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Walter Blaya Perez

**COMPLICAÇÕES E IMPACTO DA REMOÇÃO DE TERCEIROS
MOLARES NA QUALIDADE DE VIDA RELACIONADA À SAÚDE
BUCAL DE JOVENS E ADULTOS**

Santa Maria, RS.
2017

Walter Blaya Perez

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QUALIDADE DE VIDA RELACIONADA À SAÚDE BUCAL DE JOVENS E
ADULTOS**

Tese apresentada ao Curso de Doutorado do Programa de Pós-Graduação em Ciências Odontológicas, Área de Concentração em Odontologia, ênfase em Odontopediatria, da Universidade Federal de Santa Maria (UFSM, RS), como requisito parcial para obtenção do título de **Doutor em Ciências Odontológicas**.

Orientador: Prof. Dr Thiago Machado Ardenghi

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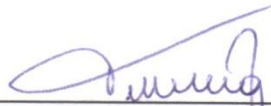
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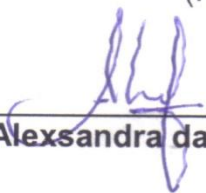
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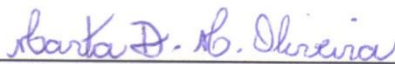
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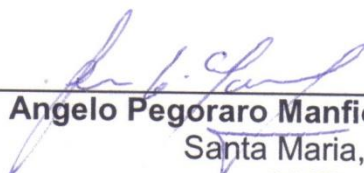
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Marta Dutra Machado Oliveira, Dra. (UFSM)



Leticia Kirst Post, Dra. (UFPeI)



Angelo Pegoraro Manfio, Dr. (UNIFRA)
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RESUMO

COMPLICAÇÕES E IMPACTO DA REMOÇÃO DE TERCEIROS MOLARES NA QUALIDADE DE VIDA RELACIONADA À SAÚDE BUCAL DE JOVENS E ADULTOS

AUTOR: Walter Blaya Perez
ORIENTADOR: Thiago Machado Ardenghi

A remoção dos terceiros molares pode ser seguida de complicações pós-operatórias. Dor, edema, hemorragia e infecção são os principais problemas relatados após o procedimento cirúrgico. Tais condições causam relativo desconforto aos indivíduos, afetando sua rotina diária. O objetivo desta tese foi avaliar a prevalência de complicações pós-operatórias em indivíduos que realizaram a extração dos terceiros molares nas clínicas de cirurgia do Curso de Odontologia da Universidade Federal de Santa Maria dos anos 2000 a 2015. Assim como, avaliar o impacto na qualidade de vida relacionada à saúde bucal (QVRSB) dos indivíduos da remoção no pós-operatório de sete e 30 dias. Um total de 3657 terceiros molares foram extraídos ao longo de 15 anos. Os dados foram tabulados e a análise descritiva realizada obtendo-se a prevalência de qualquer complicação pós-operatória. A avaliação das complicações com fatores associados foi verificada através da análise de regressão. Para a avaliação do impacto na QVRSB, 75 pacientes responderam ao questionário OHIP-14 antes do procedimento cirúrgico. Outras duas avaliações foram realizadas sete e trinta dias após a extração do terceiro molar. Os pacientes também indicaram a ocorrência de dor e edema durante este período. A análise descritiva foi calculada para as variáveis clínicas e demográficas e para dados clínicos pré- e pós-operatórios. Média e desvio-padrão foram obtidos para cada item do questionário OHIP-14 e a diferença de média entre os escores pré- e pós-operatórios foi avaliada usando o teste de Wilcoxon. O tamanho do efeito foi realizado para avaliar a diferença entre os domínios e os escores total do OHIP-14 no pré-operatório, pós-operatório de 7 dias e pós-operatório de 30 dias. Complicações pós-operatórias foram observadas em 1108 (30,33%) dos indivíduos. Indivíduos do sexo feminino, que extraíram terceiros molares inferiores inclusos/semi-inclusos e que fizeram uso de medicação antibiótica e anti-inflamatória apresentaram maior probabilidade de apresentar alguma complicação pós-operatória. Quanto ao impacto na qualidade de vida, a média dos escores do OHIP-14 aumentou ao longo de 7 dias pós-operatório, demonstrando impacto negativo na qualidade de vida dos indivíduos. Ao longo do período de trinta dias, porém, retornaram a níveis inferiores ao pré-operatório. Em função da alta prevalência de complicações e do impacto negativo na qualidade de vida dos indivíduos nos primeiros sete dias após o procedimento cirúrgico concluímos dessa forma que tais condições devem ser considerados durante a tomada de decisão do paciente e profissional pela remoção dos terceiros molares.

Palavra-chave: Epidemiologia. Qualidade de vida. Terceiro molar.

ABSTRACT

POSTOPERATIVE COMPLICATIONS AND IMPACT OF THE REMOVAL OF THIRD MOLARS IN THE ORAL HEALTH RELATED QUALITY OF LIFE RELATED TO THE ORAL HEALTH OF ADULTS

AUTHOR: Walter Blaya Perez
ADVISOR: Thiago Machado Ardenghi

Removal of the third molars may be followed by postoperative complications. Pain, swelling, bleeding and infection are the main problems reported after the surgical procedure. Such conditions cause relative discomfort to individuals affecting their daily routine. The objective of this thesis was to evaluate the postoperative complications prevalence in individuals who performed the extraction of third molars in the surgery clinics of the Dentistry Course of the Universidade Federal de Santa Maria along the years 2000 to 2015. As well as evaluating the impact on quality of life (OHRQoL) of the subjects of the seven and 30 days postoperative removal. A total of 3.657 third molars were extracted over 15 years. The data were tabulated and a descriptive analysis was performed, obtaining the prevalence of any postoperative complications. The evaluation of complications with associated factors was verified through regression analysis. For the OHRQoL impact assessment, 75 patients completed the OHIP-14 questionnaire prior to the surgical procedure. Two other evaluations were performed seven and thirty days after extraction of the third molar. Patients also reported pain and swelling during this period. The descriptive analysis for the clinical and demographic variables and for pre- and postoperative clinical data was calculated. Mean and standard deviation were obtained for each item of the OHIP-14 questionnaire and the mean difference between the pre- and postoperative scores was assessed using the Wilcoxon test. The effect size was performed to evaluate the difference between the domains and total OHIP-14 scores in the preoperative, 7-day postoperative and 30-day postoperative periods. Postoperative complications were observed in 1108 (30.33%) of the individuals. Individuals who extracted lower third molars included/retained and who used antibiotic and anti-inflammatory medication were more likely to present some postoperative complications. Regarding the impact on quality of life, the mean OHIP-14 scores increased during the 7 postoperative days, demonstrating a negative impact on the individuals' quality of life. Over the 30-day period, however, they returned to levels lower than preoperative. Due to the high prevalence of complications and the negative impact on the quality of life of the individuals in the first seven days after the surgical procedure, we conclude that such conditions should be considered during patient and professional decision making by the removal of third molars.

Key words: Epidemiology. OHRQoL. Third molar.

SUMÁRIO

1 INTRODUÇÃO.....	09
2 ARTIGO 1 - POSTOPERATIVE COMPLICATIONS OF REMOVAL OF THIRD MOLARS IN ADULT PATIENTS: A 15-YEARS RETROSPECTIVE STUDY.....	15
2.1 ABSTRACT.....	17
2.2 INTRODUCTION.....	18
2.3 MATERIAL AND METHODS.....	19
2.4 RESULTS.....	21
2.5 DISCUSSION.....	22
2.6 REFERENCES.....	25
2.7 TABLES.....	28
2.7.1 Table I. Sociodemographic and clinical characteristics of the sample. Santa Maria, Brazil.....	28
2.7.2 Table II. Distribution of third molar position according to Winter and Pell and Gregory classification. Santa Maria, Brazil.....	30
2.7.3 Table III. Unadjusted and adjusted analysis of the occurrence of any postoperative.....	31
3 ARTIGO 2 - IMPACT OF REMOVAL OF THIRD MOLARS ON ORAL HEALTH RELATED QUALITY OF LIFE IN ADULTS.....	32
3.1 ABSTRACT.....	34
3.2 INTRODUCTION.....	35
3.3 MATERIAL AND METHODS.....	36
3.4 RESULTS.....	37
3.5 DISCUSSION.....	38
3.6 REFERENCES.....	41
3.7 TABLES.....	43
3.7.1 Table I. Characteristics of the sample.....	43
3.7.2 Table II. Mean (SD) pain according to VAS.....	45
3.7.3 Table III. Pre and postoperative mean (SD) according to domains of the OHIP-14.	46
3.7.4 Figure 1. Distribution of total score OHIP-14.....	46
3.7.5 Table IV. Effect size of the total and domains score OHIP according of the postoperative period.....	47
4 DISCUSSÃO.....	48
5 CONCLUSÃO.....	50
REFERÊNCIAS.....	51
ANEXO A - MODELO TEÓRICO PARA QUALIDADE DE VIDA RELACIONADA À SAÚDE BUCAL.....	55
ANEXO B - PARECER COSUBSTANCIADO DO COMITÊ DE ÉTICA.....	56
ANEXO C - NORMAS PARA PUBLICAÇÃO NA REVISTA <i>JOURNAL OF ORAL AND MAXILLOFACIAL SURGERY</i>.....	59
ANEXO D - ORALH HEALTH IMPACTED PROFILE QUESTIONNAIRE (OHIP-14).....	68
APÊNDICE A- TERMO DE CONSENTIMENTO LIVRE E ESCLARECIDO	68

