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Características sociodemográficas dos indivíduos internados para o Serviço de Cirurgia e Traumatologia Bucomaxilofacial em um hospital de Minas Gerais antes e durante a pandemia pelo COVID-19.

Governador Valadares
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Dissertação apresentada ao Programa de Pós-Graduação em Ciências Aplicadas à Saúde, da Universidade Federal de Juiz de Fora, *Campus* Governador Valadares, como requisito parcial à obtenção do título de Mestre em Ciências Aplicadas à Saúde, área de concentração Biociências.

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BANCA EXAMINADORA

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RESUMO

Objetivo: Este estudo teve como propósito avaliar as características sociodemográficas dos indivíduos internados para o Serviço de Cirurgia e Traumatologia Bucomaxilofacial em um hospital de Minas Gerais antes e durante a pandemia pelo COVID-19. Métodos: Foi realizado um estudo do tipo transversal e retrospectivo. Foram analisados os registros médicos de todos os pacientes admitidos no Serviço de Cirurgia e Traumatologia Bucomaxilofacial (CTBMF) no período de 2019 a 2021. Foram coletadas informações clínicas, dados sociodemográficos e datas de internação dos pacientes. A análise estatística incluiu métodos descritivos usando o software R, bem como teste qui-quadrado e Mann-Whitney, com um nível de significância de 0,05%, utilizando o software JASP. Resultados: Foram examinados 143 prontuários e a maioria das hospitalizações envolveu pacientes do sexo masculino (82,5%). As principais causas de internação foram acidentes de motocicleta (37,8%), infecções bucomaxilofaciais (21,7%) e agressões físicas (11,9%). Quanto aos diagnósticos, as condições mais comuns incluíram fraturas de mandíbula (50 casos), abscessos/celulites (22 casos), fraturas nasais (14 casos) e fraturas do complexo zigomático-maxilar (13 casos). Não houve diferenças significativas na idade (p=0,94) e nas causas de internação entre os períodos avaliados (p=0,31). Também não foi observada uma associação significativa entre aumento ou redução de fraturas ósseas bucomaxilofaciais (p=0,35) ou infecções (p=0,15) antes e durante a pandemia. No entanto, foi notada uma associação significativa em relação ao sexo (OR 0,98, IC 0,03 – 1,92, p=0,04), com menos internações de mulheres durante a pandemia em comparação com o período pré-pandemia. Em relação às internações por infecção, houve diferenças significativas de acordo com o sexo (OR 1,57, IC 0,65 – 2,50, p=4,38e-4), com um maior número de internações entre pacientes do sexo masculino no período total avaliado. As hospitalizações devido a fraturas ósseas bucomaxilofaciais (n=103) foram predominantemente em pacientes do sexo masculino (OR 1,30, IC 0,40-2,19, p=6,01e—3), e observou-se que a maioria dos pacientes internados devido a violência (tiros ou agressões físicas, n=21) apresentou fraturas ósseas (OR 2,24, IC 0,33 – 5,99, p=8,21e-3).

Conclusão: Houve uma redução no número de hospitalizações no Serviço de CTBMF durante a pandemia, com uma diminuição correspondente no número de

hospitalizações de mulheres. No entanto, os fatores causais das hospitalizações não apresentaram alterações significativas em comparação com o ano de 2019, que foi o último ano antes do início da pandemia.

Descritores: Internação hospitalar. Cirurgia Maxilofacial. COVID-19.

