean age, female-to-male ratio); prevalence of the assigned diagnoses; prevalence of the diagnoses assigned to the left and right joints, if available; prevalence of the diagnoses assigned to the 2 genders, if available; prevalence of the different combinations of multiple diagnoses, if available; and prevalence of TMD (only for community studies).

RESULTS:

Twenty-one (n = 21) papers were included in the review (15 dealing with TMD patient populations and 6 with community samples). The studies on TMD patients accounted for a total of 3,463 subjects (mean age 30.2-39.4 years, female-to-male ratio 3.3), with overall prevalences of 45.3% for group I muscle disorder diagnoses, 41.1% for group II disc displacements, and 30.1% for group III joint disorders. Studies on general populations accounted for a total of 2,491 subjects, with an overall 9.7% prevalence for group I, 11.4% for group IIa, and 2.6% for group IIIa diagnoses.

CONCLUSIONS:

Prevalence reports were highly variable across studies. Myofascial pain with or without mouth opening limitation was the commonest diagnosis in TMD patient populations, and disc displacement with reduction was the commonest diagnosis in community samples.

PMID: 21835653 [PubMed - indexed for MEDLINE]
Related citations

ELSEVIER
FULL-TEXT ARTICLE

86. Quintessence Int. 2011 Oct;42(9):761-9.

Paresthesia during orthodontic treatment: case report and review.

Monini Ada C, Martins RP, Martins IP, Martins LP.

Facultade de Ontologia de Araraquara, Universidade Estadual Paulista, UNESP, Araraquara, S&#65533;o Paulo, Brazil.

Abstract

Paresthesia of the lower lip is uncommon during orthodontic treatment. In the present case, paresthesia occurred during orthodontic leveling of an extruded mandibular left second molar. It was decided to remove this tooth from the appliance and allow it to relapse. A reanatomization was then performed by grinding. The causes and treatment options of this rare disorder are reviewed and discussed. The main cause of paresthesia during orthodontic treatment may be associated with contact between the dental roots and inferior alveolar nerve, which may be well observed on tomography scans. Treatment usually involves tooth movement in the opposite direction of the cause of the disorder.
PMID: 21909501 [PubMed - indexed for MEDLINE]
Related citations

87. An Bras Dermatol. 2011 Sep-Oct;86(5):955-60.

Knowledge of the physical properties and interaction of laser with biological tissue in dentistry.

[Article in English, Portuguese]
Cavalcanti TM, Almeida-Barros RQ, Cat&#65533;o MH, Feitosa AP, Lins RD.

Universidade Estadual da Para&#65533;ba, Campina Grande, PB, Brasil.
thiagomaciel_cg@hotmail.com

Abstract

The trend in dentistry is to incorporate less invasive methods to minimize pain and discomfort during and after dental intervention. Therefore, it is believed that laser therapy is an excellent treatment option, since it has beneficial effects for the irradiated tissues, such as activation of microcirculation, production of new capillaries, inflammatory and analgesic effects, in addition to stimulation of growth and cell regeneration. The comprehension of the interaction between lasers and tissue is based mainly on understanding the reactions that can

be induced in those tissues by laser. This work intends to show how important it is to know the physical properties of laser as well as its interactions with biological tissues, since its effects and mechanisms of action are complex and are the object of various studies to better understand its forms of application and indications.

Free Article

PMID: 22147036 [PubMed - indexed for MEDLINE]

Related citations

88. Aust Dent J. 2011 Sep;56(3):257-64. doi: 10.1111/j.1834-7819.2011.01351.x.

Temporomandibular joint surgery: what does it mean to the dental practitioner?

Dimitroulis G.

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Abstract

A poor appreciation of the role of surgery in the management of temporomandibular disorders (TMD) may result in some patients being denied access to appropriate care. While surgery is often considered as an option of last resort, there are instances where surgery is the definitive and sometimes the only treatment option. The aim of this paper was to review the role of temporomandibular joint (TMJ) surgery and its place in the treatment armamentarium of temporomandibular disorders. Indications, rationale for surgery, risks vs. benefits are discussed and complemented with examples of clinical cases treated by the author. All dental practitioners should be aware of the benefits of TMJ surgery so that patients do not suffer unnecessarily from ongoing non-surgical treatments that ultimately prove to be ineffective in the management of their condition.

PMID: 21884140 [PubMed - indexed for MEDLINE]

Related citations

89. Gerodontology. 2011 Sep;28(3):197-204. doi: 10.1111/j.1741-2358.2010.00368.x. Epub 2010 May 14.

Insertion and follow-up of complete dentures: a literature

review.

Goiato MC, Filho HG, Dos Santos DM, Bar&#65533;o VA, J&#65533;nior AC.

Department of Prosthodontics and Dental Materials, UNESP-S&#65533;o Paulo State University, S&#65533;o Paulo, Brazil. goiato@foa.unesp.br

Abstract

OBJECTIVE:

The aim of this study was to present the importance of clinical procedures related to insertion and follow-up of complete dentures in elderly patients.

MATERIALS AND METHODS:

The success of rehabilitation with complete dentures results from the accuracy of clinical and laboratorial procedures that makes the denture insertion an important step of treatment.

CONCLUSION:

The follow-up and professional maintenance of function and hygiene facilitates long-term efficiency.

PMID: 20491950 [PubMed - indexed for MEDLINE]
Related citations

90. J Craniomaxillofac Surg. 2011 Sep;39(6):459-62. Epub 2010 Nov 20.

Synovial chondromatosis originally arising in the lower compartment of temporomandibular joint: a case report and literature review.

Chen MJ, Yang C, Zhang XH, Qiu YT.

Department of Oral & Maxillofacial Surgery, Ninth People's Hospital, Shanghai Jiao Tong University, School of Medicine, Shanghai Key Laboratory of Stomatology, No. 639 Zhi-zao-ju Road, Shanghai 200011, PR China.

Abstract

INTRODUCTION:

More than 200 cases of synovial chondromatosis (SC) in the TMJ were reported. Most of SC described exclusively involved the upper compartment of the joint. SC originally arising in the lower compartment is rarely found.

MATERIAL AND METHODS:

This article presents a 50-year-old man with a slow growing, pain, preauricular swelling in left side and the limitation of mouth-opening. Panoramic radiograph, CT scans and MR images were taken. An arthroscopic examination and a surgical intervention were performed.

RESULTS:

Panoramic radiograph and CT scans didn't reveal the calcifying lesions in left TMJ region. Sagittal MR images and the arthroscopic examination demonstrated distinct nodules within an extremely expanded lower joint compartment and a normal position of the articular disc. All loose bodies and grossly abnormal synovium were removed. The diagnosis of SC was confirmed by histologic examination.

CONCLUSION:

MRI and arthroscopy may be helpful diagnostically. Removal of all involved synovium, and loose cartilaginous bodies may be required for adequate treatment.

PMID: 21095132 [PubMed - indexed for MEDLINE]
Related citations

ELSEVIER FULL-TEXT ARTICLE

91. J Oral Sci. 2011 Sep;53(3):273-82.

Bovine teeth as substitute for human teeth in dental research: a review of literature.

Yassen GH, Platt JA, Hara AT.

Department of Preventive and Community Dentistry, Oral Health Research Institute, Indiana University School of Dentistry, Indianapolis, IN 46202, USA. gyassen@iupui.edu

Abstract

The aim of this paper was to review in vitro and in situ studies that directly compared the use

of bovine teeth as a substitute for human teeth in dental experiments. A PubMed search was conducted for papers published from 1953 to December 30, 2010 using the following keywords: "human bovine enamel" or "human bovine dentin" or "human bovine teeth". The abstracts of the studies resulting from the keyword search were read, and all papers that compared human and bovine teeth were fully read. Only original articles written in English and directly comparing human and bovine substrates were included in the review. The search was supplemented by manual searches of the reference lists from each identified paper. Out of 76 studies initially selected, 68 fulfilled the selection criteria for inclusion. The studies covered seven categories: dental morphology, chemical composition, physical properties, dental caries, dental erosion/abrasion, bonding/adhesive strength, and marginal microleakage. Inconsistent data exist regarding whether bovine teeth can be considered an appropriate substitute for human teeth in dental research. Morphological, chemical compostion and physical property differences between the two substrates must be considered when interpreting results obtained from any experiment using bovine tooth substrate.

Free Article

PMID: 21959653 [PubMed - indexed for MEDLINE]

Related citations

92. Dent Traumatol. 2011 Aug;27(4):295-9. doi: 10.1111/j.1600-9657.2011.01005.x. Epub 2011 Apr 28.

The art and science of managing traumatic injuries to primary teeth.

Needleman HL.

Department of Dentistry, Children's Hospital, Harvard School of Dental Medicine, Boston, MA, USA. hneedleman@post.harvard.edu

Abstract

The selection of an appropriate treatment protocol and the rendering of treatment to children with traumatic injuries of their primary teeth are often more challenging than doing so for the permanent teeth of older individuals. This article discusses general considerations involving patient, parent, dentist, dental anatomy and occlusion that are responsible for the differences between the treatment protocols for the management of traumatic dental injuries to primary teeth and those for permanent teeth.

PMID: 21535401 [PubMed - indexed for MEDLINE]

Related citations

93. Int J Oral Maxillofac Surg. 2011 Aug;40(8):874-7. Epub 2011 Apr 5.

Synovial cyst of the temporomandibular joint: a case report and literature review.

Spinzia A, Panetta D, Russo D, Califano L.

Department of Maxillofacial Surgery, University Federico II, Napoli, Italy.
alessia.spinzia@gmail.com

Abstract

Synovial cysts are lesions that usually occur on the wrist, foot and knee. They are rarely involved in the region of the temporomandibular joint (TMJ), with only 10 cases reported from 1978 to 2007. The authors report a case of a synovial cyst of the TMJ in a 45-year-old woman. The patient presented with a right preauricular swelling, 1cm anterior to the tragus. A computed tomography (CT) scan showed a small oval hypodense mass of soft tissue in the right temporomandibular region with no relation to the condyle. Fine needle aspiration reported a synovial cyst of the TMJ. The patient was taken to the operating room and a preauricular approach extending to the temporal region was carried out resulting in surgical excision of the mass. The histological findings were consistent with the diagnosis of a synovial cyst. The long term clinical and radiological follow-up (after 18 months) showed no sign of recurrence. The authors suggest, in accordance with the literature, that a surgical approach should be the treatment of choice in the case of a synovial cyst of the TMJ.

PMID: 21470821 [PubMed - indexed for MEDLINE]
Related citations


94. Int J Oral Maxillofac Surg. 2011 Aug;40(8):866-73. Epub 2011 Apr 3.

Orthognathic bimaxillary surgery in two patients with osteogenesis imperfecta and a review of the literature.

Ros©n A, Modig M, Larson O.

