BDA LIBRARY MEDLINE SEARCH

RECENT REVIEWS RELATED TO MINOR ORAL SURGERY

Database: Ovid MEDLINE(R) Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily, Ovid MEDLINE and Versions(R)

Search Strategy:

1. exp *Tooth Extraction/ (9155)
2. exp *Oral Surgical Procedures/ (40657)
3. minor.tw. (20575)
4. 2 and 3 (589)
5. ((tooth and extract$) or (minor and oral and surg$)).ti. (1935)
6. 1 or 4 or 5 (10168)
7. limit 6 to english language (7354)
8. limit 7 to “review articles” (403)
9. limit 7 to “systematic reviews” (186)
10. review.ti. and 7 (206)
11. 8 or 9 or 10 (487)
12. exp animals/ not humans/ (4589760)
13. 11 not 12 (484)
14. limit 13 to yr="2015 -Current" (89)
15. remove duplicates from 14 (75)

***************************

<1>

Unique Identifier
28886353
VI 1
Status
Publisher

Bennetts NA; Mergelmeyer JE; Reimer EJ; Melville JC.

Authors Full Name
Bennetts, Nicholas A; Mergelmeyer, James E; Reimer, Eric J; Melville, James C.

Institution
Bennetts, Nicholas A. Chief Resident PGY-6, Oral and Maxillofacial Surgery, University of Texas Health Sciences Center at Houston, School of Dentistry, Houston, TX.
Mergelmeyer, James E. Resident PGY-1, Oral and Maxillofacial Surgery, University of Texas Health Sciences Center at Houston, School of Dentistry, Houston, TX.
Reimer, Eric J. Chief Resident PGY-1, Oral and Maxillofacial Surgery, University of Texas Health Sciences Center at Houston, School of Dentistry, Houston, TX.
Melville, James C. Assistant Professor, Maxillofacial Oncology and Reconstructive Surgery, Oral and Maxillofacial Surgery, University of Texas Health Sciences Center at Houston, School of Dentistry, Houston, TX. Electronic address: James.C.Melville@uth.tmc.edu.

Title
Initial Manifestation of Acquired Hemophilia A After a Routine Tooth Extraction. A Case Report and Literature Review.

Source

Abstract
Although surgical treatment of patients on anticoagulation regimens is common practice among oral and maxillofacial surgeons, unexpected and unknown coagulopathies can have devastating and catastrophic consequences for the most routine of procedures. Acquired hemophilia A (AHA) is an extremely rare life-threatening bleeding disorder characterized by autoantibodies directed against circulating coagulation factor VIII. The effects of AHA can produce catastrophic bleeding and hematomas. The effect of this uncontrolled hemorrhage after dentoalveolar surgery can mimic severe head and neck infection by causing dysphagia, odynophagia, and acute airway complications. This report describes the case of a 64-year-old woman who was diagnosed with AHA after routine extraction of the mandibular left third molar.

Copyright © 2017. Published by Elsevier Inc.

Publication Type
Journal Article.

Date Created
20170908

Year of Publication
2017

<2>

Unique Identifier
28377143
Status
In-Process

Authors
Astromskaitė I; Juodzbalys G.

Authors Full Name
Astromskaitė, I; Juodzbalys, G.
Institution
Astramskaite, I. Department of Maxillofacial Surgery, Lithuanian University of Health Sciences, Kaunas, Lithuania. Electronic address: inesa.astr@gmail.com.
Juodzbalys, G. Department of Maxillofacial Surgery, Lithuanian University of Health Sciences, Kaunas, Lithuania.

Title
Scales used to rate adult patients' psycho-emotional status in tooth extraction procedures: a systematic review. [Review]

Source

Abstract
The aim of this study was to review scales used to assess anxiety, stress, and pain in dental patients undergoing a tooth extraction procedure and to propose a novel psycho-emotional rating scale based on the relevant literature and our own experience. An electronic literature search was conducted of the National Library of Medicine database MEDLINE (Ovid) and EMBASE databases between January 2005 and April 2016. Sequential screening at the title/abstract and full-text levels was performed. The review included all human prospective or retrospective follow-up studies and clinical trials, cohort studies, case-control studies, and case series that demonstrated at least one scale used to measure tooth extraction anxiety, stress, or pain. The search resulted in 32 articles meeting the inclusion criteria. None of the studies were found to be suitable in evaluating patient's stress, pain, and fear at once. Also, no scales were found that included both the doctor's and the patient's rating. In a few studies, vital signs as psycho-emotional status indicators were rated. Guidelines for a suitable questionnaire that could be used for rating the psycho-emotional status of patients undergoing tooth extraction are listed in the present research. Further studies are required for verification and validation of offered scale.

Copyright © 2017 International Association of Oral and Maxillofacial Surgeons. Published by Elsevier Ltd. All rights reserved.

Publication Type
Journal Article. Review.

Date Created
20170405

Year of Publication
2017

<3>
Unique Identifier
27878823

Status
In-Process

Authors
Holden A; Dracopoulos SA.

Authors Full Name
Holden, Acl; Dracopoulos, S A.

Institution
Holden, Acl. Faculty of Dentistry, University of Sydney, Surry Hills, New South Wales, Australia.
Dracopoulos, S A. Faculty of Dentistry, University of Sydney, Surry Hills, New South Wales, Australia.

Title
Owning the tooth: exploring the ethical and legal issues relating to the use of extracted human teeth in dental education in Australia. [Review]

Source

Local Messages
THIS JOURNAL IS AVAILABLE IN THE BDA LIBRARY, TO REQUEST THIS ARTICLE FROM THE LIBRARY GO TO:

Abstract
Extracted human teeth have been used to practice operative techniques for a very long time. As a natural surrogate for a live tooth in vivo, their use has traditionally been very important for the development of skills in trainee dentists, as well as their qualified colleagues who wish to practise existing or new skills. As synthetic alternatives develop greater authenticity, alongside a society in which many retain their natural dentition well into old age, the current paradigm relating to how extracted teeth in dental education are used needs to be revisited. An ethical and legal dilemma that must be addressed within dental education relates to where and how teeth may be sourced. This article will seek to question whether there is a legal or ethical requirement to gain consent for the use of extracted teeth from patients, as well as exploring the status of whether extracted dental tissue can be considered to be the property of either patient or surgeon. Whilst synthetic alternatives are being utilized more frequently in education, it is unlikely that they will completely replace extracted natural teeth in the immediate future. It is therefore imperative that their use complies with legal doctrine and contemporary ethical thought.

Copyright © 2016 Australian Dental Association.

Publication Type
Journal Article. Review.

Date Created
20161123

Year of Publication
2017

<4>
Unique Identifier
28343928
RECENT REVIEWS RELATED TO MINOR ORAL SURGERY

**Title**
Endodontics, Endodontic Retreatment, and Apical Surgery Versus Tooth Extraction and Implant Placement: A Systematic Review. [Review]

**Source**

**Abstract**
INTRODUCTION: The aim of this systematic review was to answer the following clinical question: Which is the best treatment option for a pulpally involved tooth?

METHODS: An electronic search was conducted in the Cochrane, PubMed (MEDLINE), and ScienceDirect databases between December 2015 and February 2016. A manual search was also performed. The inclusion criteria were randomized clinical trials, prospective or retrospective cohort studies, and cross-sectional studies performed on humans with at least 1 year of follow-up and published within the last 10 years. Two researchers independently screened the title and abstract of every article identified in the search in order to establish its eligibility. The selected articles were classified into different levels of evidence by means of the Strength of Recommendation Taxonomy criteria.

RESULTS: Sixty articles met the inclusion criteria for this systematic review. The survival rate of single-tooth implants was greater than the success rate of the distinct conservative treatments. However, among comparative studies, no important differences between both treatments were observed until at least 8 years later.

CONCLUSIONS: The endodontic treatment and the implant placement are both valid and complementary options for planning oral rehabilitation. Although a level B recommendation can be stated, these results come from retrospective comparative studies because there is a lack of randomized clinical studies comparing both types of therapeutic options.

Copyright © 2017 American Association of Endodontists. Published by Elsevier Inc. All rights reserved.
PURPOSE: To perform a systematic review and meta-analysis of randomized clinical trials (RCTs) investigating the efficacy and safety of topical tranexamic acid (TXA) to prevent postoperative bleeding in anticoagulated patients undergoing minor oral surgery.

MATERIAL AND METHODS: We analyzed RCTs comparing the use of topical TXA versus other topical hemostatic agents or placebo solutions for minor oral surgeries. We assessed the risk of bias and strength of evidence according to the Cochrane guidelines and GRADE rating system, respectively. The pooled relative risk (RR) was calculated for the effect of topical application of TXA on postsurgical bleeding.

RESULTS: Five RCTs were included in the study. The combined RR for the number of patients receiving TXA in comparison to the control group was 0.13 (95% CI 0.06-0.36, P = 0.01), indicating a protective effect of topical TXA on bleeding after minor oral surgeries. Subgroup analysis revealed that topical TXA was effective in preventing postsurgical bleeding compared to placebo and epsilon-aminocaproic acid. No cases of thromboembolic events were reported.

CONCLUSIONS: Currently available evidence suggests that surgical site irrigation with TXA followed by mouthwash during the first postoperative week is safe and may reduce the risk of bleeding after minor oral surgeries in anticoagulated patients.
Implant placement post extraction in esthetic single tooth sites: when immediate, when early, when late?. [Review]

**Abstract**

Implant placement in post-extraction sites of single teeth in the esthetic zone has been a topic of great interest in the field of implant dentistry since 1990. Triggered by the development of guided bone regeneration, the concept of immediate implant placement became quite popular in the 1990s. In the past 12 years, however, the dental community has begun to focus increasingly on the esthetic outcomes of post-extraction implant placement and several studies indicated a significant risk for the development of mucosal recessions with immediate implants. Parallel with this, significant progress has been made in the understanding of tissue biology in terms of hard and soft tissue alterations post extraction, based on preclinical, clinical and radiological studies. This knowledge has helped better to understand the etiology of these esthetic complications with immediate implant placement. The present review first analyzes the various phases of the development of therapeutic strategies over the years for post-extraction implant placement in single tooth sites in the esthetic zone. It presents the current knowledge concerning the terminology with immediate, early and late implant placement, the risk factors for the development of esthetic complications, and the selection criteria for the various treatment options. In the second part, clinical recommendations are given, since a clinician active in this field of implant therapy can use all treatment options depending on the preoperative analysis including a 3D cone beam computed tomography. The selection criteria for all four treatment options are presented and documented with typical case reports to illustrate the current treatment approaches applied in daily practice.
RESULTS: All 25 cases were treated successfully with the use of the DINS. Twelve of these cases were associated with pathologic lesions. Three patients were noted to have inferior alveolar nerve paresthesia. One patient sustained a pathologic fracture at week 2. Postoperative infections were noted in 7 cases, 2 of which had a pre-existing infection. One patient reported temporary limitation of mouth opening. A coronectomy was performed in 1 case.

CONCLUSIONS: We present results using a new technology, the DINS, for removal of complex mandibular third molars. Potential advantages are 1) improved visualization and localization of anatomic structures such as the inferior alveolar nerve, lingual cortical plate, and adjacent roots; 2) improved control during osteotomy; 3) decreased surgical access requirements and reduction in overall bone removal; 4) ability to perform complex procedures successfully in an in-office setting; 5) decreased surgical time resulting from improved visualization; and 6) potential use as a teaching tool. Possible limitations of the use of an in-office DINS include increased cost, increased time attributed to presurgical planning, initial learning curve, and optical array interference by the surgeon or assistants during surgery.
CONCLUSION: APCs should be used in postextraction sites to improve clinical and radiographic outcomes such as bone density and soft tissue healing and postoperative symptoms. The actual benefit of APCs on decreasing pain in extraction sockets is still not quantifiable.

Copyright © 2017 American Association of Oral and Maxillofacial Surgeons. Published by Elsevier Inc. All rights reserved.

Title

Source

Abstract
BACKGROUND: Alveolar cleft reconstruction using iliac crest bone graft is considered standard of care for children with complete cleft lip and palate at the time of mixed dentition. Harvesting bone may result in donor-site morbidity and additional operating time and length of hospitalization. Recombinant human bone morphogenetic protein (rhBMP)-2 with a demineralized bone matrix is an alternative bone source for alveolar cleft reconstruction. The authors investigated the outcomes of rhBMP-2/demineralized bone matrix versus iliac crest bone graft for alveolar cleft reconstruction by reviewing postoperative surgical complications and cleft closure.

METHODS: A retrospective chart review was conducted for 258 rhBMP-2/demineralized bone matrix procedures (mean follow-up, 2.9 years) and 243 iliac crest bone graft procedures (mean follow-up, 4.1 years) on 414 patients over a 12-year period. The authors compared complications, canine eruption, and alveolar cleft closure between the two groups.

RESULTS: In the rhBMP-2/demineralized bone matrix group, one patient required prolonged intubation because of intraoperative airway swelling not thought to be caused by rhBMP-2, 36 reported facial swelling and one required outpatient steroids as treatment, and 12 had dehiscence; however, half of these complications resolved without intervention. Twenty-three of the 228 rhBMP-2/demineralized bone matrix patients and 28 of the 242 iliac crest bone graft patients required repeated surgery for alveolar cleft repair. Findings for canine tooth eruption into the cleft site through the graft were similar between the groups.