ABSTRACT

Objective: The purpose of this study was to examine hospitalizations in a public hospital located in the interior of Minas Gerais before and during the COVID-19 pandemic. Methods: A cross-sectional and retrospective study was realized. The medical records of all patients admitted to the Oral and Maxillofacial Surgery and Traumatology Service (CTBMF) between 2019 and 2021 were analyzed. Clinical information, sociodemographic data and hospitalization dates were collected. Statistical analysis included descriptive methods using R software, as well as chi-square and Mann-Whitney tests, with a significance level of 0.05%, using JASP software. Results: 143 medical records were examined, and the results showed that most hospitalizations involved male patients (82.5%). The main causes of hospitalization were motorcycle accidents (37.8%), oral and maxillofacial infections (21.7%) and physical assaults (11.9%). As for diagnoses, the most common conditions included mandible fractures (50 cases), abscesses/cellulitis (22 cases), nasal fractures (14 cases) and fractures of the zygomatic-maxillary complex (13 cases). There were no significant differences in age (p=0.94) and causes of hospitalization between the periods evaluated (p=0.31). There was also no significant association between an increase or decrease in oral and maxillofacial bone fractures (p=0.35) or infections (p=0.15) before and during the pandemic. However, a significant association was noted in relation to gender (OR 0.98, CI 0.03 - 1.92, p=0.04), with fewer hospitalizations of women during the pandemic compared to the pre-pandemic period. Regarding hospitalizations due to infection, there were significant differences according to gender (OR 1.57, CI 0.65 - 2.50, p=4.38e-4), with a higher number of hospitalizations among male patients for this reason in all periods evaluated. Hospitalizations due to oral and maxillofacial bone fractures (n=103) were predominantly among male patients (OR 1.30, CI 0.40-2.19, p=6.01e-3), and it was observed that most patients hospitalized due to violence (gunshots or physical assaults, n=21) had bone fractures (OR 2.24, CI 0.33 - 5.99, p=8.21e-3).

Conclusion: There has been a reduction in the number of hospitalizations at the CTBMF Service during the pandemic, with a corresponding decrease in the number of hospitalizations of women. However, the causal factors of hospitalizations did not change significantly compared to 2019, which was the last year before the start of the pandemic.

Keywords: Hospitalization. Maxillofacial surgery. COVID-19

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LISTA DE ABREVIATURAS E SIGLAS

CDC	Centers of Disease Control and Prevention (Centros de Controle e Prevenção de Doenças)
CTBMF	Cirurgia e Traumatologia Bucomaxilofacial
DTM	Disfunção Temporomandibular
OMS	Organização Mundial da Saúde

SUMÁRIO

1. INTRODUÇÃO

No campo da odontologia, especificamente na área de Cirurgia e Traumatologia Bucomaxilofacial (CTBMF), há um enfoque dedicado ao diagnóstico, intervenção cirúrgica e medidas de apoio, como a instituição de uma correta farmacoterapia em associação com uma abordagem de uma equipe multiprofissional, relacionadas a doenças, lesões, traumas e distúrbios que afetam o sistema mastigatório e estruturas craniofaciais correlatas (Pary *et al.,* 2016).

A exposição considerável e a relativa falta de proteção da região facial contribuem para um alto número de lesões, resultando frequentemente em distúrbios graves. As lesões craniofaciais podem representar uma parcela significativa, chegando a até 50%, de todas as mortes decorrentes de traumatismos (Da Silva Maia *et al.,* 2021).

Diferentes tipos de traumas, como acidentes de trânsito, quedas de alturas, agressões interpessoais, incidentes no local de trabalho e lesões relacionadas a atividades esportivas, são descritos como alguns dos agentes das fraturas nos ossos da face, que podem abranger várias áreas como o complexo zigomático, ossos malares, maxila, mandíbula, as órbitas dos olhos, os alvéolos dentários e os próprios dentes, além dos ossos do seio nasal e da testa (Kasem *et al.,* 2022; Vásquez-Blanco *et al.,* 2021; Tiwari *et al.,* 2017).

Além das fraturas, outras moléstias recorrentes na face são as infecções odontogênicas, de etiologia dentária, e dos tecidos bucomaxilofaciais (pele, glândulas, periodonto, entre outros), que podem evoluir para condições de significativo impacto clínico quando se propagam para estruturas anatomicamente contíguas no contexto facial. Os indicadores clínicos compreendem edema, dor em região de maxila e mandíbula, pirexia local e sistêmica, disfagia, odinofagia, sialorreia, trismo, odontalgia e halitose. Em cenários de gravidade acentuada, podem emergir distúrbios fonéticos, comprometimentos respiratórios e cianose cutânea, denotando consequências potenciais nas vias aéreas, como na Angina de Ludwig (Camargos *et al.,* 2016).