Department of Dental Medicine, Division of Oral and Maxillofacial Surgery, Karolinska

Institute, Huddinge, Sweden. annika.rosen@ki.se

Abstract

Orthognathic surgery in patients with osteogenesis imperfecta is rare. Most cases result in a successful outcome with stable and good occlusion. Two patients with, probably severe types III and IV, and malocclusion class III with retrognathic maxilla and prognathic mandible, were treated with orthodontic treatment and bimaxillary surgical correction. The surgical outcome and follow up are presented together with a review of published cases of orthognathic surgery in patients with different types of osteogenesis imperfecta. The authors conclude that it is possible to perform combined orthodontic and orthognathic surgery in patients with osteogenesis imperfecta despite the greater risk of complications. The treatments were successful with follow up times of 5-6 years.

PMID: 21459557 [PubMed - indexed for MEDLINE]

Related citations

95. J Oral Implantol. 2011 Aug;37(4):499-503. Epub 2010 Jun 16.

Osseointegrated implant fracture: causes and treatment.

Gealh WC, Mazzo V, Barbi F, Camarini ET.

Ara©atuba Dentistry School, UNESP-Univ Estadual Paulista, S©o Paulo, Brazil. gealh@bol.com.br

Abstract

Despite its high success rate, therapy with osseointegrated dental implants is not free of complications. Among the problems that may occur is fracture of implants, which, albeit a rare phenomenon, may lead to unpleasant clinical outcomes for the patient, as well as for the clinician. Thus, it is paramount to know the factors related to the biological processes involved in maintenance of osseointegration and biomechanics applied to dental implants to prevent such complications, as well as treatment options available to deal with the problem. Therefore, the objectives of this work were to investigate the literature to identify causative factors that may lead to fracture of dental implants and to discuss available procedures.

PMID: 20553152 [PubMed - indexed for MEDLINE]

Related citations

96. J Oral Maxillofac Surg. 2011 Aug;69(8):e297-303.

Nontraumatic bilateral bifid condyle and intermittent joint lock: a case report and literature review.

Almasan OC, Hedesiu M, Baciut G, Baciut M, Bran S, Jacobs R.

Department of Prosthetic Dentistry, University of Medicine and Pharmacy Iuliu Hatieganu, Cluj-Napoca, Romania. oana.almasan@umfcluj.ro
PMID: 21782992 [PubMed - indexed for MEDLINE]
Related citations

97. J Oral Maxillofac Surg. 2011 Aug;69(8):2211-6. Epub 2011 Apr 15.

Frey syndrome-an underreported complication to closed treatment of mandibular condyle fracture? Case report and literature review.

Kragstrup TW, Christensen J, Fejerskov K, Wenzel A.

Department of Orthopedic Surgery, Bispebjerg Hospital, University of Copenhagen, Copenhagen, Denmark. t.kragstrup@dadlnet.dk
PMID: 21496996 [PubMed - indexed for MEDLINE]
Related citations

98. J Oral Maxillofac Surg. 2011 Aug;69(8):2247-52. Epub 2011 Feb 3.

Temporomandibular joint synovial chondromatosis with intracranial extension: a review and observations of patient observed for 4 years.

Campbell DI, De Silva RK, De Silva H, Sinon SH, Rich AM.

Department of Oral and Maxillofacial Surgery, University of Otago School of Dentistry, Dunedin, New Zealand. duncan.i.campbell@gmail.com
PMID: 21292373 [PubMed - indexed for MEDLINE]

Related citations

ELSEVIER FULL-TEXT ARTICLE

99. Chang Gung Med J. 2011 Jul-Aug;34(4):341-51.

Facial asymmetry: etiology, evaluation, and management.

Cheong YW, Lo LJ.

Department of Plastic and Reconstructive Surgery and Chang Gung Craniofacial Research Center, Chang Gung Memorial Hospital at Linkou, Chang Gung University College of Medicine, Taoyuan, Taiwan.

Abstract

Facial asymmetry is common in humans. Significant facial asymmetry causes both functional as well as esthetic problems. When patients complain of facial asymmetry, the underlying cause should be investigated. The etiology includes congenital disorders, acquired diseases, and traumatic and developmental deformities. The causes of many cases of developmental facial asymmetry are indistinct. Assessment of facial asymmetry consists of a patient history, physical examination, and medical imaging. Medical imaging is helpful for objective diagnosis and measurement of the asymmetry, as well as for treatment planning. Components of soft tissue, dental and skeletal differences contributing to facial asymmetry are evaluated. Frequently dental malocclusion, canting of the occlusal level and midline shift are found. Management of facial asymmetry first aims at correcting the underlying disorder. Orthognathic surgery is performed for the treatment of facial asymmetry combined with dental occlusal problems. A symmetrical facial midline, harmonious facial profile and dental occlusion are obtained from treatment. Additional surgical procedures may be required to increase or reduce the volume of skeletal and soft tissue components on both sides to achieve better symmetry.

Free Article

PMID: 21880188 [PubMed - indexed for MEDLINE]

Related citations

CHANG GUNG MEDICAL JOURNAL

100. Dent Clin North Am. 2011 Jul;55(3):599-608, x.

Treatment of dentin hypersensitivity.

Trushkowsky RD, Oquendo A.

Advanced Program for International Dentists in Aesthetic Dentistry, Department of Cariology and Comprehensive Care, New York University College of Dentistry, 345 East 24th Street, New York, NY 10010, USA. ComposiDoc@aol.com

Abstract

Dentinal hypersensitivity is exemplified by brief, sharp, well-localized pain in response to thermal, evaporative, tactile, osmotic, or chemical stimuli that cannot be ascribed to any other form of dental defect or pathology. Pulpal pain is usually more prolonged, dull, aching, and poorly localized and lasts longer than the applied stimulus. Up to 30% of adults have dentinal hypersensitivity at some time. Current techniques for treatment may be only transient in nature and results are not always predictable. Two methods of treatment of dentin hypersensitivity are tubular occlusion and blockage of nerve activity. A differential diagnosis needs to be accomplished before any treatment.

PMID: 21726693 [PubMed - indexed for MEDLINE]
Related citations


101. J Bodyw Mov Ther. 2011 Jul;15(3):291-7. Epub 2010 Jun 25.

Breathing and temporomandibular joint disease.

Bartley J.

The Auckland Regional Pain Service, Auckland District Health Board, 10 Owens Road, Epsom, Auckland 1023, New Zealand. jbartley@ihug.co.nz

Abstract

Temporomandibular joint disease (TMD) refers to a collection of pain related conditions in the masticatory muscles and temporomandibular joint. Occlusal factors have been implicated in TMD pathogenesis, yet despite decades of research no causal relationship between occlusion and TMD has been found. The significance of psychosocial factors in both the assessment and the long-term management of patients with TMD is receiving increased recognition. The teaching of relaxation skills and coping strategies are effective, proven TMD therapies. The role of breathing re-education in temporomandibular joint (TMJ) disorders is rarely mentioned. A focus on breathing patterns and their disorders potentially explains how biomechanical factors associated with psychosocial influences might lead to pathophysiological changes within the TMJ as well as in the associated muscles. Attention to factors such as breathing and postural rehabilitation provides health

professionals valuable, additional tools to help care for patients with TMD.

PMID: 21665104 [PubMed - indexed for MEDLINE]
Related citations
ELSEVIER FULL-TEXT ARTICLE

102. J Oral Maxillofac Surg. 2011 Jul;69(7):1885-91. Epub 2011 Mar 21.

Use of opioids in long-term management of temporomandibular joint dysfunction.

Bouloux GF.

Department of Oral and Maxillofacial Surgery, Emory University School of Medicine, Atlanta, GA 30322, USA. gfboulo@emory.edu

Comment in

- Response to Bouloux: use of opioids in long-term management of temporomandibular joint dysfunction. [J Oral Maxillofac Surg. 2011]

Abstract

The long-term treatment of patients with chronic temporomandibular joint dysfunction has been challenging. The long-term use of opioids in these patients can be neither supported nor refuted based on current evidence. However, evidence is available to support the long-term use of opioids in other chronic noncancer pain states with reduced pain, improved function, and improved quality of life. One group of patients with chronic temporomandibular joint pain, for whom both noninvasive and invasive treatment has failed, might benefit from long-term opioid medication. The choices include morphine, fentanyl, oxycodone, tramadol, hydrocodone, and methadone. Adjunct medication, including antidepressant and anticonvulsant drugs, can also be used. The safety of these medications has been well established, but the potential for adverse drug-related behavior does exist, requiring appropriate patient selection, adequate monitoring, and intervention when needed.

PMID: 21419546 [PubMed - indexed for MEDLINE]
Related citations
ELSEVIER FULL-TEXT ARTICLE

103. J Prosthodont Res. 2011 Jul;55(3):127-36. Epub 2011 May 18.

Bruxism and prosthetic treatment: a critical review.

Johansson A, Omar R, Carlsson GE.

Department of Clinical Dentistry-Prosthodontics, Faculty of Medicine and Dentistry, University of Bergen, Årstadveien 17, 5009 Bergen, Norway.
Anders.Johansson@iko.uib.no

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.

reserved.
PMID: 21596648 [PubMed - indexed for MEDLINE]
Related citations


104. Minerva Stomatol. 2011 Jul-Aug;60(7-8):349-58.

Histological and functional changes in retrodiscal tissue following anterior articular disc displacement in the rabbit: review of the literature.

[Article in English, Italian]
Seg M, Politi L, Galioto S, Collesano V.

Dentistry and Dental Prosthesis, Faculty of Medicine, University of Pavia, Italy.

Abstract

AIM:

Numerous studies have shown how the disc displacement, which usually occurs in an antero-medial direction, can be a factor contributing to temporomandibular joint (TMJ) pain and dysfunction. The aim of this study was to ascertain, through a critical review of the literature, current knowledge relating to anterior articular disc (ADD) in the rabbit that constitutes an extremely suitable animal model for studying the human TMJ.

METHODS:

An electronic search of the MEDLINE database was performed without applying time or language restrictions and using the following key words: TMD, anterior disc displacement, rabbit, bilaminar zone. This was followed by a manual search. The articles identified were assessed to verify their pertinence, or otherwise, to the topic of investigation.

RESULTS:

The articles examined were divided into the following groups according to the topic (histological and/or functional) they dealt with: experimental animal models, joint changes, elastic fibers, collagen, chondrocytes and nervous tissue.

CONCLUSION:

The papers reviewed covered many aspects, both microscopic and histochemical, of the dysfunctional picture o anterior ADD, furnishing a vast body of useful information, not only from the point of view of the results recorded, but also as regards the various surgical and

analytical methods used.
PMID: 21709650 [PubMed - indexed for MEDLINE]
Related citations


105. Head Face Med. 2011 Jun 15;7:10.

Evaluation of the mechanism and principles of management of temporomandibular joint dislocation. Systematic review of literature and a proposed new classification of temporomandibular joint dislocation.

Akinbami BO.

University of Port Harcourt Teaching Hospital, Port Harcourt, Rivers State, Nigeria. akinbamzy3@yahoo.com

Abstract

BACKGROUND:

Virtually all the articles in literature addressed only a specific type of dislocation. The aim of this review was to project a comprehensive understanding of the pathologic processes and management of all types of dislodgement of the head of the mandibular condyle from its normal position in the glenoid fossa. In addition, a new classification of temporomandibular joint dislocation was also proposed.