CONCLUSIONS: The rhBMP-2/demineralized bone matrix appears to be an acceptable alternative for alveolar cleft repair. The authors found no increase in serious adverse events with the use of this material. Local complications, such as swelling and minor wound dehiscence, predominantly improved without intervention.

CLINICAL QUESTION/LEVEL OF EVIDENCE: Therapeutic, III.
Purpose: To assess the beneficial or harmful effects of systemic prophylactic antibiotics at extraction of teeth, apart from third molars, vs no antibiotic or placebo administration. Furthermore, if antibiotics are beneficial, to determine which type, dosage, duration and timing of administration is the most effective.

Materials and Methods: The Cochrane Oral Health Group's Trials Register (to 30 January 2016) and MEDLINE (1 January 1950 to 30 January 2016) were searched. There were no language or date restrictions placed on the searches of the electronic databases. Randomised controlled trials (RCTs) of parallel group design, with a follow-up of at least 2 weeks, comparing the administration of various prophylactic antibiotic regimens vs no antibiotics to people undergoing extraction of teeth, not including third molars, were included. Outcome measures were postoperative complications/adverse events, post-operative pain and swelling. Screening of eligible studies, assessment of the risk of bias of the trials and data extraction were conducted in triplicate by three independent review authors. Results were to be expressed as risk ratios (RRs) using a random-effects model for dichotomous outcomes, with 95% confidence intervals (CIs). Heterogeneity, including both clinical and methodological factors, was to be investigated.

Results: No relevant RCT was identified.

Conclusions: There is no RCT to determine if the antibiotic therapy is needed at extraction of teeth, excluding third molars. Properly designed and conducted RCTs are needed to understand the role of the antibiotic therapy for tooth extraction. Conflict-of-interest statement: This systematic review was self-funded and the authors have no conflict of interests to declare.
CONCLUSIONS: Within the limitations of the available evidence, PRF seems to have no beneficial role in bone healing after extraction of the mandibular third molars. Future standardized randomized controlled clinical trials are required to estimate the effect of PRF on socket regeneration.

Copyright © 2017 American Association of Oral and Maxillofacial Surgeons. Published by Elsevier Inc. All rights reserved.
Prevention of Lingual Nerve Injury in Third Molar Surgery: Literature Review. [Review]

Pippi, Roberto; Spota, Andrea; Santoro, Marcello. Authors Full Name
Institution
Pippi, Roberto. Associate Professor, Department of Odontostomatological and Maxillofacial Sciences, "Sapienza" University of Rome, Rome, Italy.
Spota, Andrea. Researcher, Department of Odontostomatological and Maxillofacial Sciences, "Sapienza" University of Rome, Rome, Italy.
Santoro, Marcello. PhD Student, Department of Odontostomatological and Maxillofacial Sciences, "Sapienza" University of Rome, Rome, Italy. Electronic address: santoro_marcello@yahoo.it.

Purpose: To identify any factors that could aid the surgeon in preventing or minimizing the risk of lingual nerve injury during third molar surgery.

Materials and Methods: Electronic research was carried out on the correlation between lingual nerve damage and lower third molar surgery (topographic anatomy, surgical technique, and regional anesthesia) using PubMed, Scopus, and Cochrane central databases. The research included only articles published in English up to February 2016.

Results: Lingual nerve anatomy varied greatly: direct contact between the lingual nerve and the third molar alveolar wall was reported in a wide range of cases (0 to 62%) and the nerve was located at the same level or above the top of the ridge in 0 to 17.6% of cases. No detailed data were found on the actual incidence of lingual nerve injury resulting from local anesthesia by injection. Permanent lingual nerve damage did not show statistically relevant differences between the simple buccal approach and the buccal approach plus lingual flap retraction, although the latter was statistically associated with an increased risk of temporary damage. Lingual slit technique was statistically associated with an increased risk of temporary nerve damage than the buccal approach with or without lingual flap retraction. For permanent damage, no statistically relevant differences were found between the lingual split technique and the buccal approach with lingual flap retraction. Compared with tooth sectioning, the ostectomy was strongly statistically associated with permanent lingual nerve damage.

Conclusions: Results should be interpreted with extreme caution because of the considerable heterogeneity of the data and the considerable influence of several anatomic and surgical variables that were closely related, but difficult to analyze independently. It seems preferable to avoid lingual flap elevation, except in selected cases in which the presence of more than 1 unfavorable surgical variable predicts a high risk of nerve injury. Tooth sectioning could decrease the extent of the ostectomy or even, in some cases, prevent it, potentially acting as a protective factor against lingual nerve injury.

Flap Designs for Flap Advancement During Implant Therapy: A Systematic Review.

Plonka AB; Sheridan RA; Wang HL. Authors Full Name
Institution
Plonka, Alexandra B. *Resident, Department of Periodontics and Oral Medicine, School of Dentistry, University of Michigan, Ann Arbor, MI. +Professor and Director of Graduate Periodontics, Department of Periodontics and Oral Medicine, School of Dentistry, University of Michigan, Ann Arbor, MI.

Purpose: Guided bone regeneration (GBR) procedures allow ridge augmentation before or at time of implant placement. GBR outcomes rely on primary passive tension-free wound closure, which may be achieved by a variety of flap designs and surgical procedures. A comprehensive literature review of flap design and management is provided, including material types, incision design, reflection, releasing, and suturing techniques.
MATERIALS AND METHODS: Two reviewers completed a literature search using the PubMed database and a manual search of relevant journals. Relevant articles from January 1990 to September 2015 published in the English language were considered.

RESULTS: A variety of flap designs aim to achieve primary passive closure during GBR were introduced. To facilitate case selection and treatment planning, flap designs have been categorized based on their ability to achieve minor (<3 mm), moderate (3-6 mm), and major (>=7 mm) degrees of flap advancement.

CONCLUSIONS: Techniques such as vertical releasing incisions, periosteal releasing incisions, and split-thickness flaps may be used alone or combined to achieve passivity during GBR. GBR complications may be prevented by imaging and preoperative planning and careful surgical technique especially flap advancement.

Publication Type: Journal Article.
Date Created: 20161128
Year of Publication: 2017

INTRODUCTION: Oral and maxillofacial surgeries might induce anxiety and pain to the patients. Sedative agents are one of the best ways for eliminating such consequences. Dexmedetomidine (DEX) is a recent sedative agent which presents higher sedative quality with greater specificity than other drugs. The aim of present paper is to evaluate the risks and benefits of administering DEX during oral and maxillofacial surgeries by reviewing high quality released articles. Areas covered: Searches on PubMed, Scopus and Web of Science databases were completed with focus on randomized controlled trials (RCT). Related articles, from 2000 to 2015, were selected based on inclusion criteria and quality assessments factors. Full texts of the selected articles were screened and their significant information were gathered for judgments. Expert opinion: 17 RCTs on a total of 765 patients were screened. Some of the difficulties during reviewing the articles were: different pharmacokinetic and pharmacodynamics of drugs when combined with DEX, different time spots and method of monitoring, including studies on both minor and major surgeries for better data collection. Recent researches are going to focus on application of DEX for in-office procedures because of its desirable properties. Nevertheless, the analgesic and amnesic features of DEX are still questionable.

Publication Type: Journal Article. Review.
Date Created: 20170427
Year of Publication: 2017
PURPOSE: To systematically assess the available evidence on the effect of orthodontic extractions on third molar (M3) angulation.

MATERIALS AND METHODS: Three databases were searched up to April 25, 2016 to identify orthodontic studies comparing M3 angular changes in patients with and without extraction. Information on methodology, treatment procedures, and outcome was retrieved from each study. Assessment of overall and individual quality of the included studies was performed using validated criteria.

RESULTS: Fourteen retrospective studies were considered eligible for this systematic review. Two studies achieved a moderate evidence score, whereas the lowest grade was assigned to 12 studies. The overall evidence level was classified as limited. Meta-analysis was not feasible because of the high heterogeneity across studies. Based on the best available evidence, premolar extraction followed by fixed orthodontic appliances can substantially improve the angular position of M3s by 10° to 18°.

CONCLUSIONS: There is limited evidence that orthodontic extractions can substantially enhance the uprighting of M3s. Clinicians should be aware of the potentially beneficial effect of orthodontic extraction treatment on M3 development, although well-designed prospective studies are necessary to strengthen this statement.

Copyright © 2016 American Association of Oral and Maxillofacial Surgeons. Published by Elsevier Inc. All rights reserved.
Obstructive sleep apnea-hypopnea syndrome (OSAHS) is a serious social health problem with significant implications on quality of life. Surgery for OSAHS has been criticized due to a lack of evidence to support its efficacy as well as the heterogeneous reporting of published outcomes. Moreover, the transoral robotic surgery (TORS) in the management of OSAHS is still in a relative infancy. Nevertheless, a review and meta-analysis of the published articles may be helpful. Among 195 articles, eight studies were included in the analysis. The mean of enrolled patients was 102.5 +/- 107.9 (range 6-289) comprising a total of 820 cases. The mean age was 49 +/- 3.27 and 285 patients underwent a previous sleep apnea surgery. The uvulopalatopharyngoplasty (UPPP) was the most common palatal procedure. The mean rate of failure was 34.4 % (29.5-46.2 %). Complications occurred in 21.3 % of the patients included in the analysis, most of them were classified as minor. Transient dysphagia represented the most common complication (7.2 %) followed by bleeding (4.2 %). TORS for the treatment of OSAHS appears to be a promising and safe procedure for selected patients seeking an alternative to continuous positive airway pressure (CPAP), although further researches are urgently needed.
**Abstract**

An audit of outpatient clinic attendances at Cardiff Dental Hospital (between September 2009 and March 2010) showed that 30% of patients failed to attend review appointments after minor operations. To reduce rates of non-attendance we set up a system of telephone review in March 2010. Patients were given a telephone appointment two weeks after their minor operation (mainly removal of lower third molars), instead of an appointment at the outpatient clinic. A trained nurse contacted each patient to complete a structured questionnaire that included questions about numbness, pain, and swelling. During the first year of the project, 1020 patients were booked for telephone review and of these 90% were discharged. 674 (66%) were discharged after telephone review, and 245 (24%) were not contactable. A total of 101 patients (10%) were brought in for clinic review because they reported complications. Estimated staff costs per patient for telephone review and clinic review were 3.05 and 23.55 respectively. Telephone review resulted in a significant reduction in the number of patients who failed to attend the clinic (OR=0.88, 95% CI 0.81 to 0.96) and facilitated audit of complications. The use of telephone review in conjunction with clinical follow-up for those with postoperative problems allows for cost-effective care with reduced rates of non-attendance.

---

**MEDLINE**

**Authors**
Cammaroto G; Monteverchi F; D'Agostino G; Zeccardo E; Bellini C; Galletti B; Shams M; Negm H; Vicini C.

**Authors Full Name**
Cammaroto, Giovanni; Monteverchi, Filippo; D'Agostino, Giovanni; Zeccardo, Ermelinda; Bellini, Chiara; Galletti, Bruno; Shams, Medhat; Negm, Hesham; Vicini, Claudio.

**Institution**
Cammaroto, Giovanni. Department of Otolaryngology, University of Messina, Via Consolare Valeria 1, 98100, Messina, Italy. giovanni.cammaroto@hotmail.com.
Monteverchi, Filippo. ENT and Oral Surgery Unit, Department of Special Surgery, Ospedale Morgagni Pierantoni, Forli, Italy. D'Agostino, Giovanni. ENT and Oral Surgery Unit, Department of Special Surgery, Ospedale Morgagni Pierantoni, Forli, Italy. Zeccardo, Ermelinda. ENT and Oral Surgery Unit, Department of Special Surgery, Ospedale Morgagni Pierantoni, Forli, Italy. Bellini, Chiara. ENT and Oral Surgery Unit, Department of Special Surgery, Ospedale Morgagni Pierantoni, Forli, Italy. Galletti, Bruno. Department of Otolaryngology, University of Messina, Via Consolare Valeria 1, 98100, Messina, Italy. Shams, Medhat. Department of Otolaryngology, Head and Neck Surgery, Hamad Medical Corporation, Rumaliah Hospital, Doha, Qatar. Negm, Hesham. Department of Otorhinolaryngology, Faculty of Medicine, University of Cairo, Cairo, Egypt. Vicini, Claudio. ENT and Oral Surgery Unit, Department of Special Surgery, Ospedale Morgagni Pierantoni, Forli, Italy.

**Title**
Tongue reduction for OSAHS: TORSs vs coblations, technologies vs techniques, apples vs oranges. [Review]

**Source**

**Abstract**
Coblation tongue surgery and Trans-oral robotic surgery (TORS) proved to be the most published therapeutical options for the treatment of patients affected by obstructive sleep apneas (OSAHS). A systematic review of the literature and an analysis of the data are presented. The mean rates of failure were 34.4 and 38.5%, respectively in TORS and Coblation groups. Complications occurred in 21.3% of the patients treated with TORS and in 8.4% of the patients treated with Coblation surgery. TORS seems to give slightly better results, allowing a wider surgical view and a measurable, more consistent removal of lingual tissue. However, the higher rate of minor complication and the significant costs of TORS must also be considered. Moreover, both technologies may be applied to a wide range of surgical techniques, each of them with different effectiveness.