A hospitalização e uma pronta abordagem terapêutica se erigem como medidas imperativas a fim de contrabalançar potenciais desfechos adversos, tais como obstrução das vias aéreas, mediastinite ou septicemia. O diagnóstico em

estágio precoce, juntamente com uma abordagem multidisciplinar, assume caráter primordial para a condução exitosa do tratamento (Camargos *et al.,* 2016).

1.1 PANDEMIA DE COVID-19

Os coronavírus formam uma família diversa de vírus que têm a capacidade de infectar uma ampla gama de animais. Nos seres humanos podem variar desde infecções respiratórias leves até casos graves e fatais. Mais recentemente, a partir de dezembro de 2019, um novo capítulo se desdobrou com o surto da COVID-19. Este surto teve início na cidade de Wuhan, na província de Hubei, China. Naquele período, várias instituições de saúde comunicaram a presença de grupos de pacientes sofrendo de pneumonia de origem desconhecida. Os indivíduos afetados pela COVID-19 experimentaram sintomas como desconforto no peito e, nos casos mais graves, dispneia e infiltração pulmonar bilateral. Essa série de eventos destacou a contínua ameaça representada pelos coronavírus e sua capacidade de desencadear pandemias, reforçando a necessidade de vigilância e preparação em saúde pública (Gangwani *et al.,*2021; Hu, *et al.,* 2021; Mohamadian, *et al.,* 2021).

De forma veloz, a enfermidade alastrou-se por outras regiões da China e em direção a 190 nações distintas. Em um marco importante, em 30 de janeiro, a Organização Mundial da Saúde promulgou a situação como uma emergência de saúde pública de interesse internacional, reconhecendo a gravidade do surto de coronavírus. Posteriormente, em 11 de fevereiro, o Comitê Internacional de Taxonomia de Vírus formalizou a nomenclatura "SARS-CoV-2" para o novo coronavírus. Foi então que a OMS cunhou a designação "COVID-19" para a enfermidade, proclamando-a como uma pandemia em 9 de março de 2020, uma determinação que elevou o status da situação para uma "emergência de saúde pública internacional". Os impactos desse cenário foram trágicos, tendo causado a perda de vida de mais de 5 milhões de indivíduos ao redor do globo até o mês de dezembro de 2021 (Barca *et al.,* 2020).

As vias de transmissão da COVID-19 de pessoa para pessoa englobam tanto a transmissão direta, por meio de ações como tosse, espirros e a inalação de pequenas gotículas que contêm o vírus, quanto a transmissão por contato. Nesse último caso, o contato ocorre com as membranas mucosas presentes na cavidade oral, nasal e nos olhos (Pabst, *et al.,* 2021; Barca *et al.,* 2020; Vishal *et al.,* 2020).

A maioria das estratégias e ações de biossegurança adotadas pelos governos foram moldadas pela preocupação em evitar uma sobrecarga nos sistemas hospitalares, além de se basearem em modelagens epidemiológicas que evidenciam como a diminuição do contato entre os indivíduos contaminados e a população em geral pode notavelmente aplainar a trajetória da epidemia. Com taxas de letalidade dos casos oscilando entre 1% e 7%, e uma taxa média de mortalidade em torno de 5% entre os pacientes que requerem hospitalização, os governos em grande parte se empenharam em conter a disseminação da infecção, embora com abordagens políticas e níveis de urgência que variaram consideravelmente (Fonseca *et al.,* 2021).

Em resposta à situação, houve a implementação de restrições em diversas esferas de interação social, incluindo as adaptações no setor de cuidados de saúde. A criação de hospitais de campanha, o treinamento em larga escala para profissionais da saúde, bem como a reorganização das enfermarias tornaram-se medidas essenciais (Pavelski *et al.,* 2022).