1 INTRODUÇÃO

Os terceiros molares são os últimos dentes da arcada dentária a se desenvolverem, fato que ocorre após o nascimento. Em torno dos sete anos de idade, radiograficamente, pode ser observada a presença da cripta do germe dentário; entre nove e quatorze anos ocorre a mineralização da coroa; entre 16 e 18 anos acontece a formação da raiz; e o completo fechamento do ápice radicular se dá em torno dos 22 anos (JUNG; CHO, 2013; ZANDI et al., 2014). O completo desenvolvimento dos dentes coincide com o término do crescimento ósseo e sua irrupção na cavidade oral pode ocorrer entre 17 e 25 anos. (MERCIER; PRECIUS, 1992; SWIFT; NELSON, 2012).

Seu desenvolvimento tardio associado ao fato de serem os últimos dentes a irromper pode dificultar a erupção impedindo que o movimento ocorra ou mesmo que não aconteça de forma correta e funcional, estando suscetíveis à falta de espaço no arco. Dessa forma três diferentes situações podem ser observadas: dentes totalmente erupcionados, parcialmente erupcionados/semi-inclusos ou inclusos (GODFREY; DENT, 1999; SWIFT; NELSON, 2012).

Dentes inclusos ou impactados são dentes que, chegado o período normal de erupção, não irromperam na cavidade oral podendo ocorrer pela obstrução por tecido ósseo ou mucoso, pela posição do dente adjacente ou mesmo pela falta de espaço no arco dentário. Os terceiros molares são os dentes com maior prevalência e incidência de inclusão (CHAVES JUNIOR et al., 2006).

Estes dentes, normalmente, têm pouca ou nenhuma função e estão relacionados a um alto índice de doenças associadas (SILVESTRE; SINGH, 2003). Muitas vezes, quando inclusos ou semi-inclusos, podem causar danos à saúde bucal dos indivíduos estando associados à doença periodontal, pericoronarite, reabsorção das raízes do dente adjacente, lesão de cárie, surgimento de cistos e tumores odontogênicos e, em função destes, dor. Sendo estes fortes indicativos para extração do elemento dentário (CHAVES JUNIOR et al., 2006), tornando-se um dos procedimentos mais comuns dos consultórios odontológicos (MCARDLE; RENTON, 2012).

A decisão pela extração dos terceiros molares quando estão associados a alterações patológicas é bem definida (SATO et al, 2009). Almendros- Marques et al. (2006) analisaram a indicação para exodontia de terceiro molar e dentre as

principais razões para o procedimento cirúrgico estavam pericoronarite (58%), dor (11%), cárie dentária (7%) e finalidade ortodôntica (5%). Em contrapartida, Yuasa e Sugiura (2004), Torres et al. (2008) e Sigron et al. (2014) encontraram como principal indicativo de extração a remoção profilática deste elemento.

Ressalta-se que diversos fatores devem ser considerados ao se indicar a extração de terceiros molares, e antes de qualquer decisão, se faz necessária à análise radiográfica, sendo esta indispensável para a seleção da técnica cirúrgica mais indicada conforme a classificação do elemento em questão. A classificação destes elementos ajudará no planejamento das cirurgias e servirá de base para o prognóstico cirúrgico (ALMENDROS- MARQUES et al., 2006).

A dificuldade cirúrgica é geralmente avaliada pela angulação do dente e profundidade óssea em que se encontra. O sistema de classificação de Pell e Gregory (1933) avalia a posição do terceiro molar em relação ao plano oclusal e o ramo ascendente da mandíbula (Posição A, B e C e Classe I, II e III). Já a classificação de Winter (1926) avalia a posição do terceiro molar em relação ao longo eixo do segundo molar (vertical, horizontal, méso-angular, disto-angular, invertido, vestibulo-angular, línguo-angular e ectópico). A posição e angulação do dente nos maxilares indicarão o tipo de incisão a ser realizada bem como a quantidade óssea a ser removida.

No estudo de Negreiros et al. (2012), 45,3% e 63,9% dos dentes foram classificados na posição B e classe II do sistema de Pell e Gregory, respectivamente. Em relação à classificação de Winter, a posição vertical foi a mais prevalente encontrada (41,9%). Algumas patologias podem estar correlacionadas com a posição dos terceiros molares e complicações cirúrgicas. Em estudo realizado com 165 pacientes que realizaram a extração de terceiros molares inferiores (259 dentes) 47,9% dos dentes pertenciam a Classe IIB de Pell e Gregory e 124 estavam em posição vertical. Os resultados do estudo demonstram que dentes em posição vertical da Classe II A e IIB eram os mais ligados à patologias infecciosas como a pericoronarite (ALMENDROS- MARQUES et al., 2006).

Diferentemente da bem consolidada indicação para extração na presença de patologias, não há consenso na literatura sobre a remoção profilática dos terceiros molares. A remoção precoce destes dentes tem como objetivo evitar problemas associados à presença deles, como a pericoronarite que pode gerar dor e debilitar o paciente para suas atividades rotineiras (SLADE et al., 2004).

Ghaeminia et al. (2016) avaliou os efeitos da remoção de terceiros molares impactados assintomáticos comparados com o manejo conservador dos mesmos em adolescentes e adultos através de uma revisão. Em uma coorte prospectiva de 416 indivíduos de 24-84 anos os resultados sugerem que a presença de terceiros molares assintomáticos pode estar associada com aumento do risco de periodontite ao segundo molar adjacente em longo prazo. Em relação à dimensão do arco dentário, o ensaio clínico randomizado analisado não demonstrou diferença após um período de cinco anos. Os estudos inclusos na revisão tiveram a qualidade da evidência classificada como baixa/ muito baixa e seus resultados devem ser analisados com cautela. Na falta de boas evidências os valores do paciente e a experiência clínica do profissional devem ser considerados (GHAEMINIA et al., 2016).

Condições como dor e edema pós-operatórios são previsíveis após procedimentos cirúrgicos em função das diferentes injúrias causadas aos tecidos mole e duro da cavidade oral. Estas, juntamente com infecção/alveolite e hemorragia, são as principais queixas dos pacientes submetidos à remoção de terceiros molares (SATO et al., 2009). Sigron et al. (2014) observou uma taxa de 8,4% de complicação pós operatória sendo a alveolite (4.2%) a principal queixa.

Além do possível risco à saúde bucal dos indivíduos, a presença do terceiro molar pode impactar negativamente a qualidade de vida das pessoas. Isto pode dificultar a mastigação, gerar ansiedade e irritabilidade, diminuir horas de sono e causar restrições alimentares. Conseqüentemente, as relações sociais e atividades rotineiras sofrem uma piora significativa. (MICHEL-CROSATO et al., 2005). A gravidade da morbidade pré-operatória pode auxiliar o clínico na escolha pela remoção ou não do elemento dentário quando não se tem indicação concreta para exodontia.

A Organização Mundial de Saúde (OMS) define "saúde" como o estado de completo bem-estar físico, mental e social e não somente a ausência de doença (WHO, 1946). Sendo assim, a qualidade de vida ou percepção dos indivíduos acerca de sua posição social, dos seus objetivos, preocupações e como se sentem frente às rotinas diárias é um fator importante do conceito de saúde visto que são parte importante do conceito de "bem-estar" e estão fortemente associados ao processo saúde-doença (LOCKER, 1988).

A Organização Mundial de Saúde (OMS) tem reconhecido como parte importante do Programa de Saúde Bucal Mundial as dimensões funcionais e psicológicas da saúde bucal que integram a saúde geral e o bem-estar (SISCHO; BRODER, 2011). Desta forma, a avaliação da auto percepção da qualidade de vida relacionada à saúde bucal (QVRSB) tem ganho destaque na literatura sendo amplamente recomendada como um complemento aos parâmetros clínicos no planejamento de políticas de saúde pública para a eleição de serviços e na avaliação dos desfechos de estratégias de saúde bucal (SISCHO; BRODER, 2011).