---

**RECENT REVIEWS RELATED TO MINOR ORAL SURGERY**

<table>
<thead>
<tr>
<th>Authors</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wells J P; Roked Z; Moore S C; Sivarajasingam V.</td>
<td>Telephone review after minor oral surgery.</td>
</tr>
<tr>
<td>Wells, J P; Roked, Z; Moore, S C; Sivarajasingam, V.</td>
<td>Telephone review after minor oral surgery.</td>
</tr>
</tbody>
</table>

**Source**

Local Messages

THIS JOURNAL IS AVAILABLE IN THE BDA LIBRARY, BDA MEMBERS CAN ALSO ACCESS THIS JOURNAL ONLINE FROM 2011 TO DATE. Go to www.bda.org/ejournals

**Abstract**
An audit of outpatient clinic attendances at Cardiff Dental Hospital (between September 2009 and March 2010) showed that 30% of patients failed to attend review appointments after minor operations. To reduce rates of non-attendance we set up a system of telephone review in March 2010. Patients were given a telephone appointment two weeks after their minor operation (mainly removal of lower third molars), instead of an appointment at the outpatient clinic. A trained nurse contacted each patient to complete a structured questionnaire that included questions about numbness, pain, and swelling. During the first year of the project, 1020 patients were booked for telephone review and of these 90% were discharged. 674 (66%) were discharged after telephone review, and 245 (24%) were not contactable. A total of 101 patients (10%) were brought in for clinic review because they reported complications. Estimated staff costs per patient for telephone review and clinic review were 3.05 and 23.55 respectively. Telephone review resulted in a significant reduction in the number of patients who failed to attend the clinic (OR=0.88, 95% CI 0.81 to 0.96) and facilitated audit of complications. The use of telephone review in conjunction with clinical follow-up for those with postoperative problems allows for cost-effective care with reduced rates of non-attendance.
The aim of this study was to review previous studies and to identify reliable factors determining anxiety in adult patients undergoing tooth extraction procedures. An electronic literature search was conducted of the MEDLINE, ScienceDirect, SpringerLink, and Wiley Online Library databases covering the period January 2005 to May 2015. Sequential screening was performed at the title/abstract and full-text level. The review included all human prospective and retrospective follow-up studies and clinical trials, cohort studies, case-control studies, and case series that demonstrated at least one factor determining tooth extraction anxiety and/or fear and used specific scales for measurement. The search identified 16 articles meeting the inclusion criteria. Factors related to tooth extraction in patients were assessed: propensity to anxiety (P<0.05), pain experience or expectations (P<0.05), level of disturbance during the procedure (P<0.001), difficulty of the procedure (P=0.034), marital status (P=0.003), social class (P=0.012), and type of local anaesthesia (P=0.008). Using a video as the method of providing information (P<0.05) and having had a previous negative dental experience (P<0.05) led to an increase in patient anxiety level. Due to disagreements between studies, further investigations into the other factors are required to clarify the results. However, the absence of a single and appropriate scale that includes both the patient’s evaluation and that of the doctor, hinders the rating of patient anxiety.
Abstract

BACKGROUND: Informed consent is the legal requirement to educate a patient about a proposed medical treatment or procedure so that he or she can make informed decisions. The purpose of the study was to examine the current practice for obtaining informed consent for third molar tooth extractions (wisdom teeth) by oral and maxillofacial surgeons in Australia and New Zealand.

METHODS: An online survey was sent to 180 consultant oral and maxillofacial surgeons in Australia and New Zealand. Surgeons were asked to answer (yes/no) whether they routinely warned of a specific risk of third molar tooth extraction in their written consent.

RESULTS: Seventy-one replies were received (39%). The only risks that surgeons agreed should be routinely included in written consent were a general warning of infection (not alveolar osteitis), inferior alveolar nerve damage (temporary and permanent) and lingual nerve damage (temporary and permanent).

CONCLUSIONS: There is significant variability among Australian and New Zealand oral and maxillofacial surgeons regarding risk disclosure for third molar tooth extractions. We aim to improve consistency in consent for third molar extractions by developing an evidence-based consent form.
RECENT REVIEWS RELATED TO MINOR ORAL SURGERY

Date Created 20160921
Year of Publication 2016

<25>
Unique Identifier
27314558
VI 1
Status MEDLINE
Authors Garve R; Garve M; Link K; Turp JC; Meyer CG.
Authors Full Name Garve, Roland; Garve, Miriam; Link, Katharina; Turp, Jens C; Meyer, Christian G.
Institution Garve, Roland. Center for Natural and Cultural History of Man, Danube Private University, Krems, Austria.
Garve, Miriam. Department of Quality Management and Accreditation, Leuphana University, Luneburg, Germany.
Link, Katharina. Center for Natural and Cultural History of Man, Danube Private University, Krems, Austria.
Turp, Jens C. Center for Natural and Cultural History of Man, Danube Private University, Krems, Austria.
Turp, Jens C. Clinic for Reconstructive Dentistry and Temporomandibular Disorders, University Center of Dental Medicine Basel, School of Dental Medicine, Basel, Switzerland.
Meyer, Christian G. Institute of Tropical Medicine, Eberhard Karls University Tubingen, Tubingen, Germany.
Meyer, Christian G. Vietnamese-German Center for Medical Research, Hanoi, Vietnam.
Title Infant oral mutilation in East Africa - therapeutic and ritual grounds. [Review]
Source Tropical Medicine & International Health. 21(9):1099-105, 2016 Sep.
Abstract This paper reviews the practice and ritual traditions of infant oral mutilation, drawing on a literature search in PubMed and Google Scholar, historical reports, relevant textbooks, NGO materials and personal observations of the authors.
Copyright © 2016 John Wiley & Sons Ltd.
Publication Type Journal Article. Review.
Date Created 20160901
Year of Publication 2016

<26>
Unique Identifier
27228244
Status MEDLINE
Authors Laleman I; Bernard L; Vercruyssen M; Jacobs R; Bornstein MM; Quirynen M.
Authors Full Name Laleman, Isabelle; Bernard, Lauren; Vercruyssen, Marjolein; Jacobs, Reinhilde; Bornstein, Michael M; Quirynen, Marc.
Title Guided Implant Surgery in the Edentulous Maxilla: A Systematic Review. [Review]
Abstract PURPOSE: This systematic review verified the usefulness/limitations of static surgical guides during implant surgery in the edentulous maxilla. The PICO question was: “Does the use of digitally generated surgical guides vs conventional techniques affect the following outcomes: surgical complications, implant complications, prosthesis complications, implant survival, prosthesis survival, economics, patient satisfaction, and maintenance intervention?”
MATERIALS AND METHODS: The electronic searches retrieved 2,588 unique articles from which eventually 36 full-text articles were read for eligibility. Because no randomized controlled clinical trials could be found, the PICO question had to be reformulated, now only looking to the outcome of digitally generated surgical guides without comparison with conventional techniques.
RESULTS: Although long-term data are lacking, the outcome of implants placed with a static guide and of the prosthetic reconstruction seems similar to that expected from conventional techniques. The number of surgical complications with guided surgery is negligible. Guided flapless implant surgery offers slightly more comfort for the patient; however, the economic benefits are unclear.
CONCLUSION: Implant therapy via static surgical guides in the maxilla is predictable, with slightly more comfort for the patient but with only minor economic advantages.
Publication Type
Bone augmentation for single tooth implants: A review of the literature. [Review]

Source

Abstract
AIM: To analyse data on bone augmentation at single-tooth implants with regard to the type of graft materials, the stability of grafts over time, reported time span towards implant placement, implant survival rates, implant marginal bone maintenance and possible complications.

MATERIAL AND METHODS: A literature review resulted in 585 titles after exclusion of duplicates. Analyses of article titles and abstracts reduced the number to 93 studies, which were subsequently full-text analysed. After the final selection, a total of 24 studies were included, of which 13 reported on single implants and horizontal/vertical augmentation (onlay), 10 focused on single implants and sinus augmentation (inlay), and one study presented the outcome of single implants and distraction osteogenesis.

RESULTS: All bone materials, i.e. autografts, allografts, xenografts, and alloplasts, were used with comparable satisfactory results, allowing for placement of 7 to 10 mm-long implants. Stability of bone graft volume over time was sparsely documented. Some onlay autografts tended to resorb early i.e. prior to implant placement, but minor bone resorption was also seen for other grafts over time. A continuous but small bone resorption of inlay autografts and alloplasts was seen over time for the few sites recorded. A staged approach predominated for the onlay grafts, with implants placed 3 to 6 months post-grafting, and overall a majority of these implants (347/363) were submerged. For the inlay graft procedures almost all implants were immediately inserted at the time of grafting, and the majority of these implants (253/256) were submerged. A total of five and two implant failures were registered during the various study periods for the onlays and inlays, respectively. Marginal bone conditions, around implants in grafted sites, were comparable to what has generally been reported for non-grafted sites.

CONCLUSIONS: Bone augmentation for the single-tooth implant is a viable treatment option with predictable graft and implant outcomes.
Corresponding to case series or cohort studies. The prevalence of ONJ in the patients treated with intravenous and oral bisphosphonates was 6.9% (range 0-34.7%) and 0.47% (range 0-2.5%), respectively. The main preventive measures comprised local and systemic infection control.

CONCLUSIONS: No conclusive scientific evidence is available to date on the efficacy of ONJ prevention protocols in patients treated with antiresorptive or antiangiogenic drugs subjected to tooth extraction.

BACKGROUND: Prophylactic removal of asymptomatic disease-free impacted wisdom teeth is surgical removal of wisdom teeth in the absence of symptoms and with no evidence of local disease. Impacted wisdom teeth may be associated with pathological changes, such as pericoronitis, root resorption, gum and alveolar bone disease (periodontitis), caries and the development of cysts and tumours. When surgical removal is carried out in older people, the risk of postoperative complications, pain and discomfort is increased. Other reasons to justify prophylactic removal of asymptomatic disease-free impacted third molars have included preventing late lower incisor crowding, preventing damage to adjacent structures such as the second molar or the inferior alveolar nerve, in preparation for orthognathic surgery, in preparation for radiotherapy or during procedures to treat people with trauma to the affected area. Removal of asymptomatic disease-free wisdom teeth is a common procedure, and researchers must determine whether evidence supports this practice. This review is an update of an existing review published in 2012.

OBJECTIVES: To evaluate the effects of removal compared with retention (conservative management) of asymptomatic disease-free impacted wisdom teeth in adolescents and adults.

SEARCH METHODS: We searched the following electronic databases: Cochrane Oral Health's Trials Register (to 24 May 2016), the Cochrane Central Register of Controlled Trials (CENTRAL) (2016, Issue 4), MEDLINE Ovid (1946 to 24 May 2016) and Embase Ovid (1980 to 24 May 2016). We searched ClinicalTrials.gov and the World Health Organization International Clinical Trials Registry Platform for ongoing and unpublished studies to 24 May 2016. We imposed no restrictions on language or date of publication in our search of electronic databases.

SELECTION CRITERIA: Studies comparing removal (or absence) with retention (or presence) of asymptomatic disease-free impacted wisdom teeth in adolescents or adults. We included randomised controlled trials (RCTs) with no restriction on length of follow-up, if available. We considered quasi-RCTs and prospective cohort studies for inclusion if investigators measured outcomes with follow-up of five years or longer.

DATA COLLECTION AND ANALYSIS: Eight review authors screened search results and assessed the eligibility of studies for inclusion according to the review inclusion criteria. Eight review authors independently conducted risk of bias assessments in duplicate. When information was unclear, we contacted study authors for additional information.

MAIN RESULTS: This review includes two studies. The previous review included one RCT with a parallel-group design, which was conducted in a dental hospital setting in the United Kingdom; our new search for this update identified one prospective cohort study conducted in the private sector in the USA. Primary outcome No eligible studies in this review reported the effects of removal compared with retention of asymptomatic disease-free impacted wisdom teeth on health-related quality of life Secondary outcomes We found only low to very low quality evidence of the effects of removal compared with retention of asymptomatic disease-free impacted wisdom teeth for a limited number of secondary outcome measures. One prospective cohort study, reporting data from a subgroup of 416 healthy male participants, aged 24 to 84 years, compared the effect of the absence (previous removal or agenesis) against the presence of asymptomatic disease-free impacted wisdom teeth on periodontitis and caries associated with the distal of the adjacent second molar during a follow-up period of three to over 25 years. Very low quality evidence suggests that the presence of asymptomatic disease-free impacted wisdom teeth may be associated with increased risk of periodontitis affecting the adjacent second molar in the long term. In the same study, which is at serious risk of bias, there is insufficient evidence to demonstrate a difference in caries risk associated with the presence or absence of impacted wisdom teeth. One RCT with 164 randomised and 77 analysed adolescent participants compared the effect of extraction with retention of asymptomatic disease-free impacted wisdom teeth on dimensional changes in the dental arch after five years. Participants (55% female) had previously undergone orthodontic treatment and had ‘crowded’ wisdom teeth. No evidence from this study, which was at high risk
of bias, was found to suggest that removal of asymptomatic disease-free impacted wisdom teeth has a clinically significant effect on dimensional changes in the dental arch. The included studies did not measure our other secondary outcomes: costs, other adverse events associated with retention of asymptomatic disease-free impacted wisdom teeth (pericoronitis, root resorption, cyst formation, tumour formation, inflammation/infection) and adverse effects associated with their removal (alveolar osteitis/postoperative infection, nerve injury, damage to adjacent teeth during surgery, bleeding, osteonecrosis related to medication/radiotherapy, inflammation/infection).