No contexto brasileiro, em 4 de fevereiro de 2020, o Ministério promulgou a Portaria 188/2020, categorizando o surto como uma "Emergência de Saúde Pública de Importância Nacional" (Fonseca *et al.,* 2021; Lasco, 2020; Ortega & Orsini, 2020). O Brasil emergiu como uma das nações mais impactadas pela pandemia, evidenciando-se tanto pelo prolongado período de imposições sociais restritivas quanto pelo expressivo montante de óbitos registrados. Uma observação relevante é que, embora ostente a sexta maior população global, o Brasil ocupou o terceiro lugar no ranking dos países com o maior número de infecções, ficando atrás somente dos Estados Unidos e da Índia, respectivamente. Além disso, ocupou a segunda posição no tocante ao número de vidas perdidas devido à COVID-19 (Pavelski *et al.,* 2022).

1.2 CIRURGIA E TRAUMATOLOGIA BUCOMAXILOFACIAL NO CONTEXTO DA PANDEMIA DA COVID-19

Desde o início da pandemia, as medidas rigorosas temporariamente implementadas impactaram significativamente diversos aspectos da vida humana, incluindo atividades físicas, interações sociais e a capacidade de manter exames de saúde regulares (Hilbold *et al.,* 2023).

O panorama de tratamento para lesões traumáticas sofreu transformações significativas em nível global em virtude da pandemia de COVID-19, apresentando importante diminuição nas hospitalizações decorrentes de fraturas na região bucomaxilofacial (Kasem *et al.,* 2022). Inicialmente, testemunhou-se uma diminuição dos casos relacionados a lesões bucomaxilofaciais nos serviços de emergência, algo que provocou alterações tanto na demografia quanto nas características das lesões. Paralelamente, essas mudanças reverberaram nas práticas clínicas, promovendo um aumento nos tratamentos não cirúrgicos e conservadores (Puglia *et al.,* 2021).

Esse cenário gerou efeitos de longo prazo na prevenção e evolução de doenças bucais, observados pelo fato de que apenas os pacientes com dores agudas mantiveram uma presença constante nos atendimentos odontológicos, com a maioria deles recebendo intervenções urgentes. Todavia, há relatos de que até intervenções urgentes não foram possíveis devido às restrições de acesso aos consultórios odontológicos, levando pacientes com problemas infecciosos, frequentemente em estágios avançados, a buscarem atendimento hospitalar através das equipes especializadas em CTBMF (Walter *et al.,* 2021).

O contexto de pandemia trouxe consigo uma série de restrições, incluindo um período de bloqueio abrangente, seguido por diferentes graus de limitações que persistiram por um considerável intervalo de tempo. Essa conjuntura impactou profundamente o modo de vida, a mobilidade e os padrões de deslocamento da população, o que, por sua vez, pode ter gerado alterações no panorama de incidência de traumas (Philip *et al.,* 2022).

Um aspecto a se considerar é que, embora a literatura tenha apontado que a quantidade de casos relacionados a traumas faciais diminuiu, a gravidade das lesões bucomaxilofaciais e suas ramificações mais amplas se agravou notadamente durante a pandemia de COVID-19, período marcado pela implementação das políticas de distanciamento social (Ludwig *et al.,* 2021).

Diante do receio de contrair a COVID-19 e das medidas rigorosas implementadas, houve uma acentuada queda na circulação de veículos, o que culminou em uma significativa redução no registro de pacientes acometidos por lesões bucomaxilofaciais provenientes de acidentes automobilísticos em alguns países. No entanto, observou-se que os casos praticamente retornaram aos níveis anteriores à medida que as restrições foram gradualmente afrouxadas posteriormente (Philip *et al.,* 2022).

É importante apontar que apesar da diminuição nas lesões bucomaxilofaciais diretamente correlacionadas à redução do tráfego veicular durante o período de quarentena (ação de saúde pública que envolve a reclusão social de pessoas visando evitar a disseminação de uma doença específica), houve relatos de aumento na incidência de lesões resultantes de conflitos interpessoais. Este cenário elucida de maneira evidente como o isolamento prolongado e a paralisação de atividades cotidianas podem, de fato, impactar negativamente a saúde mental de determinados indivíduos (Pavelski *et al.,* 2022; Vishal *et al.,* 2021).