METHOD AND MATERIALS:

A thorough computer literature search was done using the Medline, Cochrane library and Embase database. Key words like temporo-mandibular joint dislocation were used for the search. Additional manual search was done by going through published home-based and foreign articles. Case reports/series, and original articles that documented the type of dislocation, number of cases treated in the series and original articles. Treatment done and outcome of treatment were included in the study.

RESULT:

A total of 128 articles were reviewed out which 79 were found relevant. Of these, 26 were case reports, 17 were case series and 36 were original articles. 79 cases were acute dislocations, 35 cases were chronic protracted TMJ dislocations and 311 cases were chronic recurrent TMJ dislocations. Etiology was predominantly trauma in 60% of cases and other causes contributed about 40%. Of all the cases reviewed, only 4 were unilateral dislocation.

Various treatment modalities are outlined in this report as indicated for each type of dislocation.

CONCLUSION:

The more complex and invasive method of treatment may not necessarily offer the best option and outcome of treatment, therefore conservative approaches should be exhausted and utilized appropriately before adopting the more invasive surgical techniques.

PMCID: PMC3127760 **Free PMC Article**
PMID: 21676208 [PubMed - indexed for MEDLINE]
Related citations

106. Aust Dent J. 2011 Jun;56(2):181-92. doi: 10.1111/j.1834-7819.2011.01322.x.

Prosthodontic considerations designed to optimize outcomes for single-tooth implants. A review of the literature.

Lewis MB, Klineberg I.

Faculty of Dentistry, The University of Sydney, New South Wales, Australia.

Abstract

BACKGROUND:

The aim of this study was to review the literature on the restoration of single-tooth implants, and to develop evidence-based conclusions to optimize aesthetic, biologic and patient-related outcomes.

METHODS:

An electronic and hand search was conducted using the search terms 'dental implants, single-tooth; dental restoration, temporary; dental impression materials; dental impression technique; dental prosthesis, implant-supported; dental prosthesis design; dental abutments; dental occlusion; maintenance; survival; and survival analysis'. Resultant titles were screened, and full text was obtained where relevant. The authors selected the most appropriate articles, giving preference to systematic reviews and long-term, patient-based outcome data.

RESULTS:

Thirty-nine articles were selected and critiqued by the authors.

CONCLUSIONS:

There was strong suggestion by several authors that peri-implant soft tissue aesthetics can be sculpted through provisional restoration contour, but there are no clinical outcome studies to define or support this claim. Laboratory studies demonstrate that pick-up type impression copings in conjunction with elastomeric impressions are the most accurate means for transferring implant position to a dental cast. Laboratory and finite-element analysis studies suggest implants with an internal-type connection show improved stress distribution, but supportive clinical data are lacking. The authors of this review favour a screw-retained prosthesis for retrievability. Clinical and histological studies show that gold, titanium and zirconia ceramic abutment materials exhibit excellent biological responses, although there is insufficient data on the clinical service provided by zirconia as an implant-substructure material. The literature does not associate any particular occlusal scheme with superior clinical outcomes. Implant-borne single crowns offer comparable clinical service to tooth-borne fixed dental prostheses. However, single-tooth implant restorations are associated with an increased incidence of biological and technical complications.

PMID: 21623811 [PubMed - indexed for MEDLINE]
Related citations

107. Br J Oral Maxillofac Surg. 2011 Jun;49(4):302-9. Epub 2010 May 14.

A review of techniques of lysis and lavage of the TMJ.

Tozoglu S, Al-Belasy FA, Dolwick MF.

Department of Oral and Maxillofacial Surgery, Ataturk University, Dentistry Faculty, Ataturk University Campus, Erzurum, Turkey. stozoglu@hotmail.com

Abstract

We systematically reviewed publications in the English language about techniques of lysis and lavage of the temporomandibular joint (TMJ). We describe these techniques and describe their advantages and disadvantages.

PMID: 20471143 [PubMed - indexed for MEDLINE]
Related citations

ELSEVIER FULL-TEXT ARTICLE

108. Eur J Orthod. 2011 Jun;33(3):318-24. Epub 2011 Jan 13.

A systematic review of the efficacy of oral appliance design in the management of obstructive sleep apnoea.

Ahrens A, McGrath C, H&#65533;gg U.

Discipline of Dental Public Health, Faculty of Dentistry, The University of Hong Kong, SAR China.

Abstract

Oral appliances (OAs) are increasingly advocated as a treatment option for obstructive sleep apnoea (OSA). However, it is unclear how their different design features influence treatment efficacy. The aim of this research was to systematically review the evidence on the efficacy of different OAs on polysomnographic indices of OSA. A MeSH and text word search were developed for Medline, Embase, Cinahl, and the Cochrane library. The initial search identified 1475 references, of which 116 related to studies comparing OAs with control appliances. Among those, 14 were randomized controlled trials (RCTs), which formed the basis of this review. The type of OA investigated in these trials was mandibular advancement devices (MADs), which were compared with either inactive appliances (six studies) or other types of MADs with different design features. Compared with inactive appliances, all MADs improved polysomnographic indices, suggesting that mandibular advancement is a crucial design feature of OA therapy for OSA. The evidence shows that there is no one MAD design that most effectively improves polysomnographic indices, but that efficacy depends on a number of factors including severity of OSA, materials and method of fabrication, type of MAD (monobloc/twin block), and the degree of protrusion (sagittal and vertical). These findings highlight the absence of a universal definition of treatment success. Future trials of MAD designs need to be assessed according to agreed success criteria in order to guide clinical practice as to which design of OAs may be the most effective in the treatment of OSA.

Free Article

PMID: 21239397 [PubMed - indexed for MEDLINE]

Related citations

FREE FINAL TEXT OXFORD JOURNALS

109. Eur J Radiol. 2011 Jun;78(3):414-8. Epub 2009 Dec 6.

CT and MR findings in synovial chondromatosis of the

temporo-mandibular joint: our experience and review of literature.

Testaverde L, Perrone A, Caporali L, Ermini A, Izzo L, D'Angeli I, Impara L, Mazza D, Izzo P, Marini M.

Department of Radiological Sciences, Policlinico Umberto I, University "Sapienza" of Rome, Viale del Policlinico 155, 00161 Rome, Italy. doctor.lot@gmail.com

Abstract

OBJECTIVE:

To compare Computed Tomography (CT) and Magnetic Resonance (MR) features and their diagnostic potential in the assessment of Synovial Chondromatosis (SC) of the Temporo-Mandibular Joint (TMJ).

MATERIALS AND METHODS:

Eight patients with symptoms and signs compatible with dysfunctional disorders of the TMJ underwent CT and MR scan. We considered the following parameters: soft tissue involvement (disk included), osteostructural alterations of the joints, loose bodies and intra-articular fluid. These parameters were evaluated separately by two radiologists with a "double blinded method" and then, after agreement, definitive assessment of the parameters was given. CT and MR findings were compared.

RESULTS:

Histopathological results showed metaplastic synovia in all patients and therefore confirmed diagnosis of SC. MR resulted better than CT in the evaluation of all parameters except the osteostructural alterations of the joints, estimated with more accuracy by CT scan.

CONCLUSIONS:

CT scan is excellent to define bony surfaces of the articular joints and flogistic tissue but it fails in the detection of loose bodies when these are not yet calcified. MR scan therefore is the gold standard when SC is suspected since it can visualize loose bodies at early stage and also evaluate disk condition and eventual extra-articular tissues involvement. The use of T2-weighted images and contrast medium allows identifying intra-articular fluid, estimating its entity and discriminating from sinovial tissue.

PMID: 19969436 [PubMed - indexed for MEDLINE]
Related citations

110. Headache. 2011 Jun;51(6):891-904. doi: 10.1111/j.1526-4610.2011.01903.x.

Sex-related differences in animal models of migraine headache.

Bolay H, Berman NE, Akcali D.

Department of Neurology & Neuropsychiatry Centre, School of Medicine, Gazi University, Ankara, Turkey. hbolay@gazi.edu.tr

Abstract

Trigeminal nerve-mediated pain disorders such as migraine, temporomandibular joint disorder, and classical trigeminal neuralgia are more prevalent in women than in men. Female laboratory animals also show greater responses to various nociceptive stimuli than male animals. However, current knowledge of migraine pathogenesis is based primarily on experimental studies conducted in male animals and lack of migraine research with female animals limits clinical relevance. Migraine is triggered by any alteration in the intrinsic or extrinsic milieu and women at reproductive age are continuously prone to waxing and waning effects of female sex hormones. The experimental approach to this problem is complex because the rodent estrous cycle differs from the human cycle, and because exogenous hormone replacement in ovariectomized females has its limitations. The existence of multiple estrogen receptors in the trigeminal system also presents a challenge. Estrogens do not seem to directly affect calcitonin gene-related peptide or 5-HT(1D) receptors in the trigeminal system. Nonetheless, 2 estrogen receptors activate MAPK/ERK signaling pathway that mediates nociceptive processing in trigeminal nucleus caudalis. In addition, estrogen enhances susceptibility to cortical spreading depression, the neurobiological event underlying migraine aura, which may be independent of the estrous cycle. Further studies in female animals are required to clarify mechanisms underlying sex differences with respect to fluctuating sex hormones, cortical spreading depression, and excitability of the trigeminovascular system.

PMID: 21631475 [PubMed - in process]
Related citations

111. Int J Oral Maxillofac Surg. 2011 Jun;40(6):640-3. Epub 2010 Dec 30.

Bilateral anterosuperior dislocation of intact mandibular

condyles in the temporal fossa.

Prabhakar V, Singla S.

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Abstract

Dislocation of the temporomandibular joint occurs when the mandibular condyle is displaced anteriorly beyond the articular eminence and represents 3% of all dislocated joints reported in the body. Superolateral dislocation of the condyle into the temporal fossa is well documented in the literature, but anterosuperior dislocation without an associated fracture is rarely described. This report documents the case of a middle-aged woman with bilateral anterosuperior dislocation of the intact mandibular condyle after a fall on the face. This report reviews the literature on dislocations, suggests a nomenclature, possible causative mechanism and documents the importance of early management.

PMID: 21195587 [PubMed - indexed for MEDLINE]

Related citations

112. J Orthop Sports Phys Ther. 2011 Jun;41(6):408-16. Epub 2011 Feb 18.

Diagnostic accuracy of clinical tests and signs of temporomandibular joint disorders: a systematic review of the literature.

Reneker J, Paz J, Petrosino C, Cook C.

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Abstract

STUDY DESIGN:

Systematic review.

OBJECTIVE:

To summarize the research on accuracy of individual clinical diagnostic signs and tests for the presence of temporomandibular disorder (TMD), and for the subclassifications affiliated with TMD.

BACKGROUND:

Diagnosis of TMD through clinical diagnostic measures has been reported in many studies; however, few of these studies have identified individual clinical tests or signs that can aid in the diagnosis of TMD or differentiate between the subclassifications of TMD.