AUTHORS' CONCLUSIONS: Insufficient evidence is available to determine whether or not asymptomatic disease-free impacted wisdom teeth should be removed. Although asymptomatic disease-free impacted wisdom teeth may be associated with increased risk of periodontitis affecting adjacent second molars in the long term, the evidence is of very low quality. Well-designed RCTs investigating long-term and rare effects of retention and removal of asymptomatic disease-free impacted wisdom teeth, in a representative group of individuals, are unlikely to be feasible. In their continuing absence, high quality, long-term prospective cohort studies may provide valuable evidence in the future. Given the lack of available evidence, patient values should be considered and clinical expertise used to guide shared decision making with patients who have asymptomatic disease-free impacted wisdom teeth. If the decision is made to retain asymptomatic disease-free impacted wisdom teeth, clinical assessment at regular intervals to prevent undesirable outcomes is advisable.

Publication Type
Journal Article. Research Support, Non-U.S. Gov't. Review.
Date Created
20160901
Year of Publication
2016

<30>
Unique Identifier
27285450
Status
MEDLINE
Authors
Sumanth KN; Prashanthi E; Aggarwal H; Kumar P; Lingappa A; Muthu MS; Kiran Kumar Krishanappa S.
Authors Full Name
Sumanth, Kumargere N; Prashanthi, Eachempati; Aggarwal, Himanshi; Kumar, Pradeep; Lingappa, Ashok; Muthu, Murugan S; Kiran Kumar Krishanappa, Salian.
Institution
Sumanth, Kumargere N. Department of Oral Medicine & Oral Radiology, Faculty of Dentistry, Melaka-Manipal Medical College, Jalan Batu Hampar, Bukit Baru, Melaka, Malaysia, 75150.
Title
Interventions for treating post-extraction bleeding. [Review]
Source
Cochrane Database of Systematic Reviews. (6)CD011930, 2016 Jun 10.
Abstract
BACKGROUND: Post-extraction bleeding (PEB) is a recognised, frequently encountered complication in dental practice, which is defined as bleeding that continues beyond 8 to 12 hours after dental extraction. The incidence of post-extraction bleeding varies from 0% to 26%. If post-extraction bleeding is not managed, complications can range from soft tissue haematomas to severe blood loss. Local causes of bleeding include soft tissue and bone bleeding. Systemic causes include platelet problems, coagulation disorders or excessive fibrinolysis, and inherited or acquired problems (medication induced). There is a wide array of techniques suggested for the treatment of post-extraction bleeding, which include interventions aimed at both local and systemic causes.

OBJECTIVES: To assess the effects of interventions for treating different types of post-extraction bleeding.

SEARCH METHODS: We searched the following electronic databases: The Cochrane Oral Health Group Trials Register (to 22 March 2016); The Cochrane Central Register of Controlled Trials (CENTRAL; The Cochrane Library 2016, Issue 2); MEDLINE via OVID (1946 to 22 March 2016); CINAHL via EBSCO (1937 to 22 March 2016). Due to the ongoing Cochrane project to search EMBASE and add retrieved clinical trials to CENTRAL, we searched only the last 11 months of EMBASE via OVID (1 May 2015 to 22 March 2016). We placed no further restrictions on the language or date of publication. We searched the US National Institutes of Health Trials Register (http://clinicaltrials.gov), and the WHO Clinical Trials Registry Platform for ongoing trials (http://apps.who.int/trialsearch/default.aspx). We also checked the reference lists of excluded trials.

SELECTION CRITERIA: We considered randomised controlled trials (RCTs) that evaluated any intervention for treating PEB, with male or female participants of any age, regardless of type of teeth (anterior or posterior, mandibular or maxillary). Trials could compare one type of intervention with another, with placebo, or with no treatment.

DATA COLLECTION AND ANALYSIS: Three pairs of review authors independently screened search records. We obtained full papers for potentially relevant trials. If data had been extracted, we would have followed the methods described in the Cochrane Handbook for Systematic Reviews of Interventions for the statistical analysis.

MAIN RESULTS: We did not find any randomised controlled trial suitable for inclusion in this review.

AUTHORS' CONCLUSIONS: We were unable to identify any reports of randomised controlled trials that evaluated the effects of different interventions for the treatment of post-extraction bleeding. In view of the lack of reliable evidence on this topic, clinicians must use their clinical experience to determine the most appropriate means of treating this condition, depending on patient-related factors. There is a need for well designed and appropriately conducted clinical trials on this topic, which conform to the CONSORT statement (www.consort-statement.org/).
A Systematic Review on Effect of Single-Dose Preoperative Antibiotics at Surgical Osteotomy Extraction of Lower Third Molars.

Purpose: We conducted a systematic review of randomized controlled trials (RCTs) to evaluate the effectiveness of a single dose of preoperative antibiotic administered perorally, intravenously, intramuscularly, or topically for preventing infection and alveolar osteitis in lower third molar surgical extraction applying osteotomy.

Materials and Methods: The Medline, Cochrane Library, and Embase databases were searched for RCTs until August 2015. The primary outcome measure was postoperative inflammatory reactions, with a subgroup analysis of surgical site infection (SSI) and alveolar osteitis. A risk-of-bias assessment of the included trials was done according to the Cochrane guidelines.

Results: A total of 53 RCTs were identified; however, only 10 could be included in the present review. A meta-analysis of the 10 trials showed a statistically significant reduction in SSI and alveolar osteitis when antibiotics had been used (odds ratio [OR] = 0.30; 95% confidence interval [CI], 0.19 to 0.47; P <= .00001). A subgroup meta-analysis of 6 trials showed that preoperative administration of antibiotics perorally or intravenously significantly reduced the incidence of SSI (OR = 0.19; 95% CI, 0.08 to 0.45; P = .0002). A meta-analysis of 5 trials showed that 2 g of preoperative oral amoxicillin was able to reduce the incidence of SSI and the difference was statistically significant (OR = 0.22; 95% CI, 0.08 to 0.59; P = .002). Seven trials reported on alveolar osteitis, 6 studies on oral use, 2 studies on amoxicillin, 2 on metronidazole, 2 on penicillin V, and 1 on the intravenous use of penicillin. The pooled results showed that preoperative antibiotics significantly reduced the prevalence of alveolar osteitis (OR = 0.35; 95% CI, 0.13 to 0.96; P = .04). The subgroup analysis showed that penicillin V was effective in reducing the incidence of alveolar osteitis (OR = 0.1; 95% CI, 0.03 to 0.30; P <= .0001).

Conclusions: A single oral dose of 2 g of amoxicillin before lower third molar osteotomy surgical extraction significantly decreased the incidence of SSI. A single dose of 0.8 g of penicillin V before lower third molar osteotomy surgical extraction significantly decreased the incidence of alveolar osteitis.
RECENT REVIEWS RELATED TO MINOR ORAL SURGERY

Abstract
PURPOSE: During the last two decades, many clinical trials and systematic reviews (SRs) have evaluated the clinical outcomes of immediate implant placement and its effects on soft and hard tissue. Despite the increased popularity and knowledge of immediate implant placement, the evidence about its benefits is still not conclusive. The aim of this review was to assess the quality of published SRs with meta-analyses of immediate implant placement and provide an overview of the key findings.

MATERIALS AND METHODS: Searches of MEDLINE, EMBASE, the Cochrane Library, and the Database of Abstracts of Reviews of Effects were performed to include SRs with meta-analysis of immediate implant placement. Two independent reviewers assessed the methodologic quality of SRs using A MeaSurement Tool to Assess Reviews (AMSTAR), the 2003 checklist of Glenny et al, and the Critical Appraisal Skills Program (CASP).

RESULTS: A total of 742 articles were found; 5 were included. All included SRs were published after 2007. Implant survival rate was the most commonly reported outcome. There was insufficient information in the primary studies, and hence in the SRs, about other outcomes and any adverse events. However, the methodologic quality of the SRs was considered to be high.

CONCLUSION: There is a general consensus among the included SRs that it is still premature to draw definite conclusions about the potential benefits of immediate implant placement because of the limited number of well-designed controlled clinical trials. Improvements in future SRs are still required and can be achieved by following established quality criteria, namely researching the unpublished literature and literature not in English and by reporting the quality assessment of primary studies and any sources of bias.

Publication Type
Date Created
20160323
Year of Publication
2016
**Aggregatibacter aphrophilus** brain abscess secondary to primary tooth extraction: Case report and literature review. [Review]

**Source**

**Abstract**
We report on a rare case of Aggregatibacter aphrophilus brain abscess of odontogenic origin in a 6-year-old previously healthy boy, who had close contact with a pet dog. The poodle was the most likely source of the infecting organism, which subsequently colonized the patient's oral cavity. The abscess was surgically removed and he recovered completely after prolonged antibiotic treatment with meropenem. We also review the relevant medical literature on A. aphrophilus pediatric brain abscesses.

**Publication Type**
Case Reports. Journal Article. Review.

**Date Created**
20160219

**Year of Publication**
2016

**Nitrous oxide as a conscious sedative in minor oral surgical procedure. [Review]**

**Source**

**Abstract**
Nitrous oxide (N2O) is the most commonly used inhalation anesthetic in dentistry and is commonly used in emergency centers and ambulatory surgery centers as well. When used alone, it is incapable of producing general anesthesia reliably. However, as a single agent, it has an impressive safety and is excellent for providing minimal and moderate sedation for apprehensive minor oral surgical procedure. In this article, action of N2O in overcoming the anxiety and pain of the patient during the minor oral surgery and its advantages and disadvantages, have been reviewed.

**Publication Type**
Journal Article. Review.

**Date Created**
20150527

**Year of Publication**
2015
Does ridge preservation following tooth extraction improve implant treatment outcomes: a systematic review: Group 4: Therapeutic concepts & methods. [Review]

MATERIAL AND METHODS: Electronic (MEDLINE, EMBASE, Cochrane Central Register LILACS; Web of Science) and hand search was conducted up to July 2014. Randomised controlled trials (RCT), controlled clinical trials (CCT) and prospective cohort studies with USH as controls were eligible in the analysis for Q1. RCTs, CCTs and prospective case series, with or without USH as control, were eligible for Q2.

RESULTS: Ten (8 RCTs, 2 CCTs) and 30 studies (21 RCTs, 7 CCTs, 2 case series) were included in the analysis for Q1 and Q2, respectively. The risk for bias was unclear or high in most of them. Q1: Implant placement was feasible in ARP-treated and USH sites. These implants presented similar survival/success rates and marginal bone levels. The need for further augmentation decreased when ARP was performed (Relative risk: 0.15, 95% CI: 0.07-0.3). Q2: The SE for implant placement feasibility was 98.5% (95% CI: 96.4-99.6) in GBR and 96.2 (95% CI: 93.1-98.2) in socket filler group. The SE for need for further augmentation was 11.9 (95% CI: 5.6-19.9) for GBR and 13.7% (95% CI: 5.0-25.6) for socket filler groups. GBR and socket filler presented similar SE for survival/success rates and average marginal bone loss. Limited data were available for implant-related outcomes in sites treated with socket seal.

CONCLUSIONS: There is limited evidence to support the clinical benefit of ARP over USH in improving implant-related outcomes despite a decrease in the need for further ridge augmentation during implant placement. Similar implant placement feasibility, survival/success rates and marginal bone loss should be anticipated following ARP or USH. Currently, it is not clear which type of ARP intervention has a superior impact on implant outcomes.

Copyright © 2015 John Wiley & Sons A/S. Published by John Wiley & Sons Ltd.
BACKGROUND: This is a review of the management considerations regarding exodontia for patients taking antithrombotic medications that affect platelet function or aggregation.

METHODS: The authors reviewed the literature, focusing on the indications and mechanisms of antiplatelet therapy and the perioperative management of patients taking these agents who require exodontia or other dentoalveolar surgery.

RESULTS: Dentists making management decisions regarding patients taking antiplatelet therapy should consider the patient's risk of experiencing perioperative hemorrhage against the risk of experiencing complications associated with thromboembolic events. The risk of perioperative bleeding complications is low for patients taking single or dual antiplatelet therapy. Intraoperative and postoperative bleeding can be controlled with local hemostatic measures.

CONCLUSION: For patients taking antiplatelet medication, bleeding risk for exodontia is generally lower than the risk of experiencing thromboembolic events owing to cessation of therapy.

PRACTICAL IMPLICATIONS: Dentists can safely complete exodontia in patients who continue taking antiplatelet therapy. The dentist should consult the patient's prescribing physician before considering altering the patient's antiplatelet therapy regimen.