Qualidade de vida relacionada à saúde bucal (QVRSB) tem sido definida como um constructo multidimensional, que apresenta organização complexa e dinâmica, variando entre os indivíduos de um mesmo contexto e refere-se ao impacto negativo que as enfermidades bucais geram nas atividades físicas e sociais rotineiras e na autopercepção do estado de saúde bucal dos indivíduos (LOCKER; ALLEN, 2007). As condições bucais, sabidamente, refletem nas condições físicas, psicológicas e sociais dos indivíduos (MCGRATH et al., 2004), estando o processo saúde-doença associado à percepção subjetiva das condições de saúde geral e bucal e o impacto das mesmas sobre os indivíduos (LOCKER, 1988). O resultado do impacto da condição bucal na qualidade de vida pode ser útil na decisão terapêutica de terceiros molares (SLADE et al., 2004).

Sicho e Broder em 2011 apresentaram um modelo teórico (ANEXO I) para a QVRSB englobando a interação entre fatores biológicos, sociais, psicológicos e culturais. Esse modelo associa variáveis clínicas de saúde, funcionais, a aparência orofacial, o status psicológico, qualidade de vida geral e a qualidade de vida relacionada a saúde bucal. Neste esquema ainda, os fatores contextuais têm efeito reconhecido sobre a QVRSB bem como o acesso aos serviços na forma como indivíduos percebem sua saúde bucal e sua vida de uma forma geral (SICHO; BRODER, 2011).

Como já exposto, a QVRSB é influenciada por diferentes sinais e sintomas e representa a percepção do indivíduo frente ao seu status de saúde bucal. Assim considerando, diversos estudos vêm avaliando diferentes preditores associados à piores resultados de qualidade de vida como a cárie dentária, maloclusão, trauma e clareamento dentário, que podem influenciar negativamente a QVRSB em diversas faixas etárias (PIOVESAN et al., 2010; ABANTO et al., 2011; MEIRELES et al., 2014). O impacto da remoção de terceiros molares na qualidade de vida também

tem sido avaliado em diferentes populações (SHUGARS et al., 2006; MCGRATH et al., 2003; WIJK; KIEFFER; LINDEBOOM, 2009; DEEPTI et al. 2009, IBIKUNLE; ADEYEMO ,2016; ARAVENA et al., 2016;).

Shugars et al. em 2006, avaliaram as alterações na qualidade de vida antes e após a cirurgia para remoção de terceiros molares e observou que a prevalência dos escores para cada domínio do OHIP-14 aumentou na primeira avaliação pós-operatória em relação ao período pré-cirúrgico. Os itens que mais obtiveram resultados negativos no primeiro pós-operatório foram “dor na sua boca” (57%) e “desconforto ao comer” (76%). Quatorze dias após a primeira avaliação os resultados foram semelhantes aos obtidos no pré-operatório, sendo que para os itens referentes à “dor na boca” (2%) e “desconforto ao comer” (2%) os resultados foram até menores que os encontrados inicialmente (10% e 8%, respectivamente). Resultados estes, semelhantes aos encontrados por Negreiros et al em 2012, em população brasileira, onde o escore médio pré-cirúrgico do OHIP-14 foi de 7,35 ocorrendo um aumento para 17,88 no primeiro dia pós-operatório. As avaliações seguintes seguiram em redução gradual até resultados próximos aos encontrados antes da remoção dos dentes (NEGREIROS et al., 2012).

Os questionários autoaplicáveis ou indicadores sócio-dentários são os instrumentos comumente utilizados para coletar dados referentes à qualidade de vida relacionada à saúde bucal (SLADE, 1998). Estes instrumentos têm sido desenvolvidos e testados em diversos países e populações com o intuito de estruturar as relações entre as medidas clínicas de saúde bucal com as medidas subjetivas, contribuindo para uma avaliação mais clara das necessidades da população em questão (LEAO; LOCKER, 2006). Dentre os diversos instrumentos já consolidados na literatura para mensurar a saúde bucal e seu impacto na qualidade de vida, o Oral Health Impact Profile (OHIP) em sua forma reduzida (OHIP-14) tem sido utilizado em diversos estudos em diferentes culturas e perfis sociodemográficos (MCGRATH et al., 2003; SLADE et al., 2004; SHUGARS et al., 2006; WIJK; KIEFFER; LINDEBOOM, 2009; NEGREIROS et al., 2012). No Brasil, a tradução transcultural e linguística foi testada por Almeida et al (2004). Mais tarde, as propriedades psicométricas para versão brasileira foram analisadas através de um estudo transversal realizado com 504 lactantes. A consistência interna medida pelo alpha-Cronbach provou ser adequada (0,91) mostrando uma boa correlação das

questões constantes no instrumento com a percepção de saúde das mulheres (OLIVEIRA; NADANOVSKY, 2005).

Decisões apropriadas sobre a extração de terceiros molares envolvem um bom conhecimento dos desfechos clínicos para cada opção de tratamento, assim como o efeito destas escolhas na qualidade de vida dos pacientes. O entendimento do quanto a remoção de terceiros molares impacta a qualidade de vida dos indivíduos bem como das possíveis complicações que podemos esperar do procedimento cirúrgico é útil para fornecer evidências para a tomada de decisões clínicas, com o objetivo de gerar o menor impacto possível ao paciente.

2 ARTIGO 1 - POSTOPERATIVE COMPLICATIONS OF REMOVAL OF THIRD MOLAR IN ADULT PATIENTS: A 15-YEARS RETROSPECTIVE STUDY

Redigido conforme as normas da revista *Journal of Oral and Maxillofacial Surgery* (ANEXO C).

POSTOPERATIVE COMPLICATIONS OF REMOVAL OF THIRD MOLARS IN ADULT PATIENTS: A 15-YEARS RETROSPECTIVE STUDY.

WALTER BLAYA PEREZ¹, YASSMÍN HÉLLWAHT RAMADAN², THIAGO MACHADO ARDENGHI³.

¹DDS, PhD, Adjunct Professor, Universidade Federal de Santa Maria (UFSM), Rio Grande do Sul, Brazil.

² DDS, MSc, PhD students, Universidade Federal de Santa Maria (UFSM), Rio Grande do Sul, Brazil.

³ DDS, MSc, PhD, Associate Professor, Department of Stomatology, Universidade Federal de Santa Maria (UFSM), Rio Grande do Sul, Brazil.

Correspondence to:

Thiago Machado Ardenghi (e-mail: thiardenghi@hotmail.com)

Rua Cel.Niederauer 917/208, Santa Maria - RS, Brazil.

Zip code: 97.015-121

Phone number: +55(55) 999 98 96 94

Abstract

Objective: To assess the type and frequency of postoperative complications related to the extraction of third molars and its association with individual and clinical variables. **Methods:** A retrospective evaluation of patients subjected to third molar extraction during 2000 until 2015 years, in Santa Maria, RS, Brazil. Postoperative complications were classified according to the type of cicatrization, prevalence of bleeding, swelling, infection and postoperative pain. Individual and clinical variables also were assessed. The assessment of the postoperative complication with associated factors was performed with logistic regression analysis (level of significance of 5%). **Results:** A total of 3,657 third molars were extracted in 2,715 patients during the 15-year period. Postoperative complication was observed in 1,108 (30.33%) individuals. The most frequent was pain, followed by swelling and bleeding. Higher chances of presenting any postoperative complication were observed for females, those who have extracted lower third molars that were included / retained, and for those who have used antibiotic or anti-inflammatory. **Conclusions:** A high prevalence of the postoperative complications was observed after the removal of third molars, indicating the need of specific criteria for recommendation of surgical extraction of these teeth.

Key Words: Tooth extraction – Third molar – epidemiology – pathology.

Introduction

Third molars are the teeth with the highest impaction rates with a global prevalence of 24%.¹ The removal of the third molars may be associated pathological changes as pericoronitis, dental caries adjacent to second molar, root resorption, crowding and development of cysts and tumors that can should cause pain.² Therefore, it is often recommended to prophylactic extraction, to avoid the appearance of such disorders or as a treatment of existing problems, for example dental caries and pain.³

Although the indication of extraction of third molars, associated with pathological alterations is supported by the scientific literature, the management to disease free teeth remains controversial.⁴ Some authors suggest that third molars impacted free of disease may increase the risk of oral pathologies, with periodontitis and dental caries. However, there is a lack of scientific evidence to justify its prophylactic extraction.⁵⁻⁶

Nevertheless, the procedure of removal of third molars (erupted or included/retained) is one of the most frequent oral surgical procedures in the dental routine.⁵ The postoperative complications of these procedures may be included pain, swelling, bleeding and infection on the surgical wound.⁷⁻⁸ Others adverse effects included nerve damage (temporary or permanent) and damage to second molar during the procedure.⁸⁻⁹ Furthermore, several factors have been associated with the occurrence of postoperative complications and included the age and gender to the patient, degree of impaction and even the professional experience.¹⁰ However, there are few studies evaluating the postoperative complications after removal of third

molar, and these studies included a low sample size with a short period of evaluation which limits its scientific inference.