Ainda segundo os autores, o confinamento obrigatório das pessoas em âmbito domiciliar durante esse período emergiu como um fator preponderante para o incremento nos índices de violência doméstica (Pavelski *et al.,* 2022; Vishal *et al.,* 2021) e esses tipos de lesões físicas resultantes de situações de violência doméstica e abuso frequentemente afetam a região facial (Coulthard *et al.,* 2020).

A análise minuciosa dos desdobramentos de saúde decorrentes da pandemia desempenha um papel essencial na identificação de eventuais discrepâncias nos fatores etiológicos, se presentes. Isso se estende também ao contexto do serviço de CTBMF, contribuindo para o desenvolvimento de abordagens de prevenção e intervenção mais eficazes e alinhadas com as necessidades (Philip *et al.,* 2022).

Diante do contexto exposto, levantou-se a hipótese de que haveria mudança no perfil das internações hospitalares para a área de cirurgia durante a pandemia do COVID-19 em comparação com anos anteriores à pandemia. A epidemiologia das lesões de face têm importância fundamental ao sinalizar sobre diagnósticos, prevenção e manejo dessas lesões. Adicionalmente, o conhecimento da etiologia é crucial para o planejamento e análise de abordagens de saúde pública.

O conhecimento da origem do trauma, por exemplo, permite prever quais lesões poderão se apresentar mais comumente nos serviços. Além disso, o seu estudo possibilita o planejamento e a implementação de medidas de prevenção e recuperação dos traumas bucomaxilofaciais (Gangwani *et al.,*2021; Martins *et al.,* 2020; Stanisce *et al.,* 2021).

Assim, acredita-se que a partir de uma melhor descrição do perfil das internações nesse cenário de estudo, seja possível potencializar tratamentos de uma forma mais assertiva, melhorar o conhecimento dos fatores causais, favorecendo a prevenção das internações para os serviços de cirurgia e traumatologia

bucomaxilofacial, podendo, ainda, auxiliar em políticas públicas relacionadas ao tema.

2. OBJETIVOS

2.1 OBJETIVOS GERAIS

Investigar o perfil das internações hospitalares por traumas de face em um hospital público em Governador Valadares, Minas Gerais entre os anos de 2019 e 2021.

2.2 OBJETIVOS ESPECÍFICOS

- Analisar os dados antes e durante pandemia;
- Avaliar os grupos por sexo;
- Verificar associação entre as variáveis sexo, idade, causa da internação e diagnóstico por ano de coleta e bem como diagnóstico por ano de coleta.
- Analisar as características das internações por fraturas ósseas, por infecção e por circunstâncias relacionadas à violência bem como sua associação com variáveis sociodemográficas.

3. ARTIGO CIENTÍFICO

Artigo científico enviado para publicação/publicado no periódico “Brazilian Journal of Oral Sciences”, qualis CAPES Interdisciplinar B1. A estruturação do artigo baseou-se nas instruções aos autores preconizadas pelo periódico (ANEXO X).

Hospital admissions for maxillofacial surgery in a public hospital in Minas Gerais, Brazil in the context of COVID-19

Abstract

Objective: To investigate the characteristics of hospital admissions in a public hospital before and during the COVID-19 pandemic. Methods: An epidemiological, cross-sectional, and retrospective study was realized, based on the analysis of the medical records of all patients admitted to the Oral and Maxillofacial Surgery Service of a public hospital in Minas Gerais, in 2019 and 2021. Descriptive analysis was performed in the R software, and chi-square and Mann-Whitney tests were performed in JASP software. A significance level of 0.05% was used. Results: 143 medical records were analyzed, and most hospitalizations occurred in men (82.5%). The main causes of hospitalization were motorcycle accidents (37.8%). Facial bone fractures and infections were the predominant diagnoses. No change was observed regarding the age (p=0.94) and cause (p=0.31) of hospitalizations in the periods evaluated. A significant association was observed with respect to gender (OR 0.98, IC 0.03 – 1.92, p=0.04), with a reduction in hospitalizations for women during the pandemic. Regarding hospitalizations due to infection, significant differences were observed regarding gender (OR 1.57, IC 0.65 – 2.50, p=4.38e-4), with a higher number of hospitalizations for males. In general, hospitalizations for maxillofacial bone fractures (n=103) were observed predominantly in males (OR 1.30, IC 0.40-2.19, p=6.01e—3), higher hospitalization of males for infection and was observed that among patients hospitalized because of violence (shooting or physical aggression, n=21), most had bone fractures (OR 2.24, IC 0.33 – 5.99, p=8.21e-3). Conclusion: There was a decrease in the number of hospitalizations during the pandemic, especially with a reduction in the number of women hospitalized during

the pandemic. However, there was no change in the causes of hospitalization when compared to 2019, the last year before the pandemic.