METHODS:

Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines were followed for this review. Computerized and hand searches were completed to locate articles on the diagnostic accuracy of clinical tests and signs. To be considered for review, the study required (1) an assessment of individual clinical measures of TMD, (2) a report of the diagnostic accuracy of these measures, and (3) an acceptable reference standard for comparison. Quality assessment of studies of diagnostic accuracy (QUADAS) scores were completed on each selected article. Sensitivity and specificity and negative and positive likelihood ratios were calculated for each diagnostic test described.

RESULTS:

The search strategy identified 131 potential articles, which were narrowed down to 7 that met the criteria for this review. After assessment using the QUADAS score, 3 of the 7 articles were of high quality. All 7 studies used tests to differentiate subclassifications of TMD. The 7 studies included (1) diagnostic tests/signs of joint sounds, (2) joint movements, or (3) clinically oriented pain measures. There were no studies that investigated TMD versus a competing, non-TMD condition.

CONCLUSION:

Only 3 studies presented in this literature review were of high quality. Because all of the included studies assessed diagnostic accuracy among subclassifications of individuals suspected of having TMD, the ability of any of these tests to distinguish between patients with TMD versus patients without TMD remains unknown. Because of the lack of clear findings indicating compelling evidence for clinical diagnosis of TMD, and because of the low quality of most of these studies, the data are insufficient to support or reject these tests.

LEVEL OF EVIDENCE:

Diagnosis, level 2a-.
PMID: 21335932 [PubMed - indexed for MEDLINE]
Related citations
JOSPT

113. J Prosthodont. 2011 Jun;20(4):251-60. doi: 10.1111/j.1532-849X.2011.00698.x. Epub 2011 Apr 4.

Epidemiology and etiology of denture stomatitis.

Gendreau L, Loewy ZG.

GlaxoSmithKline Consumer Healthcare, Parsippany, NJ 07054, USA.

Abstract

Denture stomatitis, a common disorder affecting denture wearers, is characterized as inflammation and erythema of the oral mucosal areas covered by the denture. Despite its commonality, the etiology of denture stomatitis is not completely understood. A search of the literature was conducted in the PubMed electronic database (through November 2009) to identify relevant articles for inclusion in a review updating information on the epidemiology and etiology of denture stomatitis and the potential role of denture materials in this disorder. Epidemiological studies report prevalence of denture stomatitis among denture wearers to range from 15% to over 70%. Studies have been conducted among various population samples, and this appears to influence prevalence rates. In general, where reported, incidence of denture stomatitis is higher among elderly denture users and among women. Etiological factors include poor denture hygiene, continual and nighttime wearing of removable dentures, accumulation of denture plaque, and bacterial and yeast contamination of denture surface. In addition, poor-fitting dentures can increase mucosal trauma. All of these factors appear to increase the ability of Candida albicans to colonize both the denture and oral mucosal surfaces, where it acts as an opportunistic pathogen. Antifungal treatment can eradicate C. albicans contamination and relieve stomatitis symptoms, but unless dentures are decontaminated and their cleanliness maintained, stomatitis will recur when antifungal therapy is discontinued. New developments related to denture materials are focusing on means to reduce development of adherent biofilms. These may have value in reducing bacterial and yeast colonization, and could lead to reductions in denture stomatitis with appropriate denture hygiene.

PMID: 21463383 [PubMed - indexed for MEDLINE]
Related citations

114. Nat Rev Gastroenterol Hepatol. 2011 Jun;8(6):349-55.

New insights into visceral hypersensitivity--clinical

implications in IBS.

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Abstract

A subset of patients with IBS have visceral hypersensitivity and/or somatic hypersensitivity. Visceral hypersensitivity might have use as a clinical marker of IBS and could account for symptoms of urgency for bowel movements, bloating and abdominal pain. The mechanisms that lead to chronic visceral hypersensitivity in patients who have IBS are unclear. However, several working models may be considered, including: nociceptive input from the colon that leads to hypersensitivity; increased intestinal permeability that induces a visceral nociceptive drive; and alterations in the expression of microRNAs in gastrointestinal tissue that might be delivered via blood microvesicles to other target organs, such as the peripheral and/or central nervous system. As such, the chronic visceral hypersensitivity that is present in a subset of patients with IBS might be maintained by both peripheral and central phenomena. The theories underlying the development of chronic visceral hypersensitivity in patients with IBS are supported by findings from new animal models in which hypersensitivity follows transient inflammation of the colon. The presence of somatic hypersensitivity and an alteration in the neuroendocrine system in some patients who have IBS suggests that multisystemic factors are involved in the overall disorder. Thus, IBS is similar to other chronic pain disorders, such as fibromyalgia, chronic regional pain disorder and temporomandibular joint disorder, as chronic nociceptive mechanisms are activated in all of these disorders.

PMCID: PMC3437337 **Free PMC Article**
PMID: 21643039 [PubMed - indexed for MEDLINE]
Related citations

115. Br Dent J. 2011 May 14;210(9):411-5.

Bullying in schoolchildren - its relationship to dental appearance and psychosocial implications: an update for GDPs.

Seehra J, Newton JT, DiBiase AT.

East Kent Hospitals University NHS Foundation Trust, Maxillofacial Unit, Kent and

Canterbury Hospital, Ethelbert Road, Canterbury, Kent CT1 3NG.

Abstract

Bullying in school-aged children is a global phenomenon. The effects of bullying can be both short- and long-term, resulting in both physiological and psychological symptoms. It is likely that dental care professionals will encounter children who are subjected to bullying. The aim of this narrative review is to discuss the incidence of bullying, the types of bullying, the effects of bullying and the interventions aimed at combating bullying in schoolchildren. The role of dentofacial aesthetics and the relationship of bullying and the presence of a malocclusion are also discussed.

PMID: 21566605 [PubMed - indexed for MEDLINE]

Related citations

116. Cochrane Database Syst Rev. 2011 May 11;(5):CD006385.

Arthroscopy for temporomandibular disorders.

Rigon M, Pereira LM, Bortoluzzi MC, Loguercio AD, Ramos AL, Cardoso JR.

Universidade Estadual de Londrina, Rua Espirito Santo, 536, Londrina, Brazil, 86010 510.

Comment in

- Arthroscopy for treating temporomandibular joint disorders. [Evid Based Dent. 2011]

Abstract

BACKGROUND:

Temporomandibular disorders (TMDs) are considered a collection of disorders involving many organic, psychological and psychosocial factors. They can involve the masticatory muscles or the temporomandibular joint (TMJ) and associated structures, or both. It is estimated that 40% to 75% of the population displays at least one sign of the disease and 33% of the population reports at least one symptom. Arthroscopy has been used to reduce signs and symptoms of patients with TMD but the effectiveness has still not been totally explained.

OBJECTIVES:

To assess the effectiveness of arthroscopy for the management of signs and symptoms in

patients with TMDs.

SEARCH STRATEGY:

The Cochrane Oral Health Group Trials Register (to 23 December 2010), the Cochrane Central Register of Controlled Trials (CENTRAL) (The Cochrane Library, Issue 4, 2010), MEDLINE via OVID (1950 to 23 December 2010), EMBASE via OVID (1980 to 23 December 2010), LILACS via BIREME Virtual Health Library (1982 to 23 December 2010), Allied and Complementary Medicine Database (AMED) via OVID (1985 to 23 December 2010), CINAHL via EBSCO (1980 to 23 December 2010). There were no restrictions regarding the language or date of publication.

SELECTION CRITERIA:

Randomized controlled clinical trials of arthroscopy for treating TMDs were included.

DATA COLLECTION AND ANALYSIS:

Two review authors independently extracted data, and three review authors independently assessed the risk of bias of included trials. The authors of the selected articles were contacted for additional information.

MAIN RESULTS:

Seven randomized controlled trials (n = 349) met the inclusion criteria. All studies were either at high or unclear risk of bias. The outcome pain was evaluated after 6 months in two studies. No statistically significant differences were found between the arthroscopy versus nonsurgical groups (standardized mean difference (SMD) = 0.004; 95% confidence interval (CI) -0.46 to 0.55, P = 0.81). Two studies, analyzed pain 12 months after surgery (arthroscopy and arthrocentesis) in 81 patients. No statistically significant differences were found (mean difference (MD) = 0.10; 95% CI -1.46 to 1.66, P = 0.90). Three studies analyzed the same outcome in patients who had been submitted to arthroscopic surgery or to open surgery and a statistically significant difference was found after 12 months (SMD = 0.45; 95% CI 0.01 to 0.89, P = 0.05) in favor of open surgery. The two studies compared the maximum interincisal opening in six different clinical outcomes (interincisal opening over 35 mm; maximum protrusion over 5 mm; click; crepitation; tenderness on palpation in the TMJ and the jaw muscles 12 months after arthroscopy and open surgery). The outcome measures did not present statistically significant differences (odds ratio (OR) = 1.00; 95% CI 0.45 to 2.21, P = 1.00). Two studies compared the maximum interincisal opening after 12 months of postsurgical follow-up. A statistically significant difference in favor of the arthroscopy group was observed (MD = 5.28; 95% CI 3.46 to 7.10, P < 0.0001). The two studies compared the mandibular function after 12 months of follow-up with 40 patients evaluated. The outcome measure was mandibular functionality (MFIQ). This difference was not statistically significant (MD = 1.58; 95% CI -0.78 to 3.94, P = 0.19).

AUTHORS' CONCLUSIONS:

Both arthroscopy and nonsurgical treatments reduced pain after 6 months. When compared with arthroscopy, open surgery was more effective at reducing pain after 12 months. Nevertheless, there were no differences in mandibular functionality or in other outcomes in clinical evaluations. Arthroscopy led to greater improvement in maximum interincisal opening after 12 months than arthrocentesis; however, there was no difference in pain.

PMID: 21563153 [PubMed - indexed for MEDLINE]

Related citations

117. Indian J Dent Res. 2011 May-Jun;22(3):440-5.

Application of Botulinum toxin type A: an arsenal in dentistry.

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Abstract

An extremely effective way of preventing damage to and enhancing treatment of dental hard tissues and restorations would be to "de-programme" the muscles responsible for excessive destructive forces and other gnathological-related diseases. The new paradigm is the intramuscular injection of Botulinum toxin type A (BOTOX) into the affected muscles. It is a natural protein produced by anaerobic bacterium, Clostridium botulinum. The toxin inhibits the release of acetylcholine (ACH), a neurotransmitter responsible for the activation of muscle contraction and glandular secretion, and its administration results in reduction of tone in the injected muscle. There are seven distinct serotypes of Botulinum toxin, viz., A, B, C, D, E, F, and G, which differ in their potency, duration of action, and cellular target sites. This paper describes the different applications of BOTOX in dentistry.

Free Article

PMID: 22048586 [PubMed - indexed for MEDLINE]

Related citations

118. J Dent. 2011 May;39(5):341-50. Epub 2011 Feb 25.

Acupuncture for treating temporomandibular joint disorders: a systematic review and meta-analysis of randomized, sham-

controlled trials.

Jung A, Shin BC, Lee MS, Sim H, Ernst E.