Therefore, the aim of this study was to analyze the type and frequency of postoperative complications related to the extraction of third molars and evaluated of the association these complications with individual and clinical variables.

Materials and methods

Study population

This retrospective University-based study included all patients who underwent surgical extraction of the third molar, from January 2000 until December 2015, at the Clinic of Advanced Surgical Procedures of the Universidade Federal de Santa Maria, Brazil. The Clinic of Advanced Surgical Procedures is a referral center for oral surgery in the city and has been attending an estimated population of 300 new patients per year. The recommendations for third molar extraction included orthodontic indication, pericoronitis, dental caries in third molar or adjacent second molar and asymptomatic included or semi-included teeth.

Data collection

The clinical history of all patients, as age, sex and skin color was collected from clinical records.

Other variables of interest in the study such as depth of third molar in relation to the occlusal plane (Position A, B, C) and the distance between the mandibular branch and the third molar (Class I, II, III) was recognized according to the classification of Pell and Gregory.¹¹ Angulation of the third molar in relation to the second molar was analyzed according to the Winter's classification.¹² These data

were obtained by a trained examiner through the analysis of the panoramic radiographs present in the clinical records of the patients.

According to the classifications of Pell and Gregory and Winter, the position of third molars were categorized as followed: erupted (position AI), semi-erupted (positions IB, IIA, IIB) and included / retained (positions IC, IIIA, IIIB and IIIC).

Postoperative complications

The postoperative complications were classified according to type of cicatrization, prevalence of bleeding, swelling, infection and postoperative pain. The healing status and signs of infection were observed by the operator during a postoperative return (mean time 7 days after the surgical procedure). Bleeding, swelling and postoperative pain were self-reported by the patient if present after the surgical procedure until the return. In the statistical analysis, the postoperative complications variable was performed as “yes” (any complication) or “no” (not complication).

Reason for the dental visit was reported by the patient during the anamnesis and the category “other” refers to third molar affected by caries and trauma.

Data analysis

Data were analyzed using Stata 14.0 (Stata, College Station, TX, USA). Descriptive analysis provides summary statistics of all variables used in the study. A multivariable logistic regression analysis was performed to assess the association between any complication, age, sex and clinical variables. The odds ratio and its 95% confidence interval (OR;95%CI) was calculated to compare the probability of a patient having any postoperative complications for each covariate included in the study. The level of significance was set at $p<0.05$.

Results

A total of 3,657 third molars were extracted in 2,715 patients during the 15-year period. Of these, 1,732 were in the jaw and 14.1% (517) were procedures that involved the extraction of upper and lower teeth. Most surgical extractions correspond to female patients and only 4.5% of the extractions were performed in non-white individuals. The mean age of the patients was 29.1 years. The description of all patients' characteristics and clinical variables are shown in Table 1.

Regarding the depth of the third molar with respect to the occlusal plane of the second molar, 64.4% were located in the same occlusal plane of the second molar (position A). Regarding the distance between the mandibular branch and the third molar, most of them belong to Class II (67.2%) where the space present after the second molar was insufficient to support the third molar crown. The vertical angulation was observed in 49% of the cases while horizontal was only 12.4% (Table 2).

A total of 1,108 (30.3%) individuals presented some type of complication after extraction of the third molar. The most frequent complication was the presence of pain, followed by swelling and bleeding. Infection signs in the surgical wound were found in only 83 cases representing 5% of the complications (Table 1). Only one case of paresthesia and trismus was observed.

The unadjusted assessment observed that age, sex, extraction zone, pain prior extraction, post-operative antibiotic and anti-inflammatory and third molar position were associated with the prevalence of any postoperative complications (Table 3). After adjusted analysis, higher chances of presenting any postoperative complication were observed in female (OR 1.44, 95% CI 1.17-1.78), in extractions of

lower third molars (OR 1.80, 95% CI 1.40-2.31) and in included / retained teeth (OR 1.59, 95% CI 1.17-2.17).

Discussion

The present study analyzed the type and frequency of postoperative complications related to the extraction of third molars and observed that the overall postoperative complication rate after the surgical extraction of these tooth was 30.33%. Furthermore, variables as sex, extraction zone and position of the tooth were associated with postoperative complication.

Previous studies found a lower rate of postoperative complications, ranging from 9.2% to 20%.^{8,13} This difference may be associated to the fact that the surgical procedures, in our study, were performed by dentistry students in a clinical school, and not by experienced professionals.¹⁰ Sigron et al. (2014) and Avendaño et al (2005) also found lower rates of complications, ranging from 8.4% to 15.62% respectively and this may be due to the age group of the patients submitted to surgery (in these studies only adolescents and young adults were analyzed).^{9,14} Some authors show that younger patients have a lower risk of developing complications, following surgical procedures^{13,15}, although this is not a consensus in the literature.^{9,16-17}

The most frequent complications were the occurrence of postoperative pain (20.21%), swelling (16.91%) and bleeding (9.27%), which is accordance with previous findings.^{8,18}

In our study the rate of paresthesia and trismus was only 0.03%. Lee *et al* 2015 observed that cases of paresthesia and trismus represented 0.5% and 0.9% of

cases of postoperative complications, respectively. Avendaño *et al* 2005 found similar values for lingual paresthesia (0.26%) and inferior alveolar paresthesia (0.26%), but the difficulty of opening the mouth occurred in 2.3% of the cases.¹⁴ Chuang *et al*, 2007, observed the presence of inferior alveolar nerve injury in 1.6% of the cases and trismus in 1.2%.¹³ The low rate of these complications in this study should be considered with caution as the information may have been deleted from the clinical records. Different from the other complications analyzed there was no specific question of clinical records that may not have been reported.

In accordance with our results, Avendaño *et al* (2005) and Blondeau & Daniel (2007) observed that female was more prone to develop any complications after some surgical procedure.¹⁴⁻¹⁵ This can be explained because female tend to seek more dental care and express their emotions and feelings of pain.¹⁹ In contrast, Osunde & Saheeb (2013) found no statistically significant association between gender and the presence of postoperative pain and trismus.¹⁶

The degree of impaction showed an association with the occurrence of postoperative complications, where the semi erupted and erupted tooth had a greater propensity to present complications after the surgical procedure. These dates support the previous results of Almendrós-Marques *et al* (2006), where third molars who were partially coverage by mucosa or bone presented a higher risk of infectious complications.²⁰ Likewise, Kim *et al* (2006) showed that patients with deeply impacted teeth have significantly high frequency of swelling.¹⁸ This may occur due to increased tissue damage caused by the need for a flap and osteotomy.

Furthermore, we showed that extraction zone was associated with oral postoperative complications. Hence, lower and combined extractions (upper and lower) presented more postoperative complications. These associations may have

occurred because maxilla and mandibular have different densities and bone quality.²¹ In addition, more than one extraction in the same section, such as upper and lower, increases the chance of postoperative complications.

The results of this study demonstrated that sex, zone extraction and the third molar position were associated with the higher occurrence of any complication following the surgical extraction of third molars. This information may be helpful during planning of removal of the third molars and may serve as a basis for predicting situations expected after the surgical procedure. In this way, it is possible to carry out maneuvers aimed at reducing or avoiding possible damages to individuals, as well as the prevention of some complications.

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Table 1. Sociodemographic and clinical characteristics of the sample. Santa Maria, Brazil (n= 3,657 third molars).