Abstract
Tooth extraction induces a series of complex and integrated local changes within the investing hard and soft tissues. These local alterations arise in order to close the socket wound and to restore tissue homeostasis, and are referred to as "socket healing". The aims of the present report were twofold: first, to describe the socket-healing process; and, second, to discuss what can be learned from the temporal sequence of healing events, in order to improve treatment outcomes. The socket-healing process may be divided into three sequential, and frequently overlapping, phases: inflammatory; proliferative; and modeling/remodeling. Several clinical and experimental studies have demonstrated that the socket-healing process promotes up to 50% reduction of the original ridge width, greater bone resorption at the buccal aspect than at the lingual/palatal counterpart and a larger amount of alveolar bone reduction in the molar region. In conclusion, tooth extraction, once a simple and straightforward surgical procedure, should be performed in the knowledge that ridge reduction will follow and that further clinical steps should be considered to compensate for this, when considering future options for tooth replacement.

Source

Abstract
This article aims to highlight the strengths and weaknesses within the selected evidence to aid readers in clinical decision-making when managing patients before and after third molar surgery. Preoperative methods to prevent nerve damage, including the use of computed tomography (CT), are discussed. Preoperative considerations are also summarised, including risk factors such as increasing the occurrence of nerve deficit, weakness and damage, and the role of cone beam CT and when this should be used. The postoperative complications pain, swelling and infection are considered and the available evidence for the use of different protocols, regimes and combinations of therapies summarised.

Remote Link

Authors
Nayyar J; Clarke M; O’Sullivan M; Stassen LF.

Institution
Nayyar, J. Dublin Dental University Hospital, Trinity College Dublin, Ireland.
Clarke, M. Dublin Dental University Hospital, Trinity College Dublin, Ireland.
O’Sullivan, M. Dublin Dental University Hospital, Trinity College Dublin, Ireland.
Stassen, L F A. Dublin Dental University Hospital, Trinity College Dublin, Ireland.

Title
Fractured root tips during dental extractions and retained root fragments. A clinical dilemma?. [Review]

Source

Abstract
Root tip fracture can occur during the extraction of teeth. The clinician must then decide to either leave the root fragment in situ, or to attempt its removal. A similar decision is made when retained root fragments are found incidentally on oral radiographs. The prevalence of retained root fragments is reported as 11-37%. This article aims to highlight the risk benefit matrix of the removal or retention of retained root fragments, in light of the present evidence base.

Remote Link

Authors
Lopez Valverde ME; Albero Gamboa R; Boj Carceller D; Melchor Lacleta I; Trincado Aznar P.

Institution
Lopez Valverde, Maria Eugenia. Unidad de Endocrinologia y Nutricion, Hospital Universitario Miguel Servet, Zaragoza, Espana.
Albero Gamboa, Ramon. Unidad de Endocrinologia y Nutricion, Hospital Universitario Miguel Servet, Zaragoza, Espana.
Boj Carceller, Diana. Unidad de Endocrinologia y Nutricion, Hospital Universitario Miguel Servet, Zaragoza, Espana.
Melchor Lacleta, Isabel. Unidad de Endocrinologia y Nutricion, Hospital Universitario Miguel Servet, Zaragoza, Espana.
Trincado Aznar, Pablo. Unidad de Endocrinologia y Nutricion, Hospital Universitario Miguel Servet, Zaragoza, Espana.

Title
Silent pituitary infarction of an uncommon etiology. [Review]

Source
BACKGROUND: Although regenerative treatment options are available, periodontal regeneration is still regarded as insufficient and unpredictable.

AIM: This review article provides scientific background information on the animated 3D film Cell-to-Cell Communication - Periodontal Regeneration.

RESULTS: Periodontal regeneration is understood as a recapitulation of embryonic mechanisms. Therefore, a thorough understanding of cellular and molecular mechanisms regulating normal tooth root development is imperative to improve existing and develop new periodontal regenerative therapies. However, compared to tooth crown and earlier stages of tooth development, much less is known about the development of the tooth root. The formation of root cementum is considered the critical element in periodontal regeneration. Therefore, much research in recent years has focused on the origin and differentiation of cementoblasts. Evidence is accumulating that the Hertwig's epithelial root sheath (HERS) has a pivotal role in root formation and cementogenesis. Traditionally, ectomesenchymal cells in the dental follicle were thought to differentiate into cementoblasts. According to an alternative theory, however, cementoblasts originate from the HERS. What happens when the periodontal attachment system is traumatically compromised? Minor mechanical insults to the periodontium may spontaneously heal, and the tissues can structurally and functionally be restored. But what happens to the periodontium in case of periodontitis, an infectious disease, after periodontal treatment? A non-regenerative treatment of periodontitis normally results in periodontal repair (i.e., the formation of a long junctional epithelium) rather than regeneration. Thus, a regenerative treatment is indicated to restore the original architecture and function of the periodontium. Guided tissue regeneration or enamel matrix proteins are such regenerative therapies, but further improvement is required. As remnants of HERS persist as epithelial cell rests of Malassez in the periodontal ligament, these epithelial cells are regarded as a stem cell niche that can give rise to new cementoblasts. Enamel matrix proteins and members of the transforming growth factor beta (TGF-s) superfamily have been implicated in cementoblast differentiation.

CONCLUSION: A better knowledge of cell-to-cell communication leading to cementoblast differentiation may be used to develop improved regenerative therapies to reconstitute periodontal tissues that were lost due to periodontitis.
MANAGEMENT OF DENTAL EXTRACTIONS IN PATIENTS TAKING WARFARIN AS ANTICOAGULANT TREATMENT: A SYSTEMATIC REVIEW. [Review]

Abstract

OBJECTIVES: The management of patients on anticoagulation therapy is challenging. The objective of this study was to conduct a systematic review to establish the effectiveness of hemostatic interventions to prevent postoperative bleeding following dental extractions among patients taking warfarin.

METHODS: A systematic review of the literature was conducted using PubMed, EMBASE and the Cochrane Central Register of Controlled Trials databases and applying relevant MeSH terms. Identified studies were screened independently by 2 reviewers using the following selection criteria: tooth extraction, patients taking warfarin as the only anticoagulant, randomized controlled trials and a hemostatic intervention.

RESULTS: Six articles were included in the final review, all evaluating different interventions. Oral or local hemostatic agents were compared in 4 studies where patients continued taking warfarin before and after the procedure; in 3 studies, there were no differences between the agents in preventing postoperative bleeding and, in 1, Histoacryl glue was superior to a gelatin sponge. Two studies compared warfarin continuation with temporary discontinuation and found that continuation did not increase the risk of bleeding in patients who had an international normalized ratio (INR) within the therapeutic range.

CONCLUSIONS: Patients with an INR within the therapeutic range can safely continue taking the regular dose of warfarin before dental extractions. There is no evidence to support or reject the superiority of local hemostatic agents over warfarin discontinuation.

Source
Patients taking bisphosphonates and other anti-resorptive drugs are likely to attend general dental practice. The term 'bisphosphonate' is often immediately associated with osteonecrosis of the jaws (ONJ). Risk assessment and subsequent management of these patients should be carried out taking into account all the risk factors associated with ONJ. The introduction of newer drugs, also shown to be associated with ONJ, demands increased awareness of general dental practitioners about these medications. CPD/CLINICAL RELEVANCE: This paper provides an update on medication-related ONJ and considers the effects of anti-resorptive drugs on the management of patients needing exodontia, treatment for periodontal disease and dental implant placement.

Antifibrinolytic therapy for preventing oral bleeding in patients with haemophilia or Von Willebrand disease undergoing minor oral surgery or dental extractions. [Review] Source

BACKGROUND: Minor oral surgery or dental extractions (oral or dental procedures) are widely performed and can be complicated by hazardous oral bleeding, especially in people with an inherited bleeding disorder such as haemophilia or Von Willebrand disease. The amount and severity of singular bleedings depend on disease-related factors, such as the severity of the haemophilia, both local and systemic patient factors (such as periodontal inflammation, vasculopathy or platelet dysfunction) and intervention-related factors (such as the type and number of teeth extracted or the dimension of the wound surface). Similar to local haemostatic measures and suturing, antifibrinolytic therapy is a cheap, safe and potentially effective treatment to prevent bleeding complications in individuals with bleeding disorders undergoing oral or dental procedures. However, a systematic review of trials reporting outcomes after oral surgery or a dental procedure in people with an inherited bleeding disorder, with or without, the use of antifibrinolytic agents has not been performed to date.

OBJECTIVES: The primary objective was to assess the efficacy of local or systemic use of antifibrinolytic agents to prevent bleeding complications in people with haemophilia or Von Willebrand disease undergoing oral or dental procedures. Secondary objectives were to assess if antifibrinolytic agents can replace or reduce the need for clotting factor concentrate therapy in people with haemophilia or Von Willebrand disease and to further establish the effects of these agents on bleeding in oral or dental procedures for each of these populations.
Intravenous fluids are administered in virtually every parenteral sedation and general anesthetic. The purpose of this article is to review the physiology of body-water distribution and fluid dynamics at the vascular endothelium, evaluation of fluid status, calculation of fluid requirements, and the clinical rationale for the use of various crystalloid and colloid solutions. In the setting of elective dental outpatient procedures with minimal blood loss, isotonic balanced crystalloid solutions are the fluids of choice. Colloids, on the other hand, have no use in outpatient sedation or general anesthesia for dental or minor oral surgery procedures but may have several desirable properties in long and invasive maxillofacial surgical procedures where advanced hemodynamic monitoring may assess the adequacy of intravascular volume.

AUTHORS' CONCLUSIONS: Despite the discovery of a beneficial effect of systemically administered tranexamic acid and epsilon aminocaproic acid in preventing postoperative bleeding in people with haemophilia undergoing dental extraction, the limited number of randomised controlled trials identified, in combination with the small sample sizes and heterogeneity regarding standard therapy and treatment regimens used, do not allow us to conclude definite efficacy of antifibrinolytic therapy in oral or dental procedures in people with haemophilia. No trials were identified in people with Von Willebrand disease.

SEARCH METHODS: We searched the Cochrane Cystic Fibrosis and Genetic Disorders Group's Coagulopathies Trials Register, compiled from electronic database searches of the Cochrane Central Register of Controlled Trials (CENTRAL), of MEDLINE and from handsearching of journals and conference abstract books. We additionally searched the reference lists of relevant articles and reviews. We searched PubMed, Embase and The Cochrane Library. Additional searches were performed in ClinicalTrials.gov, WHO International Clinical Trials Registry Platform (ICTRP). Date of last search of the Cystic Fibrosis and Genetic Disorders Group's Coagulopathies Trials Register: 14 December 2015.

SELECTION CRITERIA: Randomised and quasi-randomised controlled trials in people with haemophilia or Von Willebrand disease undergoing oral or dental procedures using antifibrinolytic agents (tranexamic acid or epsilon aminocaproic acid) to prevent perioperative bleeding compared to no intervention or usual care with or without placebo.

DATA COLLECTION AND ANALYSIS: Two authors independently screened the titles and abstracts of all identified articles. Full texts were obtained for potentially relevant abstracts and two authors independently assessed these for inclusion based on the selection criteria. A third author verified trial eligibility. Two authors independently performed data extraction and risk of bias assessments using standardized forms.

MAIN RESULTS: While there were no eligible trials in people with Von Willebrand disease identified, two randomised, double-blind, placebo-controlled trials (total of 59 participants) in people with haemophilia undergoing dental extraction were included. One trial of tranexamic acid published in 1972 included 28 participants with mild, moderate or severe haemophilia A and B and one of epsilon aminocaproic acid published in 1971 included 31 people with haemophilia with factor VIII or factor IX levels less than 15%. Overall, the two included trials showed a beneficial effect of tranexamic acid and EACA, administered systemically, in reducing the number of bleedings, the amount of blood loss and the need for therapeutic clotting factor concentrates. Regarding postoperative bleeding, the tranexamic acid trial showed a risk difference of -0.64 (95% confidence interval -0.93 to -0.36) and the EACA trial a risk difference of -0.50 (95% confidence interval 0.77 to -0.22). The combined risk difference of both trials was -0.57 (95% confidence interval -0.76 to -0.37), with the quality of the evidence (GRADE) for this outcome is rated as moderate. Side effects occurred once and required stopping epsilon aminocaproic acid (combined risk difference of -0.03 (95% CI -0.08 to 0.13). There was heterogeneity between the two trials regarding the proportion of people with severe haemophilia included, the concomitant standard therapy and fibrinolytic agent treatment regimens used. We cannot exclude that a selection bias has occurred in the epsilon aminocaproic acid trial, but overall the risk of bias appeared to be low for both trials.

AUTHORS' CONCLUSIONS: Despite the discovery of a beneficial effect of systemically administered tranexamic acid and epsilon aminocaproic acid in preventing postoperative bleeding in people with haemophilia undergoing dental extraction, the limited number of randomised controlled trials identified, in combination with the small sample sizes and heterogeneity regarding standard therapy and treatment regimens between the two trials, do not allow us to conclude definite efficacy of antifibrinolytic therapy in oral or dental procedures in people with haemophilia. No trials were identified in people with Von Willebrand disease.