School of Korean Medicine, Pusan National University, Yangsan, South Korea.

Comment in

- Acupuncture may be no more effective than sham acupuncture in treating temporomandibular joint disorders. [J Evid Based Dent Pract. 2012]
- Limited evidence that acupuncture is effective for treating temporomandibular disorders. [Evid Based Dent. 2011]

Abstract

OBJECTIVE:

The aim of this article was to assess the clinical evidence for or against acupuncture and acupuncture-like therapies as treatments for temporomandibular joint disorder (TMD).

DATA:

This systematic review includes randomized clinical trials (RCTs) of acupuncture as a treatment for TMD compared to sham acupuncture. The search terms were selected according to medical subject heading (MeSH).

SOURCES:

Systematic searches were conducted in 13 electronic databases up to July 2010; Medline, PubMed, The Cochrane Library 2010 (Issue 7), CINAHL, EMBASE, seven Korean Medical Databases and a Chinese Medical Database.

STUDY SELECTION:

All parallel or cross-over RCTs of acupuncture for TMD were searched without language restrictions. Studies in which no clinical data and complex interventions were excluded. Finally, total of 7 RCTs met our inclusion criteria.

CONCLUSIONS:

In conclusion, our systematic review and meta-analysis demonstrate that the evidence for acupuncture as a symptomatic treatment of TMD is limited. Further rigorous studies are, however, required to establish beyond doubt whether acupuncture has therapeutic value for this indication.

PMID: 21354460 [PubMed - indexed for MEDLINE]
Related citations


119. J Oral Rehabil. 2011 May;38(5):359-65. doi: 10.1111/j.1365-2842.2010.02162.x. Epub 2010 Oct 6.

Hunter-Schreger Band patterns and their implications for clinical dentistry.

Lynch CD, O'Sullivan VR, Dockery P, McGillycuddy CT, Rees JS, Sloan AJ.

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Abstract

Hunter-Schreger Bands (HSBs) are an optical phenomenon visualised when a cut or fractured enamel surface is viewed under reflected light. These bands demonstrate the synchronous decussation of individual or groups of enamel prisms. While the role of HSB patterns has been investigated in comparative anatomical studies, until recently there has been little consideration of HSB patterns in human teeth. The aim of this paper is to consider the significance of HSB patterns in the human dentition and in relation to clinical dentistry. It is concluded that within the human dentition, HSB patterns have evolved to optimise resistance to attrition, abrasion and tooth fracture. It appears that certain aspects of HSB packing densities and distributions have beneficial roles in enamel bonding. Hunter-Schreger Band patterns seem to passively facilitate conditions such as abfraction and cracked tooth syndrome.

PMID: 20939845 [PubMed - indexed for MEDLINE]
Related citations


120. Med Sci Monit. 2011 May;17(5):RA111-6.

Management of temporomandibular ankylosis--compromise or individualization--a literature review.

Sporniak-Tutak K, Janiszewska-Olszowska J, Kowalczyk R.

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Abstract

Temporomandibular joint ankylosis is defined as bony or fibrous adhesion of the anatomic joint components accompanied by a limitation in opening the mouth, causing difficulties with mastication, speaking and oral hygiene as well as inadvertently influencing mandibular growth. Surgical treatment procedures include arthroplasty of the joint cavity with or without a reconstruction and a coronoidectomy, an autogenous costochondral rib graft, distraction osteogenesis and intensive mouth-opening exercise, corrective orthognathic surgery or alloplastic joint prostheses. The authors of this study would like to provide the reader with an evidence-based review of the literature in order to determine the most efficient way to manage TMJ ankylosis and re-ankylosis. The authors have concluded that in order to achieve a satisfactory and durable effective treatment, an individualized approach is necessary in each case.

PMID: 21525821 [PubMed - indexed for MEDLINE]

Related citations

121. Oral Surg Oral Med Oral Pathol Oral Radiol Endod. 2011 May;111(5):e30-6. Epub 2011 Mar 27.

Malignant pigmented villonodular synovitis of the temporomandibular joint with lung metastasis: a case report and review of the literature.

Yoon HJ, Cho YA, Lee JI, Hong SP, Hong SD.

Department of Oral Pathology, School of Dentistry and Dental Research Institute, Seoul National University, Seoul, Korea.

Abstract

Malignant pigmented villonodular synovitis (PVNS) is an extremely rare lesion. Approximately 30 cases of malignant PVNS have been reported to date and of these, only 1 case involved the temporomandibular joint. Owing to the rarity of well-documented cases and the heterogeneous histologic features of this group of tumors, there has been some confusion regarding its diagnosis. The heterogeneous features of the sarcomatous areas contain fibrosarcomatous, myxosarcomatous, malignant fibrous histiocytomalike or giant cell tumorlike patterns. However, despite the absence of frank sarcomatous change in the histopathogy of PVNS, there have been 3 reported cases of metastatic lesions in the lung or lymph nodes. Here we present an additional case of clinically malignant PVNS with pulmonary metastasis after recurrence. A 29-year-old man presented in our hospital with a recurrent swelling and pain in the right preauricular area, where benign tumor had been

previously resected. MRI demonstrated a large mass with a low signal intensity that seemed to demonstrate a ferromagnetic effect. Surgical resection of the lesion was performed and the diagnosis of PVNS with focal atypical cells was made. Unfortunately, at 30 months post surgery, a thoracic CT found a metastatic nodule in the left lower lobe of the lung.

PMID: 21444225 [PubMed - indexed for MEDLINE]
Related citations


122. Compend Contin Educ Dent. 2011 Apr;32(3):62-6.

Combination syndrome symptomatology and treatment.

Tolstunov L.

Department of Oral and Maxillofacial Surgery, University of the Pacific School of Dentistry, San Francisco, California, USA.

Abstract

Combination syndrome (CS) is one of the most fascinating oral conditions yet is poorly understood and underappreciated in the literature and clinical practice. This article reviews the most important literature on this subject and analyzes the etiology, symptomatology, diagnosis, and current therapeutic modalities for treatment in an attempt to better understand CS. The syndrome represents an example ofa complex pathologic condition of the entire stomatognathic system with a multitude of hard-tissue, soft-tissue, and occlusal changes. These changes, initiated by a certain sequence of events, beginning with a prolonged period of tooth loss, can lead to severe bone atrophy in different regions of the jaws, loss of masticatory function, and the need for complex treatment. Implant rehabilitation of these patients in a preventative approach with cooperation of the entire dental team is emphasized.
PMID: 21560744 [PubMed - indexed for MEDLINE]
Related citations

123. Eur J Esthet Dent. 2011 Spring;6(1):20-33.

A comprehensive and conservative approach for the restoration of abrasion and erosion. Part I: concepts and clinical rationale for early intervention using adhesive techniques.

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Abstract

Tooth wear represents a frequent pathology with multifactorial origins. Behavioral changes, unbalanced diet, various medical conditions and medications inducing acid regurgitation or influencing saliva composition and flow rate, trigger tooth erosion. Awake and sleep bruxism, which are widespread nowadays with functional disorders, induce attrition. It has become increasingly important to diagnose early signs of tooth wear so that proper preventive, and if needed, restorative measures are taken. Such disorders have biological, functional, and also esthetic consequences. Following a comprehensive clinical evaluation, treatment objectives, such as a proper occlusal and anatomical scheme as well as a pleasing smile line, are usually set on models with an anterior teeth full-mouth waxup, depending on the severity of tissue loss. Based on the new vertical dimension of occlusion (VDO), combinations of direct and indirect restorations can then help to reestablish anatomy and function. The use of adhesive techniques and resin composites has demonstrated its potential, in particular for the treatment of moderate tooth wear. Part I of this article reviews recent knowledge and clinical concepts dealing with the various forms of early restorative interventions and their potential to restrict ongoing tissue destruction.

PMID: 21403925 [PubMed - indexed for MEDLINE]

Related citations

124. J Prosthodont. 2011 Apr;20(3):209-17. doi: 10.1111/j.1532-849X.2010.00661.x. Epub 2010 Nov 11.

Immediate occlusal loading in edentulous jaws, CT-guided surgery and fixed provisional prosthesis: a maxillary arch clinical report.

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Abstract

Immediate occlusal loading (IOL) in edentulous jaws has been reported in numerous publications with implant cumulative survival rates consistent with conventional, unloaded healing protocols. Computed Tomography (CT)-guided surgery has more recently been developed and accepted as an additional treatment modality for maxillary and mandibular implant placement, with or without IOL. Reports as to the accuracy of planned versus actual implant placement in CT-guided surgeries have indicated that CT-guided surgery is not 100% accurate; standard deviations have been reported with values between 1 and 2 mm in terms of actual versus planned placement. The purpose of this article is to review the clinical parameters associated with IOL, and CT-guided surgery in edentulous jaws; and to present a clinical case illustrating the clinical and laboratory phases of treatment. The illustrated

treatment was accomplished with an IOL protocol and includes fabrication and placement of a laboratory-processed provisional maxillary prosthesis. This particular protocol had slightly increased costs relative to conventional implant placement; however, the clinicians and patient benefited from improved accuracy of the provisional prostheses and decreased chairtime for the clinical procedures. The benefits and limitations of this treatment protocol are also discussed.

PMID: 21070431 [PubMed - indexed for MEDLINE]
Related citations

125. Oral Dis. 2011 Apr;17 Suppl 1:23-41. doi: 10.1111/j.1601-0825.2011.01790.x.

Persistent orofacial muscle pain.

Benoliel R, Svensson P, Heir GM, Sirois D, Zakrzewska J, Oke-Nwosu J, Torres SR, Greenberg MS, Klasser GD, Katz J, Eliav E.

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Abstract

The pathophysiology of persistent orofacial myalgia has been the centre of much controversy. In this article we suggest a novel descriptive term; 'persistent orofacial muscle pain' (POMP) and review current evidence that supports the hypothesis that the induction of POMP involves the interplay between a peripheral nociceptive source in muscle, a faulty central nervous system component and decreased coping ability. In this context it is widely accepted that a complex interaction of variable intrinsic and extrinsic factors act to induce POMP and dysfunction.

PMID: 21382137 [PubMed - indexed for MEDLINE]
Related citations

126. Aust Dent J. 2011 Mar;56(1):10-5; quiz 103. doi: 10.1111/j.1834-7819.2010.01304.x.

Therapeutic effect of glass-ionomers: an overview of evidence.

Mickenautsch S, Mount G, Yengopal V.

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Abstract

The requirements for an ideal restorative material include adhesion to tooth structure (enamel and dentine) and an ability to withstand the traumas of occlusion. However, some level of an anticaries effect is also desirable. After a long history of glass-ionomer cement (GIC) development, an evidence base in support of the therapeutic effect of GIC, particularly with regard to its anticaries effect, is emerging. This evidence is increasingly presented through systematic reviews of clinical GIC application and, to a certain extent, relates to a caries-preventive effect of the material itself. However, the strength of evidence supporting other aspects of GIC, such as a higher remineralizing effect, fluoride uptake in hard tooth tissue and fluoride release of GIC, is limited. Nevertheless, the results of these in situ and laboratory trials provide valuable insights into factors that facilitate understanding of the clinical efficacy of GIC.