Variable	n (%)
Sex	
Male	1.262 (34.5)
Female	2.395 (65.5)
Skin colour	
White	3.364 (95.5)
Non-white	160 (4.5)
Reason for the dental visit	
Extraction	3,526 (97.3)
Pain	79 (2.2)
Other	17 (0.5)
Prior Medication	
No	2.186 (64.3)
Yes	1216 (35.7)
Prior Antibiotic	
No	3.316 (97.4)
Yes	87 (2.6)
Prior Anti-inflammatory	
No	3.278 (96.4)
Yes	124 (3.6)
Prior Analgesic	
No	3.321 (97.6)
Yes	82 (2.4)
Prior Extraction	
No	904 (24.9)
Yes	2.723 (75.1)
Extraction zone	
Upper	1.408 (38.5)
Lower	1.732 (47.4)
Upper and Lower	517 (14.1)
Third molar position	
Erupted	955 (43.5)
Semi erupted	782 (35.7)
Included	456 (20.8)
Post-operative antibiotic	
No	2.535 (71.3)
Yes	1019 (28.7)
Post-operative anti-inflammatory	
No	1.614 (45.4)
Yes	1.938 (54.6)
Cicatrization	
Normal	2.976 (81.5)
Regular	308 (8.4)
Great	369 (10.1)

Post-operative pain	
No	2.917 (79.8)
Yes	739 (20.2)
Bleeding	
No	3.317 (90.7)
Yes	339 (9.3)
Swelling	
No	3.037 (83.1)
Yes	618 (16.9)
Infection	
No	3.570 (97.7)
Yes	83 (2.3)
Any complication	
No	2.545 (69.7)
Yes	1.108 (30.3)

Table 2. Distribution of third molar position according to Winter and Pell and Gregory classification. Santa Maria, Brazil (n= 3,657 third molars).

Variables	Category	n (%)
Pell and Gregory Position	A	1.292 (64.4)
	B	316 (15.8)
	C	397 (19.8)
Pell and Gregory class	I	298 (22.9)
	II	873 (67.2)
	III	128 (9.9)
Winter position	Vertical	980 (49.0)
	Mesiangular	367 (18.3)
	Distoangular	404 (20.2)
	Horizontal	249 (12.4)

Table 3. Unadjusted and adjusted analysis of the occurrence of any postoperative complications. Santa Maria, Brazil (n= 3.657 third molars).

Variables	OR unadjusted (95%CI)	<i>p</i>	OR adjusted (95%CI)	<i>p</i>
Age	0.98 (0.97- 0.98)	0.00	1.00 (0.99-1.01)	0.85
Sex				
Male	1		1	
Female	1.48 (1.27- 1.72)	0.00	1.44 (1.17-1.78)	0.00
Extraction zone				
Upper	1		1	
Lower	0.14 (1.65- 2.20)	0.00	1.80 (1.40-2.31)	0.00
Upper and Lower	0.13 (1.11- 1.64)	0.01	1.56 (1.12-2.16)	0.01
Prior extraction				
No	1		1	
Yes	0.72 (0.62- 0.85)	0.00	0.87 (0.70-1.09)	0.23
Third molar position				
Erupted	1		1	
Semi erupted	0.17 (1.48- 2.14)	0.00	1.55 (1.18-2.03)	0.00
Included	0.18 (1.35-2.06)	0.00	1.59 (1.17-2.17)	0.00

3 ARTIGO 2 - IMPACT OF REMOVAL OF THIRD MOLARS ON ORAL HEALTH RELATED QUALITY OF LIFE IN ADULTS

Redigido conforme as normas da revista *Journal of Oral and Maxillofacial Surgery*
(ANEXO C).

IMPACT OF REMOVAL OF THIRD MOLARS ON ORAL HEALTH RELATED QUALITY OF LIFE IN ADULTS

WALTER BLAYA PEREZ¹, YASSMÍN HÉLLWAHT RAMADAN², FERNANDA RUFFO ORTIZ³, THIAGO MACHADO ARDENGHI⁴.

1 DDS, PhD, Adjunct Professor, Universidade Federal de Santa Maria (UFSM), Rio Grande do Sul, Brazil.

2 DDS, MSc, PhD student, Universidade Federal de Santa Maria (UFSM), Rio Grande do Sul, Brazil.

3 DDS, MSc, PhD Student, Universidade Federal de Minas Gerais (UFMG), Minas Gerais, Brazil.

4 DDS, MSc, PhD, Associate Professor, Universidade Federal de Santa Maria (UFSM), Rio Grande do Sul, Brazil.

Correspondence to:

Thiago Machado Ardenghi (e-mail: thiardenghi@hotmail.com)

Rua Cel.Niederauer 917/208, Santa Maria - RS, Brazil.

Zip code: 97.015-121

Phone number: +55(55) 999 98 96 94

Abstract

Objective: Assess the impact of the oral health related quality of life of patient's which removed third molars, in the postoperative period for 7 days and 30 days

Methods: A total of 75 patients undergoing surgical removal of their third molars teeth were recruited to participate in this study, in the Surgery Clinic of the Universidade Federal de Santa Maria. Patients were asked to complete the 14-item Oral Health Impact Profile (OHIP-14) questionnaire before the surgical procedure, after seven days and after a month. **Results:** The mean age of the subjects was 20.09 years. The majority were female (58.6%) and self-declared white (98.46%). The extraction of lower third molars represented 41.67% of the cases and the most frequent position was mesioangular. The mean of pain for the preoperative period, 7 and 30 days were 2.6, 4.06 and 1.05, respectively. The mean OHIP-14 scores increased over the 7-days period, demonstrating a negative impact on individuals' quality of life. Over the 30-days period the values returned to levels below the baseline. **Conclusions:** There was a considerable decreased in oral health related quality of life in the first seven days of the surgery, however the scores returned to preoperative level after a month. This information should be important for the understanding about what to expect to the removal of third molars and to assist decision making.

Key Words: Third molar – OHRQoL - surgery removal - epidemiology.

Introduction

Oral Health Related Quality of Life (OHRQoL) refers to the individuals' subjective opinion of the effect of their oral disease and its treatments on their daily life in the physical, psychological, and social functioning as well as their general well-being¹. Different instruments have been developed to assess the impact of the oral conditions in the daily life of individuals, and the Oral Health Impact Profile questionnaire is one of the examples. It is a valid and reliable measure of oral health related quality of life from adults².

Procedure of removal of third molars is one of the most frequent oral surgical procedures in the dental routine³. Indications to removal of symptomatic third molar tooth, associated with pericoronitis, pain or dental caries, are well established, however, prophylactic removal of asymptomatic tooth requires also stronger evidence^{3,4}.

Pain, swelling, bleeding and infection are the most common postoperative complications associated with these procedures^{5,6}. These sequelae can be expected and influence the patients' QoL in the immediate postoperative period^{1,7}. On the other hand, it is known that a period of post-surgical recovery is necessary to resume the habitual lifestyle⁸.

Although a great body of evidence demonstrates what signs and symptoms can be associated with postoperative third molar surgery, little is known about their impact on a patient's oral health related quality of life. This is due to different studies design, short samples and samples with difficulty of the comparison⁴.

Therefore, the aim of this study was to assess the impact of the oral health related quality of life of patients which removed third molars, in the postoperative period for 7 days and 30 days.

Materials and methods

Study population

Pre- and postoperative data were available of a convenience sample from 75 patients who underwent surgical extraction of the third molar at the Clinic of Advanced Surgical Procedures of the Universidade Federal de Santa Maria (UFSM), Brazil. Patients with systemic diseases and those who used tobacco or alcohol were excluded of the study. The procedures were performed by undergraduate and the same postoperative instructions were given to the patients. Local ethical approval was obtained and written consent was obtained from all patients.

Data collection

Baseline data were obtained after patients consented to participate and before the surgical procedure. Clinical and demographics variables were recorded to the clinical records. Pell and Gregory and Winter classifications were used, by a single examiner trained, to evaluate the position of the third molar, through preoperative panoramic radiographs^{9,10}.

Oral Health Related-Quality of Life was assessed by the 14-item Oral Health Impacted Profile (OHIP-14) questionnaire¹¹. Patients were invited to answer the questionnaire before the surgical procedure. When they came to the return visit 7 days after the surgery they answered again. If the patient didn't return, phone contact was made and the questionnaire was answered. The same questions were made 30 days after the procedure when patients returned to the clinic for other procedure or if they didn't returned by phone contact again. Responses for each OHIP item included the following conditions: never (coded 0), hardly ever (coded 1), occasionally (coded

2), fairly often (coded 3) and very often (coded 4). The OHIP-14 questionnaire was applied by trained interviewer.

Along with the OHIP-14 patient indicated your pain level before de surgery, 7 and 30 days after through the visual analog scale, where the responses could range from 0 to 10 points (0= no pain, 1-3= mild pain, 4-6= moderate pain, 7-9= severe pain and 10= pain intolerable/ worst pain imaginable)¹². The patients' perception of swelling was dichotomously recorded. Patients should respond "yes" if they noticed changes in face size and "no" if they didn't.

Data analysis

Data were analyzed using software Stata 14.0 (Stata, College Station, TX, USA). Descriptive statistics were calculated for patient's demographic and clinical variables, preoperative and postoperative for clinical data. Mean and standard deviation was computed for each item of the OHIP-14 questionnaire in all postoperative. Mean differences between the pre- and postoperative scores were assessed using Wilcoxon test. The level of significance was set at $p < 0.05$.