Publication Type
Date Created
20160102
Year of Publication
2015
Unique Identifier
26650497
Status
MEDLINE
Authors
Saraghi M.
Authors Full Name
Saraghi, Mana.
Institution
Saraghi, Mana. Attending Dentist Anesthesiologist, SBH Health System, Bronx, New York, and Clinical Assistant Professor, Ostrow School of Dentistry of USC, Los Angeles, California.
Title
Intraoperative Fluids and Fluid Management for Ambulatory Dental Sedation and General Anesthesia. [Review]
Source
Local Messages
THIS JOURNAL IS AVAILABLE IN THE BDA LIBRARY, TO REQUEST THIS ARTICLE FROM THE LIBRARY GO TO: https://www.bda.org/library/journals-articles/Documents/photocopy-request-form.pdf
Abstract
Intravenous fluids are administered in virtually every parenteral sedation and general anesthetic. The purpose of this article is to review the physiology of body-water distribution and fluid dynamics at the vascular endothelium, evaluation of fluid status, calculation of fluid requirements, and the clinical rationale for the use of various crystalloid and colloid solutions. In the setting of elective dental outpatient procedures with minor blood loss, isotonic balanced crystalloid solutions are the fluids of choice. Colloids, on the other hand, have no use in outpatient sedation or general anesthesia for dental or minor oral surgery procedures but may have several desirable properties in long and invasive maxillofacial surgical procedures where advanced hemodynamic monitoring may assess the adequacy of intravascular volume.
Publication Type
Journal Article. Review.
Date Created
20160309
Year of Publication
2015
**RECENT REVIEWS RELATED TO MINOR ORAL SURGERY**

---

**Unique Identifier**
26637248

**Status**
MEDLINE

**Authors**
Eichenberger M; Erb J; Zwahlen M; Schatzle M.

**Authors Full Name**
Eichenberger, M; Erb, J; Zwahlen, M; Schatzle, M.

**Institution**
- Eichenberger, M. Clinic for Orthodontics and Paediatric Dentistry, Center of Dental Medicine, University of Zurich, Zurich, Switzerland.
- Erb, J. Clinic for Orthodontics and Paediatric Dentistry, Center of Dental Medicine, University of Zurich, Zurich, Switzerland.
- Zwahlen, M. Institute of Social and Preventive Medicine, University of Bern, Bern, Switzerland.
- Schatzle, M. Clinic for Orthodontics and Paediatric Dentistry, Center of Dental Medicine, University of Zurich, Zurich, Switzerland.

**Title**
The timing of extraction of non-restorable first permanent molars: a systematic review. [Review]

**Source**

**Abstract**
AIM: To identify the ideal timing of first permanent molar extraction to reduce the future need for orthodontic treatment.

MATERIALS AND METHODS: A computerised database and subsequent manual search was performed using Medline database, Embase and Ovid, covering the period from January 1946 to February 2013. Two reviewers (JE and ME) extracted the data independently and evaluated if the studies matched the inclusion criteria. Inclusion criteria were specification of the follow-up with clinical examination or analysis of models, specification of the chronological age or dental developmental stage at the time of extraction, no treatment in between, classification of the treatment result into perfect, good, average and poor. The search was limited to human studies and no language limitations were set.

RESULTS: The search strategy resulted in 18 full-text articles, of which 6 met the inclusion criteria. By pooling the data from maxillary sites, good to perfect clinical outcome was estimated in 72% (95% confidence interval 63%-82%). Extractions at the age of 8-10.5 years tended to show better spontaneous clinical outcomes compared to the other age groups. By pooling the data from mandibular sites, extractions performed at the age of 8-10.5 and 10.5-11.5 years showed significantly superior spontaneous clinical outcome with a probability of 50% and 59% likelihood, respectively, to achieve good to perfect clinical result (p<0.05) compared to the other age groups (<8 years of age: 34%, >11.5 years of age: 44%).

CONCLUSION: Prevention of complications after first permanent molars extractions is an important issue. The overall success rate of spontaneous clinical outcome for maxillary extraction of first permanent molars was superior to mandibular extraction. Extractions of mandibular first permanent molars should be performed between 8 and 11.5 years of age in order to achieve a good spontaneous clinical outcome. For the extraction in the maxilla, no firm conclusions concerning the ideal extraction timing could be drawn.

---

**Unique Identifier**
26469902

**Status**
MEDLINE

**Authors**
Jiang Q; Qiu Y; Yang C; Yang J; Chen M; Zhang Z.

**Authors Full Name**
Jiang, Qian; Qiu, Yating; Yang, Chi; Yang, Jingyun; Chen, Minjie; Zhang, Zhiyuan.

**Institution**
- Jiang, Qian. From the Department of Oral and Maxillofacial Surgery, Shanghai Ninth People's Hospital, Shanghai Jiaotong University School of Medicine, Shanghai, China (QJ, YQ, CY, MC, ZZ); Rush Alzheimer's Disease Center (JY); and Department of Neurological Sciences, Rush University Medical Center, Chicago, Illinois (JY).

**Title**
Piezoelectric Versus Conventional Rotary Techniques for Impacted Third Molar Extraction: A Meta-analysis of Randomized Controlled Trials. [Review]

**Source**

**Abstract**
Impacted third molars are frequently encountered in clinical work. Surgical removal of impacted third molars is often required to prevent clinical symptoms. Traditional rotary cutting instruments are potentially injurious, and piezoeurosurgery, as a new osteotomy technique, has been introduced in oral and maxillofacial surgery. No consistent conclusion has been reached regarding whether...
this new technique is associated with fewer or less severe postoperative sequelae after third molar extraction. The aim of this study was to compare piezosurgery with rotary osteotomy techniques, with regard to surgery time and the severity of postoperative sequelae, including pain, swelling, and trismus. We conducted a systematic literature search in the Cochrane Library, PubMed, Embase, and Google Scholar. The eligibility criteria of this study included the following: the patients were clearly diagnosed as having impacted mandibular third molars; the patients underwent piezosurgery osteotomy, and in the control group rotary osteotomy techniques, for removing impacted third molars; the outcomes of interest include surgery time, trismus, swelling or pain; the studies are randomized controlled trials. We used random-effects models to calculate the difference in the outcomes, and the corresponding 95% confidence interval. We calculated the weighted mean difference if the trials used the same measurement, and a standardized mean difference if otherwise. A total of seven studies met the eligibility criteria and were included in our analysis. Compared with rotary osteotomy, patients undergoing piezosurgery experienced longer surgery time (mean difference 4.13 minutes, 95% confidence interval 2.75-5.52, P < 0.0001). Patients receiving the piezoelectric technique had less swelling at postoperative days 1, 3, 5, and 7 (all Ps <=0.023). Additionally, there was a trend of less postoperative pain and trismus in the piezosurgery groups. The number of included randomized controlled trials and the sample size of each trial were relatively small, double blinding was not possible, and cost analysis was unavailable due to a lack of data. Our meta-analysis indicates that although patients undergoing piezosurgery experienced longer surgery time, they had less postoperative swelling, indicating that piezosurgery is a promising alternative technique for extraction of impacted third molars.
The orthodontic extraction of permanent molars: a literature review. [Review]

Source

Abstract
The most common cause of dental crowding is the presence of an arch-length-tooth-size discrepancy. Conventional methods of gaining space in orthodontics involve the extraction of teeth, often premolars. However, there are a number of clinical situations in which the extraction of permanent molars might be considered. This paper highlights the indications, advantages, disadvantages and timing of the extraction of the first, second and third permanent molars in the treatment of a crowded malocclusion.

Effect of oral contraceptive use on the incidence of dry socket in females following impacted mandibular third molar extraction: a meta-analysis.

Abstract
The aim of this comprehensive meta-analysis was to provide evidence-based data to test whether oral contraceptive (OC) use can promote the incidence of dry socket (DS) in females following impacted mandibular third molar extraction. PubMed, the Cochrane Library, and Elsevier Science Direct databases were searched. The pooled risk ratio (RR) with 95% confidence interval (CI) was calculated using fixed-effects or random-effects model analysis. Heterogeneity among studies was evaluated with the Cochran test and I(2) statistic. Study quality was assessed with the Newcastle-Ottawa scale. Of 70 articles identified in the search, 12 reporting 16 clinical controlled trials were included in this study. The incidence of DS was significantly greater in the OC groups than in the control groups (RR 1.80, 95% CI 1.33-2.43). Subgroup analyses showed that the unit assessed (tooth or patient), the region in which the study was conducted, and the intervention were not related to the incidence of DS in females taking OC after impacted mandibular third molar extraction. The sensitivity analysis showed no significant change when any one study was excluded. Publication bias was also not detected. This study suggests that OC use may promote the incidence of DS in females following impacted mandibular third molar extraction.

Comment
Comment in: Evid Based Dent. 2015 Sep;16(3):92; PMID: 26492809

Source
**BDA LIBRARY MEDLINE SEARCH**

**RECENT REVIEWS RELATED TO MINOR ORAL SURGERY**

26078092
Status
MEDLINE
Authors
Block MS.
Authors Full Name
Block, Michael S.
Institution
Block, Michael S. Private Practice, 110 Veterans Memorial Boulevard, #112, Metairie, LA 70005, USA. Electronic address: DrBlock@cdrnola.com.
Title
Dental Extractions and Preservation of Space for Implant Placement in Molar Sites. [Review]
Source
Local Messages
THIS JOURNAL IS AVAILABLE IN THE BDA LIBRARY, BDA MEMBERS CAN ALSO ACCESS THIS JOURNAL ONLINE FROM 2002 TO DATE. Go to www.bda.org/ejournals
Abstract
The clinician is often asked to remove a tooth and place an implant into the site. The implant must be placed with appropriate stability to allow for integration to occur, which requires bone presence. Bone is also necessary to allow for ideal implant positioning within the alveolus for functional and esthetic concerns. The purpose of this article is to discuss the changes in socket dimensions over time and how to promote space maintenance, with an algorithm for treatment based on evidence.

Copyright © 2015 Elsevier Inc. All rights reserved.
Publication Type
Journal Article. Review.
Date Created
20150803
Year of Publication
2015

<54>
Unique Identifier
26070801
Status
MEDLINE
Authors
Rafetto LK.
Authors Full Name
Rafetto, Louis K.
Institution
Rafetto, Louis K. Department of Oral & Maxillofacial Surgery & Hospital Dentistry, Christiana Care Health System, 3512 Silverside Road, Suite 12, Wilmington, DE 19810, USA. Electronic address: lkrafetto@gmail.com.
Title
Managing Impacted Third Molars. [Review]
Source
Local Messages
THIS JOURNAL IS AVAILABLE IN THE BDA LIBRARY, BDA MEMBERS CAN ALSO ACCESS THIS JOURNAL ONLINE FROM 2002 TO DATE. Go to www.bda.org/ejournals
Abstract
Oral and maxillofacial surgeons can be reasonably certain of the behavior of wisdom teeth and the outcomes of different management strategies. An organized approach based on symptom and disease status simplifies management recommendations. The patients who provide the greatest challenge to certainty are those whose wisdom teeth are asymptomatic and disease free. Patients who elect to retain a third molar should be advised about this risk of removal over time. Given the increased complication rate when third molars are removed with increasing age, it may be prudent to extract them by the middle of the third decade.

Copyright © 2015 Elsevier Inc. All rights reserved.
Publication Type
Journal Article. Review.
Date Created
20150803
Year of Publication
2015

<55>
Unique Identifier
26061574
Status
MEDLINE
Authors
Costa FW; Esses DF; de Barros Silva PG; Carvalho FS; Sa CD; Albuquerque AF; Bezerra TP; Ribeiro TR; Sa Roriz Fonteles C; Soares EC.
Authors Full Name
BACKGROUND: Alveolar bone changes following tooth extraction can compromise prosthodontic rehabilitation. Alveolar ridge preservation (ARP) has been proposed to limit these changes and improve prosthodontic and aesthetic outcomes when implants are used.

OBJECTIVES: To assess the clinical effects of various materials and techniques for ARP after tooth extraction compared with extraction alone or other methods of ARP, or both, in patients requiring dental implant placement following healing of extraction sockets.

SEARCH METHODS: The following electronic databases were searched: the Cochrane Oral Health Group's Trials Register (to 22 July 2014), the Cochrane Central Register of Controlled Trials (CENTRAL) (The Cochrane Library, 2014, Issue 6), MEDLINE via OVID (1946 to 22 July 2014), EMBASE via OVID (1980 to 22 July 2014), LILACS via BIREME (1982 to 22 July 2014), the Meta Register of Current Controlled Trials (to 22 July 2014), ClinicalTrials.gov (to 22 July 2014), the World Health Organization
BACKGROUND: The aim of this study was to evaluate the predictive value of panoramic radiography on inferior alveolar nerve (IAN) injury after extraction of the mandibular third molar.