PMID: 21332735 [PubMed - indexed for MEDLINE]
Related citations

127. Headache. 2011 Mar;51(3):469-83. doi: 10.1111/j.1526-4610.2011.01846.x.

Alternative headache treatments: nutraceuticals, behavioral and physical treatments.

Sun-Edelstein C, Mauskop A.

Department of Clinical Neurosciences, St Vincent's Hospital, Melbourne, Vic., Australia.

Comment in

- Herbal medicinal treatment options for headache and migraine. [Headache. 2011]
- Alternative headache treatments: nutraceuticals, behavioral, and physical treatments. [Headache. 2011]

Abstract

There is a growing body of evidence supporting the efficacy of various complementary and alternative medicine approaches in the management of headache disorders. These treatment modalities include nutraceutical, physical and behavioral therapies. Nutraceutical options

comprise vitamins and supplements (magnesium, riboflavin, coenzyme Q(10), and alpha lipoic acid) and herbal preparations (feverfew, and butterbur). Although controversial, there are some reports demonstrating the benefit of recreational drugs such as marijuana, lysergic acid diethylamide and psilocybin in headache treatment. Behavioral treatments generally refer to cognitive behavioral therapy and biobehavioral training (biofeedback, relaxation training). Physical treatments in headache management are not as well defined but usually include acupuncture, oxygen therapy, transcutaneous electrical nerve stimulation, occlusal adjustment, cervical manipulation, physical therapy, massage, chiropractic therapy, and osteopathic manipulation. In this review, the available evidence for all these treatments will be discussed.

PMID: 21352222 [PubMed - indexed for MEDLINE]
Related citations

128. Med Oral Patol Oral Cir Bucal. 2011 Mar 1;16(2):e231-8.

Sleep bruxism. Conceptual review and update.

de la Hoz-Aizpurua JL, D©az-Alonso E, LaTouche-Arbizu R, Mesa-Jim©nez J.

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Abstract

Sleep bruxism (SB) is a parafunctional oromotor habit that can sometimes pose a threat to the integrity of the structures of the masticatory system if the magnitude and direction of the forces exerted exceed the system 's adaptive capacity. Over the years science has tried to provide a consistent explanation of the etiopathogenesis and physiopathology of SB, although the pathophysiological mechanisms are even now not yet fully understood. There is at present no specific, effective treatment to eliminate the habit of bruxism permanently. There are only palliative therapeutic alternatives steered at preventing the pathological effects of SB on the stomatognathic system and alleviating the negative clinical consequences of the habit. The objective of this article is to review and update the fundamental scientific concepts of SB and to furnish an approach to the main types of therapy used, based on the scientific literature.

Free Article
PMID: 21196839 [PubMed - indexed for MEDLINE]
Related citations

129. N Z Dent J. 2011 Mar;107(1):4-11.

The oral health of individuals with haemophilia: a review of the literature.

Hitchings EJ.

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Abstract

This paper reviews the available evidence on the oral health of individuals with haemophilia and discusses the relevance of the findings for New Zealand. A comprehensive literature search was completed using the inclusion criteria that study participants were individuals with Haemophilia A or B and that a measure of their prevalence, severity or incidence of an oral condition or state was described. Eleven studies, all cross-sectional in design, were found to meet these criteria. Aspects of caries, periodontal health, enamel defects (including fluorosis), malocclusion, temporomandibular joint disorders and oral health-related quality of life were described in those papers. Seven papers compared the study sample with a comparison ("control") sample. No studies had been conducted in New Zealand. Generally, individuals with haemophilia were found to have worse oral health than controls. However, the quality of many of the papers was poor and their heterogeneous nature makes comparison of their findings difficult. The oral health of individuals with haemophilia in New Zealand is likely to be influenced by a complicated interaction of government policies, availability of care and personal prejudices. Better-quality research on the oral health of individuals with haemophilia and their barriers to oral healthcare is needed.
PMID: 21465865 [PubMed - indexed for MEDLINE]
Related citations

130. Oral Surg Oral Med Oral Pathol Oral Radiol Endod. 2011 Mar;111(3):e17-28.

Pigmented villonodular synovitis of the temporomandibular joint: case report and review of the literature.

Roma□ach MJ, Brasileiro BF, Le□n JE, Alves DB, de Almeida OP, Vargas PA.

Department of Oral Diagnosis, Piracicaba Dental School, University of Campinas, Piracicaba, S□o Paulo, Brazil. marioromanach@yahoo.com.br

Abstract

Pigmented villonodular synovitis (PVNS) is an aggressive proliferative lesion that usually involves the synovial tissues of big joints. To date, there are "<52 cases of PVNS affecting

the temporomandibular joint reported in the English-language literature, about one-third of them exhibiting intracranial involvement. We herein describe an additional case of PVNS of the temporomandibular joint with skull base invasion affecting a 26-year-old male patient and discuss its clinicopathologic features considering previously published cases. Histopathology and imaging evaluation are important for the diagnosis of PVNS, which should be included in the differential diagnosis of preauricular aggressive swellings.

PMID: 21310347 [PubMed - indexed for MEDLINE]
Related citations
ELSEVIER FULL-TEXT ARTICLE

131. Pain. 2011 Mar;152(3 Suppl):S2-15. Epub 2010 Oct 18.

Central sensitization: implications for the diagnosis and treatment of pain.

Woolf CJ.

FM Kirby Neurobiology Center, Children's Hospital Boston, Department of Neurobiology, Harvard Medical School, Boston, MA, USA. clifford.woolf@childrens.harvard.edu

Abstract

Nociceptor inputs can trigger a prolonged but reversible increase in the excitability and synaptic efficacy of neurons in central nociceptive pathways, the phenomenon of central sensitization. Central sensitization manifests as pain hypersensitivity, particularly dynamic tactile allodynia, secondary punctate or pressure hyperalgesia, aftersensations, and enhanced temporal summation. It can be readily and rapidly elicited in human volunteers by diverse experimental noxious conditioning stimuli to skin, muscles or viscera, and in addition to producing pain hypersensitivity, results in secondary changes in brain activity that can be detected by electrophysiological or imaging techniques. Studies in clinical cohorts reveal changes in pain sensitivity that have been interpreted as revealing an important contribution of central sensitization to the pain phenotype in patients with fibromyalgia, osteoarthritis, musculoskeletal disorders with generalized pain hypersensitivity, headache, temporomandibular joint disorders, dental pain, neuropathic pain, visceral pain hypersensitivity disorders and post-surgical pain. The comorbidity of those pain hypersensitivity syndromes that present in the absence of inflammation or a neural lesion, their similar pattern of clinical presentation and response to centrally acting analgesics, may reflect a commonality of central sensitization to their pathophysiology. An important question that still needs to be determined is whether there are individuals with a higher inherited propensity for developing central sensitization than others, and if so, whether this conveys an increased risk in both developing conditions with pain hypersensitivity, and their chronification. Diagnostic criteria to establish the presence of central sensitization in

patients will greatly assist the phenotyping of patients for choosing treatments that produce analgesia by normalizing hyperexcitable central neural activity. We have certainly come a long way since the first discovery of activity-dependent synaptic plasticity in the spinal cord and the revelation that it occurs and produces pain hypersensitivity in patients. Nevertheless, discovering the genetic and environmental contributors to and objective biomarkers of central sensitization will be highly beneficial, as will additional treatment options to prevent or reduce this prevalent and promiscuous form of pain plasticity.

PMCID: PMC3268359 **Free PMC Article**
PMID: 20961685 [PubMed - indexed for MEDLINE]
Related citations

132. Pain Manag Nurs. 2011 Mar;12(1):15-24. Epub 2009 Dec 2.

Central sensitivity syndromes: mounting pathophysiologic evidence to link fibromyalgia with other common chronic pain disorders.

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Abstract

The aim of this study was to review emerging data from the fields of nursing, rheumatology, dentistry, gastroenterology, gynecology, neurology, and orthopedics that support or dispute pathophysiologic similarities in pain syndromes studied by each specialty. A literature search was performed through PubMed and Ovid using the terms fibromyalgia, temporomandibular joint disorder, irritable bowel syndrome, irritable bladder/interstitial cystitis, headache, chronic low back pain, chronic neck pain, functional syndromes, and somatization. Each term was linked with pathophysiology and/or central sensitization. This paper presents a review of relevant articles with a specific goal of identifying pathophysiologic findings related to nociceptive processing. The extant literature presents considerable overlap in the pathophysiology of these diagnoses. Given the psychosomatic lens through which many of these disorders are viewed, demonstration of evidence-based links supporting shared pathophysiology between these disorders could provide direction to clinicians and researchers working to treat these diagnoses. "Central sensitivity syndromes" denotes an emerging nomenclature that could be embraced by researchers investigating each of these disorders. Moreover, a shared paradigm would be useful in promoting cross-

fertilization between researchers. Scientists and clinicians could most effectively forward the understanding and treatment of fibromyalgia and other common chronic pain disorders through an appreciation of their shared pathophysiology.

PMCID: PMC3052797 **Free PMC Article**
PMID: 21349445 [PubMed - indexed for MEDLINE]
Related citations

133. Am J Dent. 2011 Feb;24(1):49-56.

Noncarious cervical lesions--a clinical concept based on the literature review. Part 1: prevention.

Pecie R, Krejci I, Garcia-Godoy F, Bortolotto T.

Division of Cariology and Endodontology, University of Geneva, Rue Barth©lemy-Menn 19, CH-1205 Geneva, Switzerland. raluca.pecie@unige.ch

Abstract

PURPOSE:

Due to an increased prevalence of non-carious cervical lesions (NCCL), a clinical strategy for this lesion type should be considered. Previous reviews focused mainly on etiology and prevalence. In Part 1 of this paper, an evidence-based support for a preventive strategy of NCCL was elaborated.

METHODS:

Literature over the last 10 years available in the MEDLINE database was reviewed in order to find clinical evidence for a preventive approach to NCCL. Recommendations were based primarily on systematic reviews, clinical evaluations and a monograph.

RESULTS:

The etiology of NCCL is currently considered to be rather multifactorial, as clinical investigations found multiple factors associated with this type of lesions and due to the lack of evidence to support exclusively one or another factor. Based on the hypothesis of multifactorial origin, a preventive protocol has been established. No clinical research exists with respect to the prevention of NCCL and long-term clinical evaluations of the proposed

preventive measures are needed.
PMID: 21469407 [PubMed - indexed for MEDLINE]
Related citations

134. Am J Orthod Dentofacial Orthop. 2011 Feb;139(2):154-69.

Stability of treatment for anterior open-bite malocclusion: a meta-analysis.

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Abstract

INTRODUCTION:

Anterior open-bite (AOB) treatment is considered challenging because of difficulties in determining and addressing etiologic factors and the potential for relapse in the vertical dimension after treatment. In this review, we compiled evidence on the long-term stability of the major therapeutic interventions for correcting AOB. Our objective was to review and compile evidence for the stability of surgical and nonsurgical therapies for AOB malocclusion. Our data sources were PubMed, EMBASE, Cochrane Library, limited gray literature search, and hand searching.