The effect size was performed to available means differences between domains and total score OHIP-14, in the preoperative, 7 days after and 30 days. Difference of means divided by difference of standard deviations was calculated to verify the effect sizes found in the population¹³.

Results

A total of 80 patients participated in the study. Five individuals didn't return to the postoperative control visit in seven days and didn't answer the phone calls, so they were excluded of the final sample. Thus, the final sample comprised 75 patients.

The mean age of the subjects was 20.09 years. The majority were female (58.6%) and self-declared white skin color (98.46%). The extraction of lower and upper third molars in the same procedure represented 15.28% of the cases and the most frequent position was mesioangular (Table 1).

The higher mean of pain was observed seven days after the surgical procedure (4.06: SD 2.74) (Table 2). Figure 1 showed the distribution of total score OHIP.

The mean OHIP-14 scores increased over the 7-days period, demonstrating a negative impact on individuals' quality of life, except for the psychological discomfort and psychological disability domain that showed slight decrease. Over the 30-days period the values returned to levels below the baseline. The majority domains demonstrated statistical differences in the 7 and 30 days after surgical, with exception social disability (postoperative 7 days) and functional limitation (postoperative 30 days) (Table 3).

Table 4 showed effect size of questionnaire domains. The values more expressive are seen in psychological disability in the postoperative 7 days (44.00) and in OHIP total in the postoperative 30 days (62.89).

Discussion

This study assessed the impact of the oral health related quality of life of patient's which removed third molars, in the postoperative period for 7 days and 30 days. The main results showed that the third molar removal impact negatively the patient's oral health related quality of life across physical, social and psychological aspects. And, a significant deterioration was observed for first seven days after surgical procedure. This results were similar to others studies^{7,14}. The literature has

shown⁷, as well as our findings, that individuals' OHRQoL decreases after the first days of removal of the third molars. The social, emotional and physical aspects are affected by this clinical condition. Therefore, these findings are important because can improve the decision-making and professional-patient communication.

Following the individuals' postoperative, all domains change their means after 7 days, except social disability domain. The same was observed with postoperative 30 days, with exception of the functional limitation domain. These results reaffirm that removal of the third molar impact the ORHQoL^{7,14,15}. Psychological discomfort and psychological disability were domains that decreased their means after 7 days. This may have occurred due to the fact that the individual has both discomfort and disability from the third molar, and, these symptoms may have decreased after surgery¹⁵.

The effect size was calculated to assess the effective difference of OHRQoL in the population¹³. After 30 days, the value of the OHIP-14 total was expressive, representing a manifestation of the quality of life due to removal third molar¹⁶.

This study presented some limitations and advantages. We used a convenience sample and the surgery was performed by undergraduates. However, the students followed a clinical protocol and were guided by specialized teachers. As advantages this study, we utilized a questionnaire validate from Brazilian adults to assess oral health related quality of live, and this was applied by trained researchers. So, the loss of participants was low (6.25%), may represent a good extrapolation of the results for this sample. Furthermore, we followed the postoperative for 30 days, unlike other studies that followed for less time^{7,14,15}.

In conclusion, there was a considerable decreased in oral health related quality of life in the first seven days of the surgery, however the scores returned to

preoperative level after a month. This information should be important for the understanding about what to expect to the removal of third molars and to assist decision making.

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Table 1. Characteristics of the sample, Santa Maria, RS, Brazil.

Variables	n (%)
Sex	
Male	31 (41.3)
Female	44 (58.7)
Skin colour	
White	64 (98.5)
Non-white	01 (1.5)
Reason for the dental visit	
Extraction	51 (75.0)
Pain	11 (16.2)
Others	06 (8.8)
Prior medication	
No	29 (46.8)
Yes	33 (53.2)
Prior antibiotic	
No	55 (94.8)
Yes	03 (5.2)
Prior anti-inflammatory	
No	54 (93.1)
Yes	04 (6.9)
Prior Extraction	
No	39 (53.4)
Yes	34 (46.6)
Zone extraction	
Upper	31 (43.1)
Lower	30 (41.7)
Upper and lower	11 (15.3)
Pell Gregory Class	
Class I	14 (46.7)
Class II	16 (53.3)
Pell Gregory Position	
Position A	23 (76.7)
Position B	07 (23.3)
Winter position	
Vertical	20 (33.3)
Mesioangular	13 (43.3)
Distoangular	05 (16.7)
Horizontal	02 (6.7)
Antibiotic post	
No	46 (69.7)
Yes	20 (30.3)
Anti-inflammatory post	
No	25 (37.9)
Yes	41 (62.1)

Swelling 7 days	
No	32 (47.8)
Yes	35 (52.2)
Swelling 30 days	
No	40 (78.4)
Yes	11 (21.6)
Bleeding	
No	51 (98.1)
Yes	01 (1.9)

Table 2. Mean (SD) pain according to VAS

	Mean (SD)
Inicial pain	2.6 (3.06)
Pain 7 days	4.06 (2.74)
Pain 30 days	1.5 (2.28)

Table 3. Pre and postoperative mean (SD) according to domains of the OHIP-14.

	Preoperative	Postoperative 7 days	Value p*	Postoperative 30 days	Value p*
OHIP total	13.19 (8.03)	16.20 (10.3)	0.04	7.53 (7.94)	<0.00
Functional limitation	0.65 (1.02)	1.83 (1.85)	<0.00	0.67 (1.13)	0.97
Physical pain	3.37 (1.84)	3.99 (2.27)	0.03	1.81 (1.96)	<0.00
Psychological discomfort	3.57 (2.22)	2.60 (2.30)	<0.00	1.27 (1.74)	<0.00
Physical disability	1.8 (1.84)	2.77 (2.18)	<0.00	1.11 (1.62)	<0.00
Psychological disability	1.84 (1.64)	1.40 (1.63)	0.02	0.60 (1.20)	<0.00
Social disability	1.32 (1.32)	1.59 (1.68)	0.25	0.70 (1.30)	<0.00
Handicap	0.76 (1.21)	1.23 (1.60)	0.03	0.28 (0.73)	<0.00

*Wilcoxon test; SD: standart deviation

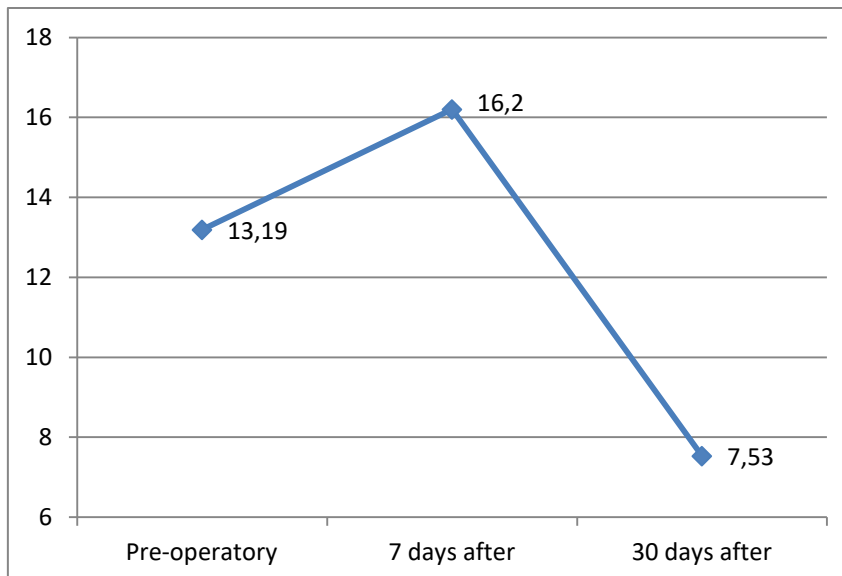


Figure 1. Distribution of total score OHIP-14

Table 4. Effect size of the total and domains score OHIP according of the postoperative period.

	Preoperative- Post 7 days	Postoperative 7 days-30 days	Preoperative- Post 30 days
OHIP total	1.32	3.67	62.89
Functional limitation	1.42	1.62	0.91
Physical pain	1.44	7.03	-13.00
Psychological discomfort	-12.12	2.37	4.79
Physical disability	2.85	2.96	3.14
Psychological disability	44.00	1.86	2.82
Social disability	0.69	2.26	1.61
Handicap	1.24	1.10	1.00

4 DISCUSSÃO

Este estudo avaliou a ocorrência de complicações após a remoção de terceiros molares em adultos ao longo de 15 anos (entre os anos 2000 e 2015). Além disso, avaliamos o impacto causado pela extração destes elementos dentários na qualidade de vida relacionada à saúde bucal dos indivíduos.