Keywords: Hospitalization; Oral and Maxillofacial Surgery; COVID-19.

Introduction

Different types of traumas, such as traffic accidents, falls from heights, interpersonal assaults, workplace incidents, and injuries related to sports activities are described as some of the agents of facial injuries (Tiwari *et al*., 2017; Vásquez-Blanco *et al.,* 2021; Kasem *et al*., 2022;). In addition to fractures, odontogenic infections of dental etiology and infections of the supporting tissues and appendages of the stomatognathic system can evolve into conditions of significant clinical impact (Camargos *et al.,* 2016). In this context, oral and maxillofacial surgery is the specialty of dentistry that acts and receives patients with these and other conditions in a hospital environment.

Since the beginning of the pandemic, the temporarily implemented stringent measures impacted several aspects of human life, including physical activity, social interactions, and the ability to maintain regular health checkups (Hilbold *et al.*, 2023). This scenario generated long-term effects in the prevention and evolution of oral diseases, observed by the fact that only patients with acute pain maintained a constant presence in dental care, with most of them receiving urgent interventions. However, there are reports that even urgent interventions were not possible due to restrictions on access to dental offices, leading patients with infectious problems, often in advanced stages, to seek hospital care through specialized surgery teams (Walter *et al.,* 2021).

The treatment landscape for traumatic injuries has undergone significant transformations at a global level due to the COVID-19 pandemic, with a significant decrease in hospitalizations due to fractures in the maxillofacial region (Kasem *et al*., 2022). Initially, there was a decrease in cases related to maxillofacial injuries in the emergency services, something that caused changes both in the demographics and in the characteristics of the lesions. In parallel, these changes reverberated in clinical practices, promoting an increase in non-surgical and conservative treatments (Puglia *et al.,* 2021).

Thus, given this scenario, the hypothesis was raised that there could have been a change in the epidemiological aspects of oral and maxillofacial surgery admissions during the COVID-19 pandemic. Thus, this study aimed to investigate the characteristics of hospital admissions in a public hospital in Minas Gerais, Brazil, before and during the pandemic. It is believed that from a better description of the profile of hospitalizations, it is possible to understand the changes in surgery services in the context of health emergencies.

Methods

An epidemiological, cross-sectional, and retrospective study was realized, based on the analysis of all medical records of patients admitted to the Oral and Maxillofacial Surgery and Traumatology Service of a public hospital in the city of Governador Valadares, Minas Gerais, Brazil, in the period between 2019 and 2021.

Governador Valadares is in the eastern macro-region of Minas Gerais. The public hospital is a center for patients from 53 municipalities in the region. During the pandemic, Governador Valadares presented alarming data, with periods of high transmission, according to the criteria of the CDC (Center for Disease Control and Prevention), and a mortality rate of 481.8 deaths per 100.000 inhabitants, higher than that observed in other municipalities of Minas Gerais in the same period in 2021 (Vieira et al., 2021). The public hospital has an Oral and Maxilofacial Surgery service that act in elective and emergencies procedures.

For data analysis, the following variables were collected: gender, age, race, reason for hospitalization, diagnosis, and date of the event. The inclusion criteria were patients hospitalized specifically for the Oral and Maxillofacial Surgery and Traumatology Service from January 2019 to December 2021. Only patients who were over 18 years of age were included. Patients who were hospitalized for other medical specialties and incomplete medical records were excluded. Hospitalizations for individuals under 18 years of age were excluded because they were linked to the medical pediatrics in the hospital. The causes and diagnosis were characterized as described in the medical records by the surgeon responsible for the care of each of the individuals during admission.