METHODS: Relevant studies up to 1 June 2014 that discussed the association of panoramic radiography signs and post-mandibular third molar extraction IAN injury were systematically retrieved from the databases of PubMed, Embase, Springerlink, Web of Science and Cochrane library. The effect size of pooled sensitivity, specificity, positive likelihood ratios (PLR), negative likelihood ratios (NLR) and diagnostic odds ratio (DOR) with their 95% confidence intervals (CI) were statistically analysed with Meta-disc 1.4 software.
BACKGROUND: In people with haemophilia or other congenital bleeding disorders undergoing surgical interventions, haemostatic treatment is needed in order to correct the underlying coagulation abnormalities and minimise the bleeding risk. This treatment varies according to the specific haemostatic defect, its severity and the type of surgical procedure. The aim of treatment is to ensure adequate haemostatic coverage for as long as the bleeding risk persists and until wound healing is complete.

OBJECTIVES: To assess the effectiveness and safety of different haemostatic regimens (type, dose and duration, modality of administration and target haemostatic levels) administered in people with haemophilia or other congenital bleeding disorders for preventing bleeding complications during and after surgical procedures.

SEARCH METHODS: We searched the Cochrane Cystic Fibrosis and Genetic Disorders Group’s Coagulopathies Trials Register, compiled from electronic database searches and handsearching of journals and conference abstract books. We also searched the reference lists of relevant articles and reviews. Date of the last search: 20 November 2014.

SELECTION CRITERIA: Randomised and quasi-randomised controlled trials comparing any hemostatic treatment regimen to no treatment or to another active regimen in children and adults with haemophilia or other congenital bleeding disorders undergoing any surgical intervention.

DATA COLLECTION AND ANALYSIS: Two authors independently assessed trials (eligibility and risks of bias) and extracted data. Meta-analyses were performed on available and relevant data.

MAIN RESULTS: Of the 16 identified trials, four (112 participants) were eligible for inclusion. Two trials evaluated 59 people with haemophilia A and B undergoing 63 dental extractions. Trials compared the use of a different type (tranexamic acid or epsilon-aminocaproic acid) and regimen of antifibrinolytic agents as haemostatic support to the initial replacement treatment. Neither trial specifically addressed mortality (one of this review’s primary outcomes); however, in the frame of safety assessments, no fatal adverse events were reported. The second primary outcome of blood loss was assessed after surgery and these trials showed the reduction of blood loss and requirement of post-operative replacement treatment in people receiving antifibrinolytic agents compared with placebo. The remaining primary outcome of need for re-intervention was not reported by either trial. Two trials reported on 53 people with haemophilia A and B with inhibitors treated with different regimens of recombinant activated factor VII (rFVIIa) for haemostatic coverage of 33 major and 20 minor surgical interventions. Neither of the included trials specifically addressed any of the review’s primary outcomes (mortality, blood loss and need for re-intervention). In one trial a high-dose rFVIIa regimen (90 μg/kg) was compared with a low-dose regimen (35 μg/kg); the higher dose showed increased haemostatic efficacy, in particular in major surgery, with shorter duration of treatment, similar total dose of rFVIIa administered and similar safety levels. In the second trial, bolus infusion and continuous infusion of rFVIIa were compared, showing similar haemostatic efficacy, duration of treatment and safety.

AUTHORS’ CONCLUSIONS: There is insufficient evidence from randomised controlled trials to assess the most effective and safe haemostatic treatment to prevent bleeding in people with haemophilia or other congenital bleeding disorders undergoing surgical procedures. Ideally large, adequately powered, and well-designed randomised controlled trials would be needed, in particular to address the cost-effectiveness of such demanding treatments in the light of the increasing present economic constraints, and to explore the new challenge of ageing patients with haemophilia or other congenital bleeding disorders. However,
performing such trials is always a complex task in this setting and presently does not appear to be a clinical and research priority. Indeed, major and minor surgeries are effectively and safely performed in these individuals in clinical practice, with the numerous national and international recommendations and guidelines providing regimens for treatment in this setting mainly based on data from observational, uncontrolled studies.

**Title**
Coronectomy as a surgical approach to impacted mandibular third molars: a systematic review. [Review]

**Source**
Head & Face Medicine. 11:9, 2015 Apr 10.

**Abstract**
The aim of this systematic review was to evaluate the clinical effectiveness of the surgical technique of coronectomy for third molars extraction in close proximity with the inferior alveolar nerve. A literature survey carried out through PubMed, SCOPUS and the Cochrane Library from inceptions to the last access in January 31, 2014, was performed to intercept randomised clinical trials, controlled clinical trials, prospective cohort studies or retrospective studies (with or without control group) that examined the clinical outcomes after coronectomy. The following variable were evaluated: inferior alveolar nerve injury, lingual nerve injury, postoperative adverse effects, pulp disease, root migration and rate of reoperation. Ten articles qualified for the final analysis. The successful coronectomies varied from a minimum of 61.7% to a maximum of 100%. Coronectomy was associated with a low incidence of complications in terms of inferior alveolar nerve injury (0%-9.5%), lingual nerve injury (0%-2%), postoperative pain (1.1%-41.9%) and swelling (4.6%), dry socket infection (2%-12%), infection rate (1%-9.5%) and pulp disease (0.9%). Migration of the retained roots seems to be a frequent occurrence (2%-85.3%). Coronectomy appears to be a safe procedure at least in the short term, with a reduced incidence of postoperative complications. Therefore, a coronectomy can be indicated for teeth that are very close to the inferior alveolar nerve. If a second operation is needed for the remnant roots, they can be removed with a low risk of paresthesia, because the roots are generally receded from the mandibular nerve.

**Title**
Orthodontic Extraction of High-Risk Impacted Mandibular Third Molars in Close Proximity to the Mandibular Canal: A Systematic Review. [Review]

**Source**
Head & Face Medicine. 11:9, 2015 Apr 10.
PURPOSE: Extraction of mandibular third molars (M3s) in close proximity to the mandibular canal has some inherent risks to adjacent structures, such as neurologic damage to teeth, bone defects distal to the mandibular second molar (M2), or pathologic fractures in association with enlarged dentigerous cysts. The procedure for extrusion and subsequent extraction of high-risk M3s is called orthodontic extraction. This is a systematic review of the available approaches for orthodontic extraction of impacted mandibular M3s in close proximity to the mandibular canal and their outcomes.

MATERIALS AND METHODS: The PubMed, Scopus, Cochrane Central Register of Controlled Trials (CENTRAL), DOAJ, Google Scholar, OpenGrey, Iranian Science Information Database (SID), Iranmedex, and Irandoc databases were searched using specific keywords up to June 2, 2014. Studies were evaluated based on predetermined eligibility criteria, treatment approaches, and their outcomes.

RESULTS: Thirteen articles met the inclusion criteria. A total of 123 impacted teeth were extracted by orthodontic extraction and 2 cases were complicated by transient paresthesia. Three types of biomechanical approaches were used: 1) using the posterior maxillary region as the anchor for orthodontic extrusion of lower M3s, 2) simple cantilever springs attached to the M3 buttonhole, and 3) cantilever springs tied to a bonded orthodontic bracket on the M3 plus multiple-loop spring wire for distal movement of the M3. Osteo-periodontal status of M2s also improved uneventfully.

CONCLUSION: Despite the drawbacks of orthodontic extraction, removal of deeply impacted M3s using the described techniques is safe with regard to mandibular nerve injury and neurologic damage. Orthodontic extraction is recommended for extraction of impacted M3s that present a high risk of postoperative osteo-periodontal defects on the distal surface of the adjacent M2 and those associated with dentigerous cysts.

Copyright © 2015 American Association of Oral and Maxillofacial Surgeons. Published by Elsevier Inc. All rights reserved.
RESULTS: Two studies were chosen for review. The first, with an enrollment of 21 patients, reported that 10 (48%) patients had a preoperative CTX level less than 150 pg/mL and that after exodontia, none developed MRONJ. The second study, with an enrollment of 950 patients, reported that approximately 282 (30%) had a preoperative CTX level less than 150 pg/mL. All the patients with depressed CTX levels were offered a "drug holiday"; however, only 101 accepted the offer. Of the remaining 181 patients, 4 developed MRONJ. The aggregated study data have demonstrated that 30% of patients evidence CTX levels less than 150 pg/mL and that the sensitivity and specificity of these levels in association with the development of MRONJ was 100% and 80.7%, respectively. The positive predictive value was 2.09% and the negative predictive value was 100%.

CONCLUSION: The published data suggest that approximately one third of patients exposed to OBP will evidence depressed CTX levels and that only a very small minority (~2%) will develop postexodontia MRONJ. Prudence would suggest that patients scheduled for exodontia and receiving OBPs should be informed about the strengths and weaknesses of the CTX test and that it should be offered during the consent process.
Coronectomy versus surgical removal of the lower third molars with a high risk of injury to the inferior alveolar nerve. A bibliographical review. [Review]


BACKGROUND: Coronectomy is the surgical removal of the crown of the tooth deliberately leaving part of its roots. This is done with the hope of eliminating the pathology caused, and since the roots are still intact, the integrity of the inferior alveolar nerve is preserved.

OBJECTIVE: The aim is to carry out a systematic review in order to be able to provide results and conclusions with the greatest scientific evidence possible.

MATERIAL AND METHODS: A literature review is carried out through the following search engines: Pubmed MEDLINE, Scielo, Cochrane library and EMI. The level of evidence criteria from the Agency for Healthcare Research and Quality was applied, and the clinical trials' level of quality was analyzed by means of the JADAD criteria.

RESULTS: The following articles were obtained which represents a total of 17: 1 systematic review, 2 randomized clinical trials and 2 non-randomized clinical trials, 3 cohort studies, 2 retrospective studies, 3 case studies and 4 literature reviews.

CONCLUSIONS: Coronectomy is an adequate preventative technique in protecting the inferior alveolar nerve, which is an alternative to the conventional extraction of third molars, which unlike the former technique, presents a high risk of injury to the inferior alveolar nerve. However, there is a need for new clinical studies, with a greater number of samples and with a longer follow-up period in order to detect potential adverse effects of the retained roots.

The anxiolytic effect of midazolam in third molar extraction: a systematic review. [Review]


PURPOSE: To assess the efficacy of midazolam for anxiety control in third molar extraction surgery.

METHODS: Electronic retrievals were conducted in Medline (via PubMed, 1950-2013.12), the Cochrane Central Register of Controlled Trials (CENTRAL) (The Cochrane Library 2013. Issue 3), Embase (via OVID 1974-2013.12), and the System for Information on Grey Literature in Europe (SIGLE). The bibliographies of relevant clinical trials were also checked. Randomized controlled trials satisfying the inclusion criteria were evaluated, with data extraction done independently by two well-trained investigators. Disagreements were resolved by discussion or by consultation with a third member of the review team.

RESULTS: Ten studies were included, but meta-analysis could not be conducted because of the significant differences among articles. All but one article demonstrated that midazolam could relieve anxiety. One article demonstrated that propofol offered superior anxiolysis, with more rapid recovery than with midazolam. Compared with lorazepam and diazepam, midazolam did not distinctly dominate in its sedative effect, but was safer. Two articles used midazolam in multidrug intravenous sedation and proved it to be more effective than midazolam alone.

CONCLUSION: It was found, by comparison and analysis, that midazolam might be effective for use for anxiety control during third molar extraction and can be safely administered by a dedicated staff member. It can also be used with other drugs to obtain better sedative effects, but the patient's respiratory function must be monitored closely, because multidrug sedation is also more risky.
BACKGROUND: Specific clinical interventions are needed to reduce wrong-site surgery, which is a rare but potentially disastrous clinical error. Risk factors contributing to wrong-site surgery are variable and complex. The introduction of organisational and professional clinical strategies have a role in minimising wrong-site surgery.

OBJECTIVES: To evaluate the effectiveness of organisational and professional interventions for reducing wrong-site surgery (including wrong-side, wrong-procedure and wrong-patient surgery), including non-surgical invasive clinical procedures such as regional blocks, dermatological, obstetric and dental procedures and emergency surgical procedures not undertaken within the operating theatre.

SEARCH METHODS: For this update, we searched the following electronic databases: the Cochrane Effective Practice and Organisation of Care (EPOC) Group Specialised Register (January 2014), the Cochrane Central Register of Controlled Trials (The Cochrane Library 2014), MEDLINE (June 2011 to January 2014), EMBASE (June 2011 to January 2014), CINAHL (June 2011 to January 2014), Dissertations and Theses (June 2011 to January 2014), African Index Medicus, Latin American and Caribbean Health Sciences database, Virtual Health Library, Pan American Health Organization Database and the World Health Organization Library Information System. Database searches were conducted in January 2014.

SELECTION CRITERIA: We searched for randomised controlled trials (RCTs), non-randomised controlled trials, controlled before-after studies (CBAs) with at least two intervention and control sites, and interrupted-time-series (ITS) studies where the intervention time was clearly defined and there were at least three data points before and three after the intervention. We included two ITS studies that evaluated the effectiveness of organisational and professional interventions for reducing wrong-site surgery, including wrong-side and wrong-procedure surgery. Participants included all healthcare professionals providing care to surgical patients; studies where patients were involved to avoid the incorrect procedures or studies with interventions addressed to healthcare managers, administrators, stakeholders or health insurers.

DATA COLLECTION AND ANALYSIS: Two review authors independently assesses the quality and abstracted data of all eligible studies using a standardised data extraction form, modified from the Cochrane EPOC checklists. We contacted study authors for additional information.