METHODS:

A search was performed of the electronic health literature on the stability of AOB after treatment. Hand searching of major orthodontic journals and limited gray literature searching was also performed, and all pertinent abstracts were reviewed for inclusion. Full articles were retrieved for abstracts or titles that met the initial inclusion criteria or lacked sufficient detail for immediate exclusion. Studies accepted for analysis were reviewed and their relevant data retrieved for pooling. The long-term stability estimates were pooled into nonsurgical and surgical groups, and summary statistics were generated.

RESULTS:

One hundred five abstracts met the initial search criteria, and 21 articles were included in final analyses. Rejected articles failed to exhibit follow-up times of 12 months or more, did not include measurements of overbite (OB), or did not meet inclusion criteria. All included articles were divided into a surgical group (SX) with a mean age of 23.3 years and a nonsurgical group (NSX) with a mean age of 16.4 years. All studies were case series. Random-effects statistical models were used to pool the mean OB measures before and after treatment and also at the long-term follow-up. The pretreatment adjusted means of OB were -2.8 mm for the SX and -2.5 mm for the NSX. AOB closures up to +1.6 mm (SX) and +1.4

mm (NSX) were achieved. Relapse in the SX group during the mean 3.5 years of follow-up reduced the OB to +1.3 mm; the NSX group relapsed to +0.8 mm in the mean 3.2 years of follow-up. Pooled results indicated reasonable stability of both the SX (82%) and NSX (75%) treatments of AOB measured by positive OB at 12 or more months after the treatment interventions.

CONCLUSIONS:

In the included case series publications, success of both the SX and NSX treatments of AOB appeared to be greater than 75%. Because the SX and the NSX were examined in different studies and applied to different clinical populations, no direct assessment of comparative effectiveness was possible. The pooled results should be viewed with caution because of the lack of within-study control groups and the variability among studies.

PMID: 21300243 [PubMed - indexed for MEDLINE]
Related citations


135. J Am Osteopath Assoc. 2011 Feb;111(2):102-12.

Manual therapy of the mandibular accessory ligaments for the management of temporomandibular joint disorders.

Cuccia AM, Caradonna C, Caradonna D.

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Abstract

Temporomandibular joint disorders are characterized by chronic or acute musculoskeletal or myofascial pain with dysfunction of the masticatory system. Treatment modalities include occlusal splints, patient education, activity modification, muscle and joint exercises, myofascial therapy, acupuncture, and manipulative therapy. In the physiology of the temporomandibular joint, accessory ligaments limit the movement of the mandible. A thorough knowledge of the anatomy of accessory ligaments is necessary for good clinical management of temporomandibular joint disorders. Although general principles regarding the anatomy of the ligaments are relatively clear, very little substantiated information on the dimension, orientation, and function of the ligaments has been published, to the authors' knowledge. The authors review the literature concerning the accessory ligaments of the temporomandibular joint and describe treatment options, including manual techniques for

mobilizing the accessory ligaments.

Free Article
PMID: 21357496 [PubMed - indexed for MEDLINE]
Related citations


136. J Oral Rehabil. 2011 Feb;38(2):101-19. doi: 10.1111/j.1365-2842.2010.02131.x. Epub 2010 Aug 19.

Temporomandibular disorders assessment: medicolegal considerations in the evidence-based era.

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Abstract

Summary Temporomandibular disorders (TMD) are a frequent finding in cases of facial trauma or dental malpractice, and legal claims for TMD damage have been increased over the years. Temporomandibular disorders assessment in the medical legal setting is complicated by the peculiarities of these disorders, whose symptoms are heterogeneous, fluctuant, and recognise a multifactorial origin. A systematic Medline search in the National Library of Medicine's PubMed database pointed out that, despite the medical legal aspects of the dental profession are gaining a growing attention, there is a paucity of literature dealing with patients with TMD assessment. For these reasons, evidence-based knowledge in the field of TMD diagnosis and treatment was summarised in this article with the aim of providing useful suggestions for a medical legal approach to TMD.

PMID: 20726941 [PubMed - indexed for MEDLINE]
Related citations


137. J Oral Rehabil. 2011 Feb;38(2):136-56. doi: 10.1111/j.1365-2842.2010.02136.x. Epub 2010 Aug 15.

Evidence for dental and dental specialty treatment of obstructive sleep apnoea. Part 1: the adult OSA patient and

Part 2: the paediatric and adolescent patient.

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Abstract

Until recently, obstructive sleep apnoea was a largely unknown condition. Because of the well-publicised death of some high-profile people resulting from untreated obstructive sleep apnoea, now mostly everyone has heard of the condition. Following diagnosis, several medical treatment modalities are available to patients. However, the role that dentistry and its various specialties can play in successful treatment for obstructive sleep apnoea should not be overlooked. The common causes for adult and paediatric obstructive sleep apnoea will be presented as well as a review of the more successful forms of dental treatment. Finally, a summary of the current evidence regarding obstructive sleep apnoea treatment will be presented.

PMID: 20722775 [PubMed - indexed for MEDLINE]
Related citations

138. J Oral Rehabil. 2011 Feb;38(2):120-35. doi: 10.1111/j.1365-2842.2010.02133.x.

Do computed tomography and magnetic resonance imaging add to temporomandibular joint disorder treatment? A systematic review of diagnostic efficacy.

Ribeiro-Rotta RF, Marques KD, Pacheco MJ, Leles CR.

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Comment in

- The impact of imaging technologies on temporomandibular joint disorder diagnosis. [Evid Based Dent. 2011]

Abstract

A question frequently asked in the clinical practice of the professional who treats

temporomandibular joint disorders (TMJD) is 'To make the cost/benefit ratio worthwhile for the patient, when should I request a temporomandibular joint (TMJ) computed tomography (CT) or magnetic resonance imaging (MRI)?' To evaluate the evidence of the efficacy of CT and MRI in the diagnosis of disc displacement, local inflammatory disorders, and arthrosis of the TMJ at therapeutic efficacy level, PubMed and Cochrane literature searches with specific indexing terms and a hand search were made. From the retrieved titles and abstracts, three examiners selected publications on the basis of predetermined inclusion and exclusion criteria. Data were extracted from the selected publications using a previously established protocol. Publications considered relevant were interpreted with the aid of the Quality Assessment of Diagnostic Accuracy Studies (QUADAS) tool and publications that critically evaluate systematic reviews. The literature search yielded 584 titles and abstracts, of which 257 were selected and read in full text. One study was judged relevant. This study evaluated evidence of the efficacy of MRI in the diagnosis of disc position and configuration, disc perforation, joint effusion, and osseous and bone marrow changes in the temporomandibular joint, but no publication reported diagnostic thinking efficacy or therapeutic efficacy. In conclusion, the absence of studies on the therapeutic efficacy of MRI and CT on TMJD reinforces the need for investment in decision-making studies; meanwhile, sectional imaging tests should be prescribed with caution, especially when health budgets are limited.

PMID: 20678103 [PubMed - indexed for MEDLINE]
Related citations

139. Oral Maxillofac Surg Clin North Am. 2011 Feb;23(1):119-32, vii.

Reoperative temporomandibular joint surgery.

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Abstract

TMJ surgeries are not always successful. Many potential pitfalls can occur during any phase of the treatment and can lead to complications, less than desirable results, and short- or long-term failures. Unsatisfactory results can occur for multiple reasons, including misdiagnosis of the original pathologic condition, incorrect selection of surgical technique, technical failures, complications, systemic disease, and unrealistic expectations. This article focuses on the reoperation of the TMJ primarily in cases of internal derangement and discusses TMJ arthrocentesis, arthroscopy, modified condylotomy, and open joint

procedures.

PMID: 21272770 [PubMed - indexed for MEDLINE]
Related citations

140. Oral Maxillofac Surg Clin North Am. 2011 Feb;23(1):47-61, v-vi.

Reoperative mandibular trauma: management of posttraumatic mandibular deformities.

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Abstract

Mandibular fractures are one the most common maxillofacial injuries. Diagnostic errors, poor surgical technique, healing disorders, or complications may lead to the establishment of posttraumatic mandibular deformities. Nonunion, malunion/malocclusion, or facial asymmetry can be found early during the healing process or as long-term sequelae after the initial mandibular fracture repair. Although occasionally these problems can be solved in a nonsurgical manner, reoperations play an important role in the management of these untoward outcomes. This article discusses the reoperative techniques used for the management of these deformities.

PMID: 21272766 [PubMed - indexed for MEDLINE]
Related citations

141. Otolaryngol Clin North Am. 2011 Feb;44(1):31-56, v.

Oral manifestations of smokeless tobacco use.

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Abstract

Smokeless tobacco (SLT) has been smoked, chewed, and inhaled in various forms for hundreds of years. The primary oral, mucosal, and hard tissue changes associated with SLT use include SLT keratosis (STK); gingival inflammation, periodontal inflammation, and alveolar bone damage; and dental caries, tooth abrasion, and dysplasia and oral squamous

cell carcinoma (SCC). Some high-risk STKs are human papillomavirus associated, and the highest level of transition of STK to dysplasia or oral SCC appears to be in those lesions that have a diffuse velvety or papillary texture clinically. There is minimal risk for oral cancer associated with SLT use.

PMID: 21093622 [PubMed - indexed for MEDLINE]
Related citations

142. Caries Res. 2011;45 Suppl 1:60-8. Epub 2011 May 31.

Clinical studies of dental erosion and erosive wear.

Huysmans MC, Chew HP, Ellwood RP.

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Abstract

We define erosion as a partial demineralisation of enamel or dentine by intrinsic or extrinsic acids and erosive tooth wear as the accelerated loss of dental hard tissue through the combined effect of erosion and mechanical wear (abrasion and attrition) on the tooth surface. Most experts believe that during the last decade there has been a significant increase in the prevalence and severity of erosive tooth wear, particularly in adolescents. Even when erosive wear occurs in its milder forms, this is a matter of concern, as it may compromise the integrity of an otherwise healthy dentition in later life. The erosive wear process is complicated and modified by many chemical, behavioural and associated processes in the mouth. If interventions are to be developed it is therefore important that in vivo methods are developed to assess the outcomes of the erosion and erosive wear processes and the effects of interventions upon them. This paper discusses potential methods of investigating erosion and erosive wear in vivo and the difficulties associated with clinical studies.

PMID: 21625134 [PubMed - indexed for MEDLINE]
Related citations

143. Caries Res. 2011;45 Suppl 1:53-9. Epub 2011 May 31.

Design of erosion/abrasion studies--insights and rational

concepts.

Wiegand A, Attin T.