A taxa de complicações encontrada em nosso estudo foi de 30,33%. Um valor relativamente alto se comparado à outros estudos que encontraram valores entre 9,2% e 20% (LEE et al., 2015; CHUANG et al., 2007). Esta diferença pode ser explicada em função dos procedimentos cirúrgicos analisados neste estudo terem sido realizados por estudantes de graduação. Jerjes et al. (2006) observou maior ocorrência de complicações em pacientes tratados por cirurgiões menos experientes, sugerindo uma relação entre complicação e experiência cirúrgica do operador.

Dentre as complicações observadas as mais frequentes foram dor (20.21%), edema (16.91%) e sangramento (9.27%), também observadas em outros estudos (LEE et al., 2015; KIM et al., 2006). A dor tem sido associada a impactos negativos na qualidade de vida relacionada à saúde bucal de indivíduos adultos (BATISTA et al, 2014).

Desta forma, nossos resultados demonstraram considerável impacto na qualidade de vida dos indivíduos nos primeiros sete dias após o procedimento cirúrgico. Os três domínios avaliados (físico, psicológico e social) sofreram impacto e esses resultados reforçam os encontrados por outros autores (McGRATH et al., 2003; BRAIMAH et al., 2016)

Assim nossos resultados podem auxiliar o clínico na tomada de decisão pela extração dos terceiros molares. Conhecendo as situações que podem ocorrer após o

procedimento cirúrgico o cirurgião-dentista pode comunicar melhor seu paciente, informando a ele o que este deve esperar do procedimento. Também facilitando a implementação de atitudes que visem minimizar a ocorrência de complicações e conseqüentemente o impacto na rotina diária dos pacientes que optem pela remoção dos terceiros molares.

5 CONCLUSÃO

A remoção de terceiros molares foi seguida de significativa prevalência de complicações pós-operatórias. Condições como dor, edema, hemorragia e infecção foram as principais complicações observadas após o procedimento cirúrgico. A extração destes elementos dentários ocasionou importante impacto na qualidade de vida relacionada à saúde bucal dos indivíduos, gerando prejuízos funcionais, sociais e emocionais durante os primeiros sete dias pós-operatórios. Porém, retornando à níveis inferiores ao período pré-operatório em até 30 dias após o procedimento.

É importante salientar que diversos fatores podem estar associados à ocorrência de complicações. Em nosso estudo, fatores como o sexo, a região da extração (se superior/ inferior) e a posição do terceiro molar em relação ao segundo e ao ramo da mandíbula apresentaram maior taxa de complicações. Da mesma forma, devemos reforçar que os maiores impactos na qualidade de vida foram observados nos primeiros sete dias de pós-operatório. O conhecimento destas características pode facilitar a indicação e planejamento da remoção dos terceiros molares, fazendo com que o manejo pós-operatório seja voltado à eliminação/redução das mesmas, gerando o menor impacto possível na rotina diária dos indivíduos.

Nossos resultados reforçam a importância da avaliação individual e da indicação bem embasada para a remoção dos terceiros molares. A indicação para este procedimento deve levar em conta a expectativa do paciente, as possíveis complicações resultantes do procedimento cirúrgico e o quanto este procedimento pode interferir na rotina diária dos indivíduos.

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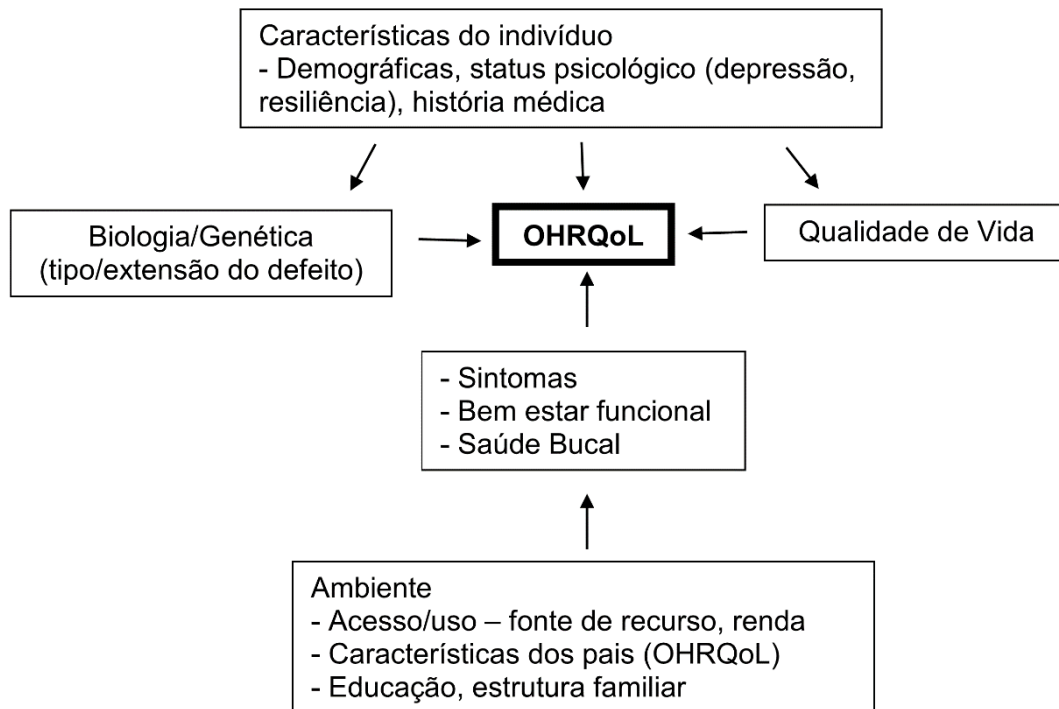
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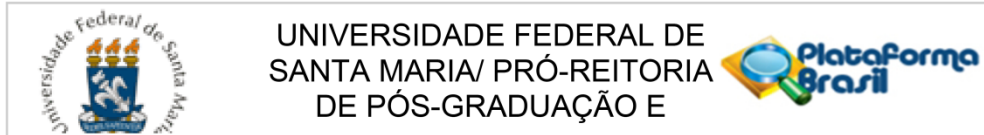
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ANEXO A- MODELO TEÓRICO PARA QUALIDADE DE VIDA RELACIONADA À SAÚDE BUCAL

MODELO TEÓRICO PARA QUALIDADE DE VIDA RELACIONADA À SAÚDE BUCAL (Sischo & Broder 2011)



ANEXO B - PARECER COSUBSTANCIADO DO COMITÊ DE ÉTICA



PARECER CONSUBSTANCIADO DO CEP

DADOS DO PROJETO DE PESQUISA

Título da Pesquisa: IMPACTO DA REMOÇÃO DE TERCEIROS MOLARES NA QUALIDADE DE VIDA RELACIONADA À SAÚDE BUCAL DE JOVENS E ADULTOS

Pesquisador: Thiago Machado Ardenghi

Área Temática:

Versão: 2

CAAE: 46511315.5.0000.5346

Instituição Proponente: Departamento de Estomatologia

Patrocinador Principal: Financiamento Próprio

DADOS DO PARECER

Número do Parecer: 1.173.271

Data da Relatoria: 03/08/2015

Apresentação do Projeto:

O desenvolvimento tardio dos terceiros molares associado ao fato de serem os últimos dentes a irromper pode dificultar a erupção impedindo que o movimento ocorra ou não aconteça de forma correta e funcional, estando suscetíveis à falta de espaço no arco. Tal condição faz com que estes sejam os dentes com maior prevalência e incidência de inclusão. Os principais agravos associados à terceiros molares são a pericoronarite, lesão de cárie, reabsorção das raízes do dente adjacente e dor, sendo estes as principais indicações de extração. A cirurgia de remoção de terceiros molares é um dos procedimentos mais comuns dos consultórios odontológicos. Além do possível risco à saúde oral dos indivíduos, a presença do terceiro molar pode impactar negativamente a qualidade de vida das pessoas ao passo que pode dificultar a mastigação, gerar ansiedade e irritabilidade, diminuir horas de sono e causar restrições alimentares, de forma a interferir nas atividades rotineiras do indivíduo. Assim sendo, o objetivo deste trabalho é avaliar o impacto na qualidade de vida relacionada à saúde oral de pacientes submetidos à cirurgia de remoção de terceiro molar. Um estudo observacional será realizado envolvendo pacientes que procurem a Clínica de Cirurgia e traumatologia Bucomaxilofacial da Universidade Federal de Santa Maria para remoção de terceiros molares. Os participantes do estudo serão aqueles pacientes maiores de dezoito anos, encaminhados para extração de terceiros molares, que não tenham experiência prévia com