MAIN RESULTS: In the initial review, we included one ITS study that evaluated a targeted educational intervention aimed at reducing the incidence of wrong-site tooth extractions. The intervention included examination of previous cases of wrong-site tooth extractions, educational intervention including a presentation of cases of erroneous extractions, explanation of relevant clinical guidelines and feedback by an instructor. Data were reported from all patients on the surveillance system of a University Medical centre in Taiwan with a total of 24,406 tooth extractions before the intervention and 28,084 tooth extractions after the intervention. We re-analysed the data using the Prais-Winsten time series and the change in level for annual numbers of mishaps was statistically significant at -4.52 (95% confidence interval (CI) -6.83 to -2.217) (standard error (SE) 0.5380). The change in slope was statistically significant at -1.16 (95% CI -2.22 to -0.10) (SE 0.2472; P < 0.05). This update includes an additional study reporting on the incidence of neurological WSS at a university hospital both before and after the Universal Protocol’s implementation. A total of 22,743 patients undergoing neurosurgical procedures at the University of Illinois College of Medicine at Peoria, Illinois, United States of America were reported. Of these, 7,286 patients were reported before the intervention and 15,456 patients were reported after the intervention. The authors found a significant difference (P < 0.001) in the incidence of WSS between the before period, 1999 to 2004, and the after period, 2005 to 2011. Similarly, data were re-analysed using Prais-Winsten regression to correct for autocorrelation. As the incidences were reported by year only and the intervention occurred in July 2004, the intervention year 2004 was excluded from the analysis. The change in level at the point the intervention was introduced was not statistically significant at -0.078 percentage points (pp) (95% CI -0.176 pp to 0.02 pp; SE 0.042; P = 0.103). The change in slope was statistically significant at 0.031 (95% CI 0.004 to 0.058; SE 0.012; P < 0.05).

AUTHORS’ CONCLUSIONS: The findings of this update added one additional ITS study to the previous review which contained one ITS study. The original review suggested that the use of a specific educational intervention in the context of a dental outpatient setting, which targets junior dental staff using a training session that included cases of wrong-site surgery, presentation of clinical guidelines and feedback by an instructor, was associated with a reduction in the incidence of wrong-site tooth extractions. The additional study in this update evaluated the annual incidence rates of wrong-site surgery in a neurological population before and after the implementation of the Universal Protocol. The data suggested a strong downward trend in the incidence of wrong-site
surgery prior to the intervention with the incidence rate approaching zero. The effect of the intervention in these studies however remains unclear, as data reflect only two small low-quality studies in very specific population groups.

Objective: To carry out a standard meta-analysis to determine if aspirin should be stopped before tooth extraction.

Study Design: The PubMed, ScienceDirect, EBSCOhost, and Science Citation Index databases were searched for studies published up to September 30, 2014. Eligible studies were restricted to randomized controlled trials (RCTs) and controlled, nonrandomized trials.

Results: Three RCTs and seven controlled trials met the inclusion criteria (covering 1752 patients: 529 on aspirin therapy and 1223 not on aspirin therapy). The results showed that the risk of postoperative hemorrhage was significantly higher in patients on aspirin therapy (relative risk [RR] = 2.46; 95% confidence interval [CI]: 1.45-4.81) but that bleeding time (BT) was not significantly different between the two groups (standardized mean difference [SMD] = 0.63; 95% CI: -0.04 to 1.31). Sensitivity analyses showed that the results were unstable.

Conclusions: We could reach a conclusion that BT is prolonged or hemorrhage is exacerbated by long-term use of aspirin. We recommend not stopping long-term aspirin use before tooth extraction but enhancing hemostasis methods, if necessary.
Dental extraction, immediate placement of dental implants, and immediate function. [Review]


Abstract

Immediate function requires adequate implant stability. Immediate function requires prosthetic stability, particularly when multiple implants are loaded. Factors to consider for immediate implants into extraction sites are thickness of socket walls, thickness of gingival drape, optimal position of the implant, and patient factors such as hygiene and smoking cessation.

RESULTS: The initial electronic search resulted in 2898 titles. The systematic application of inclusion and exclusion criteria resulted in 32 RCTs studying 1354 sockets, which addressed the clinical and histologic outcomes of flapless extraction with socket grafting and provided dimensional and histologic information at or beyond the 12-week reentry period. From these RCTs, the amount of remnant graft material was highest for xenografts (13.67%), followed by allografts (51.03%), xenografts (38.39%), and alloplasts (38.39%). Data for new and emerging biomaterials such as cell therapy and tissue regenerative materials were not amenable to calculations because of biomaterial heterogeneity and small sample sizes.

CONCLUSIONS: After flapless extraction of teeth, and using a minimum healing period of 12 weeks as a temporal measure, xenografts and allografts resulted in the least loss of socket dimensions compared to alloplasts or sockets with no grafting.
Histologic outcomes after a minimum of 12 weeks of healing showed that sockets grafted with alloplasts had the maximum amount of vital bone and the least amount of remnant graft material and remnant connective tissue. There is a limited but emerging body of evidence for the predictable regeneration of deficient buccal bone with socket grafting materials, need for barrier membranes, use of tissue engineering, and use of autogenous soft tissue grafts from the palate to cover the socket.

Copyright © 2015 Editorial Council for the Journal of Prosthetic Dentistry. Published by Elsevier Inc. All rights reserved.

Publication Type
Journal Article. Review.
Date Created
20150508
Year of Publication
2015

Unique Identifier
25741927
Status
MEDLINE

Authors
Almeida NV; Silveira GS; Pereira DM; Mattos CT; Mucha JN.

Institution
Almeida, Natalia Valli de. Fluminense Federal University.
Silveira, Giordani Santos. Fluminense Federal University.
Pereira, Daniele Masterson Tavares. Integrated Colleges of Jacarepagua.
Mattos, Claudia Trindade. Department of Orthodontics, UFF.
Mucha, Jose Nelson. Department of Orthodontics, UFF.

Title
Interproximal wear versus incisors extraction to solve anterior lower crowding: a systematic review. [Review]

Source

Abstract
OBJECTIVE: To determine by means of a systematic review the best treatment, whether interproximal wear or incisor extraction, to correct anterior lower crowding in Class I patients in permanent dentition.

METHODS: A literature review was conducted using MEDLINE, Scopus and Web of Science to retrieve studies published between January 1950 and October 2013. In selecting the sample, the following inclusion criteria were applied: studies involving interproximal wear and/or extraction of mandibular incisors, as well as Class I cases with anterior lower crowding in permanent dentition.

RESULTS: Out of a total of 943 articles found after excluding duplicates, 925 were excluded after abstract analysis. After full articles were read, 13 were excluded by the eligibility criteria and one due to methodological quality; therefore, only f ours articles remained: two retrospective and two randomized prospective studies. Data were collected, analyzed and organized in tables.

CONCLUSION: Both interproximal wear and mandibular incisor extraction are effective in treating Class I malocclusion in permanent dentition with moderate anterior lower crowding and pleasant facial profile. There is scant evidence to determine the best treatment option for each case. Clinical decision should be made on an individual basis by taking into account dental characteristics, crowding, dental and oral health, patient's expectations and the use of set-up models.
What is the risk of future extraction of asymptomatic third molars? A systematic review. [Review]

PURPOSE: The purpose of our report was to determine clinically whether young adults who elect to retain their asymptomatic third molars (M3s) have a risk of undergoing 1 or more M3 extractions in the future.

MATERIALS AND METHODS: To address our clinical question, we designed and implemented a systematic review. The studies included in the present review were prospective, had a sample size of 50 subjects or more with at least 1 asymptomatic M3, and had at least 12 months of follow-up data available. The primary study variables were the follow-up duration (in years) and the number of M3s extracted by the end of the follow-up period or the number of subjects who required at least one M3 extraction. The annual and cumulative incidence rates of M3 removal were estimated.

RESULTS: Seven studies met the inclusion criteria. The samples sizes ranged from 70 to 821 subjects, and the follow-up period ranged from 1 to 18 years. The mean incidence rate for M3 extraction of previously asymptomatic M3s was 3.0% annually (range 1 to 9%). The cumulative incidence rate for M3 removal ranged from 5% at 1 year to 64% at 18 years. The reasons for extraction were caries, periodontal disease, and other inflammatory conditions.

CONCLUSIONS: The cumulative risk of M3 extraction for young adults with asymptomatic M3s is sufficiently high to warrant its consideration when reviewing the risks and benefits of M3 retention as a management strategy.
Effect of autologous platelet concentrates for alveolar socket preservation: a systematic review. [Review]


Abstract

The current literature was reviewed to evaluate the effect of autologous plasma concentrates on the preservation of extraction sockets. A comprehensive literature search was performed from October 2013 to February 2014 in the MEDLINE/PubMed and Cochrane Central Register of Controlled Trials (CENTRAL) databases. Four studies, published between the years 2010 and 2013, met the eligibility criteria and were included in the review. There were 102 extractions (55 tests, 47 controls) in 82 patients. There was considerable heterogeneity between studies with regard to the design, follow-up time, surgical techniques, and method of preparation of plasma concentrates, and therefore the data could not be analyzed quantitatively. The use of plasma concentrates seems to accelerate healing and soft tissue epithelialization in extraction sockets and reduce postoperative pain and discomfort. However, there is no evidence to date to confirm that plasma concentrates improve hard tissue regeneration.

The effect of teeth extraction for orthodontic treatment on the upper airway: a systematic review. [Review]


Abstract

PURPOSE: The purpose of this study was to evaluate the effect of teeth extraction for orthodontic treatment on the upper airway.

METHODS: Relevant trials assessing the effect of orthodontic extractions on the upper airway were retrieved electronically through PubMed, Embase, Medline, Web of Knowledge, and the Cochrane Library. The processes of literature search, selection, quality assessment, and data extraction were performed by two authors independently.

RESULTS: Seven articles were included in this systematic review. They were categorized into three groups according to their indications for extractions, namely anteroposterior discrepancy (group 1), crowding (group 2), and unspecified indications (group 3). In group 1, enrolled patients were diagnosed with class I bimaxillary protrusion and had four first premolars extracted, with a significant decrease in upper airway dimension. In group 2, increase in the upper airway dimension was reported in patients who were diagnosed with class I crowding and four first premolars extracted. In group 3, all patients were adolescents and no significant change in the upper airway dimension was observed.

CONCLUSIONS: Currently, it is difficult to draw evidence-based conclusions because of the exceeding heterogeneity among included studies, and more qualified trials are required to provide reliable evidence. Extractions followed by large retraction of the anterior teeth in adult bimaxillary protrusion cases could possibly lead to narrowing of the upper airway. Mesial movement of the molars appeared to increase the posterior space for the tongue and enlarge the upper airway dimensions. Although the effect of tooth extraction on upper airway dimension seems to be related to indications for extraction, accepted scientific evidence is still insufficient owing to the limited number of included studies. The relationship between the upper airway size and the respiratory function has not been demonstrated. While there may be a decrease in the upper airway volume, there is no evidence that this would turn an airway more collapsible. None of the studies assessed in this review had actual functional assessment of breathing. Additional qualified trials are necessary to verify reliability.
Antibiotic prophylaxis for third molar extraction in healthy patients: Current scientific evidence. [Review]


Objective: Third molar extraction is one of the most frequently performed procedures in the dental clinic, and it is associated with innumerable trans- and postoperative complications, such as pain, trismus, edema, localized alveolar osteitis, and surgical site infection. Some authors advocate the use of local or systemic antibiotics to reduce the incidence of these postoperative complications. However, several studies have revealed an insignificant gain after using antibiotics. Despite the risks of allergic reactions, toxicity, and the development of resistant microorganisms, about 50% of dentists routinely prescribe the use of prophylactic antibiotics for this purpose. The goal of this paper is to evaluate the scientific evidence that justifies antibiotic prescription to healthy patients undergoing third molar extraction.

Early vs late orthodontic treatment of tooth crowding by first premolar extraction: A systematic review. [Review]


Objective: To investigate the body of evidence in the literature about the most favorable time for initiating orthodontic treatment in patients with severe crowding caused by tooth size arch length deficiency (TSALD).

Materials and Methods: Electronic databases (PubMed, Ovid Medline, Scopus, Virtual Health Library, and The Cochrane Library) were searched for articles published between 1900 and April 2014. Studies were included that evaluated treatment of patients with severe crowding caused TSALD, who were treated with first premolar extraction. The association between the stage of development of occlusion at which treatment was started, and the primary and/or secondary outcomes of early and late treatment were investigated.

Results: After application of the eligibility criteria and reading of the full texts, six articles were included in the final review. Of these six articles, all of which were retrospective, four showed that the primary outcome (correction of severe crowding) of the early and late groups was improved, but without statistically significant differences after treatment. Therefore, the findings of secondary outcomes in the literature (postretention crowding relapse, duration of total and active treatment [treatment with appliances], external apical root resorption, and soft tissue profile) were the target of this study. These studies presented low or moderate methodological quality and control of bias.

Conclusions: Both early and late extraction had a similar effect on correction of crowding. Early treatment had two favorable secondary outcomes (less relapse and reduced active treatment time) vs late treatment. However, the levels of evidence were not sufficient to assert which protocol was superior.