Clinic for Preventive Dentistry, Periodontology and Cariology, Centre for Dental and Oral Medicine and Craniomaxillofacial Surgery, University of Zurich, Zurich, Switzerland. annette.wiegand@zzm.uzh.ch

Abstract

In vitro and in situ studies modelling the wear of dental hard tissues due to erosion and abrasion are characterised by a high variation in study designs and experimental parameters. Based on a summary of the existing protocols, the present review aimed to describe and discuss the parameters which must be carefully considered in erosion-abrasion research, especially when it is intended to simulate clinical conditions. Experimental characteristics and parameters were retrieved from a total of 42 in vitro and 20 in situ studies. The key experimental characteristics included parameters of erosion (duration and pH) and abrasion (duration, kinds of toothbrush and toothpaste, brushing force, and time point) as well as co-factors (e.g. dental hard tissue). The majority of studies used models with alternating erosion/abrasion treatments intended to simulate clinical conditions, while other studies exaggerated clinical conditions intentionally, often using only a single erosion/abrasion treatment. Both in vitro and in situ models shared a high level of standardisation, but several studies showed a trend to severe erosion (e.g. >5 min/cycle) or extensive brushing (e.g. >100 brushing strokes/cycle) at a high frequency and repetition rate. Thus, studies often tend to produce a higher amount of wear than in the clinical situation, especially as modifying biological factors (e.g. the dilution of the erosive solution by saliva and the protective effect of the pellicle) cannot be simulated adequately. With respect to the existing models, it seems advisable to diminish duration and frequency of erosion and abrasion to more realistic clinical conditions when the everyday situation is to be simulated. Experimental parameters must be chosen with care to ensure that the problem is investigated in an appropriate mode at standardised conditions and with adequate measuring systems to allow prediction of clinical outcomes.

PMID: 21625133 [PubMed - indexed for MEDLINE]
Related citations

144. Dent Clin North Am. 2011 Jan;55(1):105-20.

Differential diagnosis of temporomandibular disorders and other orofacial pain disorders.

Okeson JP, de Leeuw R.

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Abstract

There are many types of pain conditions that are felt in the orofacial structures. Most of the conditions treated by the dentist are associated with the teeth, periodontal structures, and associated mucosal tissues. This article focuses on the differential diagnosis of other common pain conditions the dentist will likely face, such as temporomandibular disorders, neuropathic pain disorders, and common headaches; and the clinical presentation of each. Controlling or reducing pain can be accomplished by controlling perpetuating factors such as parafunctional habits and by some simple behavioral modifications. Finally, this article offers some simple treatment considerations.

PMID: 21094721 [PubMed - indexed for MEDLINE]
Related citations


145. Int Rev Neurobiol. 2011;97:251-84.

Neurobiology of estrogen status in deep craniofacial pain.

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Department of Diagnostic and Biological Sciences, University of Minnesota School of Dentistry, Minneapolis, MN 55455, USA.

Abstract

Pain in the temporomandibular joint (TMJ) region often occurs with no overt signs of injury or inflammation. Although the etiology of TMJ-related pain may involve multiple factors, one likely risk factor is female gender or estrogen status. Evidence is reviewed from human and animal studies, supporting the proposition that estrogen status acts peripherally or centrally to influence TMJ nociceptive processing. A new model termed the "TMJ pain matrix" is proposed as critical for the initial integration of TMJ-related sensory signals in the lower brainstem that is both modified by estrogen status, and closely linked to endogenous pain and autonomic control pathways.

PMID: 21708314 [PubMed - indexed for MEDLINE]
Related citations

146. J Periodontol. 2011 Jan;82(1):5-24. Epub 2010 Sep 10.

Safety of oscillating-rotating powered brushes compared to manual toothbrushes: a systematic review.

Van der Weijden FA, Campbell SL, D&#65533;rfer CE, Gonz&#65533;lez-Cabezas C, Slot DE.

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Comment in

- The safety of oscillating-rotating powered toothbrushes. [Evid Based Dent. 2011]
- There is no difference with regard to hard and/or soft tissue safety between oscillating-rotating powered brushes and manual toothbrushes. [J Evid Based Dent Pract. 2011]

Abstract

BACKGROUND:

Oscillating-rotating power toothbrushes have been proven clinically efficacious. To our knowledge, a comprehensive review of all clinical and laboratory investigations solely comparing the safety of these toothbrushes to the standard of care (i.e., manual toothbrushes) has not been published. The aim of this systematic review is to examine the literature concerning the relative soft and/or hard tissue safety outcomes with the use of oscillating-rotating toothbrushes compared to manual toothbrushes.

METHODS:

With the use of electronic databases of the National Library of Medicine (PubMed-MEDLINE), the Cochrane Central Register of Controlled Trials (Cochrane-CENTRAL), and the Excerpta Medical Database (EMBASE), a search of in vivo and in vitro trials through May 2010 was conducted to identify appropriate studies that evaluated the effects of an oscillating-rotating power toothbrush compared to a manual toothbrush with respect to soft and/or hard tissue safety. Eligible trials incorporated a safety evaluation as a primary or secondary outcome parameter (i.e., gingival recession, observed/reported adverse events, and hard tissue effects) or used a surrogate parameter (i.e., stained gingival abrasion and brushing force) to assess safety. Data extraction for the primary- and surrogate-measure safety studies, which included mean values and SDs when available, and a meta-analysis of

the gingival recession data were performed.

RESULTS:

Independent screening of the titles and abstracts of 697 PubMed-MEDLINE, 436 Cochrane-CENTRAL, and 664 EMBASE papers resulted in 35 publications that met the eligibility criteria. The mean change in gingival recession was not significantly different among toothbrush groups in the two selected trials with safety as a primary outcome (weighted mean difference: 0.03). A meta-analysis of the five trials that evaluated safety with a surrogate parameter was not possible; however, there were no significant between-group differences at the study end in any trial. A descriptive analysis of the 24 selected studies assessing safety as a secondary outcome revealed few brushing-related adverse events. The heterogeneity in objectives and methodology of the four in vitro trials that met the eligibility criteria precluded generalization of the results.

CONCLUSION:

A large body of published research in the preceding 2 decades has consistently shown oscillating-rotating toothbrushes to be safe compared to manual toothbrushes, demonstrating that these power toothbrushes do not pose a clinically relevant concern to hard or soft tissues.

PMID: 20831367 [PubMed - indexed for MEDLINE]

Related citations

147. Med Oral Patol Oral Cir Bucal. 2011 Jan 1;16(1):e37-41.

Oral findings in Rett syndrome: a systematic review of the dental literature.

Fuertes-Gonz&#65533;lez MC, Silvestre FJ, Almerich-Silla JM.

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Abstract

Rett syndrome (RS) is a chromosome X-linked genetic neurological disorder characterized by developmental regression, particularly in relation to expressive language and use of the hands, together with profound mental retardation, that almost exclusively affects females. The present review describes the 35 cases of RS published in the indexed literature (Medline)--the first corresponding to 1985 and the last to the year 2007. Certain oral manifestations of the disease are derived from the drug treatment prescribed to control the disease, while others are common to other clinical conditions characterized by convulsion activity, difficulties for correct oral hygiene, walking problems and/or an excess of

oral/digital-manual habits. In any case, bruxism is the oral habit most frequently associated with RS--the treatment of which remains the subject of controversy.

Free Article

PMID: 20526264 [PubMed - indexed for MEDLINE]

Related citations

MED ORAL
Free full text

148. Orthodontics (Chic.). 2011 Winter;12(4):340-53.

Speech defect and orthodontics: a contemporary review.

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Abstract

In conjunction with the lips, tongue, and oropharynx, the teeth play an important role in the articulation of consonants via airflow obstruction and modification. Therefore, along with these articulators, any orthodontic therapy that changes their position may play a role in speech disorders. This paper examines the relevant studies and discusses the difficulties of scientific investigation in this area. The ability of patients to adapt their speech to compensate for most handicapping occlusion and facial deformities is recognized, but the mechanism for this adaptation remains incompletely understood. The overall conclusion is that while certain malocclusions show a relationship with speech defects, this does not appear to correlate with the severity of the condition. There is no direct cause-and-effect relationship. Similarly, no guarantees of improvement can be given to patients undergoing orthodontic or orthognathic correction of malocclusion.

PMID: 22299107 [PubMed - indexed for MEDLINE]

Related citations

149. Prog Orthod. 2011;12(1):53-8. Epub 2011 Jan 20.

Dental occlusion and posture: an overview.

Michelotti A, Buonocore G, Manzo P, Pellegrino G, Farella M.

Department of Oral, Dental and Maxillo-Facial Sciences, Section of Orthodontics and Gnatology, University of Naples Federico II, Italy. michelot@unina.it

Abstract

OBJECTIVES:

In recent decades, it has been suggested that disorders of the masticatory system such as malocclusions, can influence whole body posture. A growing number of patients are seeking concomitant treatment for dental malocclusions and postural disorders. The aim of this overview is to critically analyze the relationship between dental occlusion and posture.

MATERIALS AND METHODS:

A literature overview was carried out to analyze the association between "malocclusion" versus "head posture", "spine curvature", and "body sway".

RESULTS:

The studies showed that even if some associations have been found between occlusal factors and postural alterations, there is not enough scientific evidence to support a cause-effect relations. Most studies suffer from major flaws such as lack of control groups, failure to take into account for the possible confounders, inappropriate study design, and lack of sufficient reliability and validity of used diagnostic tests.

CONCLUSIONS:

On the basis of this overview, it is not advisable to perform occlusal and/or orthodontic treatment, especially if irreversible and expensive, to treat or prevent postural imbalances or alteration of spine curvatures.

PMID: 21515232 [PubMed - indexed for MEDLINE]
Related citations

150. Quintessence Int. 2011 Jan;42(1):e1-e14.

Whiplash-associated disorders and temporomandibular symptoms following motor-vehicle collisions.

Epstein JB, Klasser GD.

Department of Oral Medicine and Diagnostic Sciences, College of Dentistry, University of Illinois at Chicago, Illinois, USA. jepstein@uic.edu

Comment in

- Whiplash is likely to be associated with temporomandibular disorder symptoms, but the magnitude of this association is not known. [J Evid Based Dent Pract. 2011]

Abstract

Recent research has shown that temporomandibular symptoms may be associated with or occur independently of whiplash-associated disorders related to motor-vehicle collisions. A PubMed/Medline search was conducted using the terms "temporomandibular disorders," "orofacial pain," "temporomandibular joint," "whiplash," and "whiplash-associated disorders and motor-vehicle accidents and motor-vehicle collisions" for the years 1995 to 2009. Systematic reviews, meta-analyses, and clinical studies were included if they addressed temporomandibular disorders, whiplash epidemiology, diagnosis, and prognosis. References in the selected articles were also reviewed (including those prior to 1995) if the articles specifically addressed the topic. An evidence base was established for general outcomes using the Oxford Centre for Evidence-Based Medicine Levels of Evidence. Temporomandibular symptoms may develop following motor-vehicle collisions and be more complex, representing a component of a symptom cluster of potentially regional and widespread pain impacted by psychosocial factors. Oral health care providers must be aware of the relationship between temporomandibular symptoms, whiplash-associated disorders, and trauma and the more complex nature of the symptoms for appropriate diagnosis and management.

PMID: 21206925 [PubMed - indexed for MEDLINE]

Related citations