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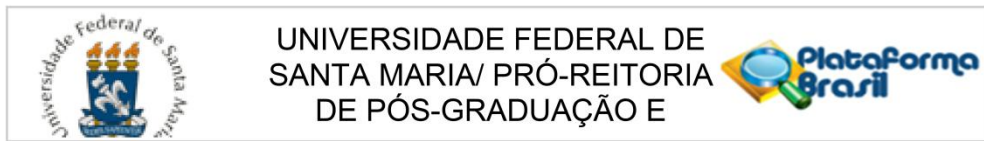
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UF: RS

Município: SANTA MARIA

Telefone: (55)3220-9362

E-mail: cep.ufsm@gmail.com



Continuação do Parecer: 1.173.271

extração, que estejam aptos a serem submetidos a procedimento cirúrgico, atendidos na Clínica de Cirurgia e Traumatologia Bucocomaxilofacial da UFSM. A clínica atende em média 30 pacientes/mês, sendo estimado para o período de agosto a dezembro de 2015 o atendimento de 120 pacientes. As variáveis analisadas serão dor, edema, posição dos terceiros molares, presença de patologias associadas, motivo da extração e o impacto na qualidade de vida relacionada à saúde oral e atividades diárias. Dor será avaliada através de uma escala do tipo Lickert com variação de 0 (sem dor) a 10 (dor insuportável). O edema será quantificado através de medidas obtidas a partir de dois pontos: da comissura labial ao trágus da maxila e do trágus da maxila ao mento. A classificação dos terceiros molares será feita segundo Pell e Gregory e Winter por meio de análises radiográficas. Para avaliar o impacto na qualidade de vida relacionada à saúde oral será utilizado o questionário OHIP-14. Outras informações serão obtidas através da anamnese prévia ao procedimento cirúrgico. Os dados serão analisados utilizando o programa STATA 12.0(Stata; College Station, TX, USA). Primeiramente será feita a análise descritiva das variáveis em estudo. Para verificar a associação entre os preditores e o impacto na qualidade de vida relacionada a saúde bucal será realizada a Regressão de Poisson.

Objetivo da Pesquisa:

GERAL: avaliar o impacto na qualidade de vida de pacientes submetidos à cirurgia de remoção de terceiro molar na Clínica de Cirurgia e Traumatologia Bucocomaxilofacial da Universidade Federal de Santa Maria- RS, no período de julho a dezembro de 2015.

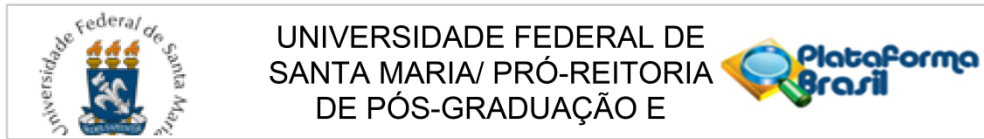
OBJETIVOS ESPECÍFICOS:

- a) Avaliar as mudanças na OHRQoL dos pacientes que removeram os terceiros molares, em quatro períodos de tempo: antes da cirurgia, imediatamente após, sete dias e um mês depois da extração dos terceiros molares;
- b) Mensurar dor, edema e o impacto na qualidade de vida relacionada à saúde oral dos indivíduos;
- c) Avaliar a associação de fatores sociodemográficos e clínicos com dor, edema e o impacto na qualidade de vida pós-operatórios.

Avaliação dos Riscos e Benefícios:

Foram analisados adequadamente no projeto, na Plataforma e no TCLE.

Endereço: Av. Roraima, 1000 - prédio da Reitoria - 2º andar
Bairro: Camobi **CEP:** 97.105-970
UF: RS **Município:** SANTA MARIA
Telefone: (55)3220-9362 **E-mail:** cep.ufsm@gmail.com



Continuação do Parecer: 1.173.271

Comentários e Considerações sobre a Pesquisa:

No objetivo geral ainda consta que a pesquisa ocorreria em julho. As demais dúvidas foram sanadas.

Considerações sobre os Termos de apresentação obrigatória:

Todos foram apresentados adequadamente.

Recomendações:

Corrigir o mês indicado no objetivo geral para data posterior a aprovação pelo CEP.

Veja no site do CEP - <http://w3.ufsm.br/nucleodecomites/index.php/cep> - na aba "orientações gerais", modelos e orientacoes para apresentacao dos documentos. Acompanhe as orientações disponíveis, evite pendências e agilize a tramitacao do seu projeto.

Conclusões ou Pendências e Lista de Inadequações:

Ao acreditar que a correção do mês indicado no objetivo geral poderá ser feita facilmente, a exemplo das anteriores, este parecer é favorável a aprovação do projeto.

Situação do Parecer:

Aprovado

Necessita Apreciação da CONEP:

Não

Considerações Finais a critério do CEP:

SANTA MARIA, 06 de Agosto de 2015

Assinado por:
CLAUDEMIR DE QUADROS
 (Coordenador)

Endereço: Av. Roraima, 1000 - prédio da Reitoria - 2º andar
Bairro: Camobi **CEP:** 97.105-970
UF: RS **Município:** SANTA MARIA
Telefone: (55)3220-9362 **E-mail:** cep.ufsm@gmail.com

ANEXO C - NORMAS PARA PUBLICAÇÃO NA REVISTA *JOURNAL OF ORAL AND MAXILLOFACIAL SURGERY*



JOURNAL OF ORAL AND MAXILLOFACIAL SURGERY

Official Journal of the [American Association of Oral and Maxillofacial Surgeons](#)

AUTHOR INFORMATION PACK

TABLE OF CONTENTS

• Description	p.1
• Impact Factor	p.1
• Abstracting and Indexing	p.1
• Editorial Board	p.1
• Guide for Authors	p.3



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DESCRIPTION

This monthly journal offers comprehensive coverage of new techniques, important developments and innovative ideas in **oral** and **maxillofacial surgery**. Practice-applicable articles help develop the methods used to handle **dentoalveolar surgery**, **facial injuries** and **deformities**, **TMJ disorders**, **oral cancer**, **jaw reconstruction**, **anesthesia** and **analgesia**. The journal also includes specifics on new instruments and diagnostic equipment and modern therapeutic drugs and devices. *Journal of Oral and Maxillofacial Surgery* is recommended for first or priority subscription by the Dental Section of the Medical Library Association.

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Abstract Example (Hypothesis driven patient-oriented research)-

Comparative Effectiveness of Maxillomandibular Advancement and Uvulopalatopharyngoplasty for the Treatment of Moderate to Severe Obstructive Sleep Apnea

Scott B. Boyd, DDS, PhD, Arthur S. Walters, MD, Yanna Song, MS, Lily Wang, PhD

Purpose

To directly compare the clinical effectiveness of maxillomandibular advancement (MMA) and uvulopalatopharyngoplasty (UPPP)—performed alone and in combination—for the treatment of moderate to severe obstructive sleep apnea (OSA).

Patients and Methods

The investigators designed and implemented a retrospective cohort study composed of patients with moderate to severe OSA (baseline AHI >15). The predictor variable was operative treatment and included MMA, UPPP, and UPPP followed by MMA (UPPP/MMA). The primary outcome variable was the apnea-hypopnea index (AHI) measured preoperatively and 3 months to 6 months postoperatively. Other variables were grouped into the following categories: demographic, respiratory, and sleep parameters. Descriptive and bivariate statistics were computed.

Results

The sample was composed of 106 patients grouped as follows: MMA (n = 37), UPPP (n = 34), and UPPP/MMA (n = 35) for treatment of OSA. There were no significant differences between the 3 groups for the study variables at baseline, except for AHI. Surgical treatment resulted in a significant decrease in AHI in each group: MMA (baseline AHI, 56.3 ± 22.6 vs AHI after MMA, 11.4 ± 9.8; $P < .0001$), UPPP/MMA (baseline AHI, 55.7 ± 49.2 vs AHI after UPPP/MMA, 11.6 ± 10.7; $P < .0001$), and UPPP (baseline AHI, 41.8 ± 28.0 vs AHI after UPPP, 30.1 ± 27.5; $P = .0057$). After adjusting for differences in baseline AHI, the estimated mean change in AHI was significantly larger for MMA compared with UPPP (MMA AHI, -40.5 vs UPPP AHI, -19.4; $P < .0001$). UPPP/MMA was no more effective than MMA ($P = .684$).

Conclusion

The results of this study suggest that MMA should be the surgical treatment option of choice for most patients with moderate to severe OSA who are unable to adequately adhere to CPAP.

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Prof. Walter Blaya Perez

Departamento de Estomatologia UFSM

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Fone: 32209269 (falar com Walter Blaya Perez)

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