Descriptive and inferential analysis was performed with R (version 4.3.1.) and the JASP (version 0.14.1) software. A descriptive analysis (absolute/relative frequency), mean and standard deviation was performed. The chi-square test/Fischer's exact test was used to evaluate nominal variables and the Mann-Whitney test was used to evaluate the relationship between age and other variables. $P<0.05$ was considered as significant.

This study was submitted and approved by the Research Ethics Committee of the Universidade Federal de Juiz de Fora (number 5.555.235).

Results

Were identified 232 individuals hospitalized by the oral and maxillofacial surgery service between 2019 and 2021. Of these, 23 patients were excluded by age and 33 individuals participating in the routine treatment program for patients with special needs in the hospital. In addition, 33 medical records were not located, leaving 143 individuals who had the medical records analyzed for this study.

Table 1 shows the sociodemographic characteristics of hospitalizations in the period evaluated. Most patients were male (n=118, 82.5%), while 25 (17.5%) were female. The overall mean age of the sample was 38.5 years, with a standard deviation of 14.5. The median for both groups was 35 years. The predominant race was brown, with 114 individuals (79.7%).

Table 1. Hospital admissions to the Oral and Maxillofacial Surgery and Traumatology service classified by year, gender, and race.

Variables	n=143	%
Year	76	53.1
2019	37	25.9
2020	30	21.0
2021		
Gender		
Male	118	82.5
Female	25	17.5
Race		
Yellow	1	0.7
White	7	4.9
Brown	114	79.7
Black	11	7.7
Without information	7	7.0
Age*	38.5	14.5

* Média

Table 2 indicates the causes and diagnosis, highlighting motorcycle accidents (n=54), oral and maxillofacial infections (n=31), and physical aggression (n=17), corresponding to 37.8%, 21.7%, and 11.9% of all causal factors, respectively. Violence (physical aggression and assault by firearm) was responsible by 14.69 (n=21) hospitalizations.

Mandible fracture (n=50), abscess/cellulitis (n=22), nasal fracture (n=14) and fracture of the maxillary zygomatic complex (n=13) were more frequent diagnoses. Bone fractures, in general, were responsible for 72.03% of diagnoses. Infection (including cellulitis/ abscess and drainage) was the second most frequently observed (n=28, 19.6%).

Table 2. Causal factors and diagnoses of hospitalizations in the periods evaluated.

Variables	**n=143**	**%**
Etiology		
Car accident	7	4,9
Animal accident	4	2,8
Sports accident	2	1,4
Motorcycle accident	54	37,8
Work accident	4	2,8
Physical assault	17	11,9
Run over	3	2,1
Temporomandibular desorder	3	2,1
Facial infection	31	21,7
Not specified	5	3,5
Assault by firearm	4	2,8
Fall from height	4	2,8
Fall from own height	5	3,5
Diagnosis		
Cellulitis/abscess	22	15,4
Drainage	6	4,2
Zygomatic arch fracture	6	4,2
Zygomatic arch and mandible fracture	1	0,7
Zygomatic/maxillary complex fracture	13	9,1
Zygomatic/maxillary complex and mandible fracture	6	4,2
Zygomatic/maxillary complex and mandible and nasal fracture	1	0,7
Mandible fracture	50	35,0
Fracture of mandible and maxilla	3	2,1
Maxillary fracture	2	1,4
Maxillary and nasal fracture	1	0,7
Nasal fracture	14	9,8
Naso-orbito-ethmoidal fracture	3	2,1

Panfacial fracture	3	2,1
Facial laceration	1	0,7
Tongue injury	3	2,1
Mandible dislocation	3	2,1
Pseudoarthrosis of the mandible	2	1,4
Sialoadenitis	1	0,7
Maxillary tumor	1	0,7
Maxillary sinus tumor	1	0,7

Graph 1 shows the incidence by gender and year of collection, indicating a predominance of males in 2019, 2020 and 2021, 76.3%, 91.9% and 86.7% respectively, and 23.7%, 8.1% and 13.3% among female patients.

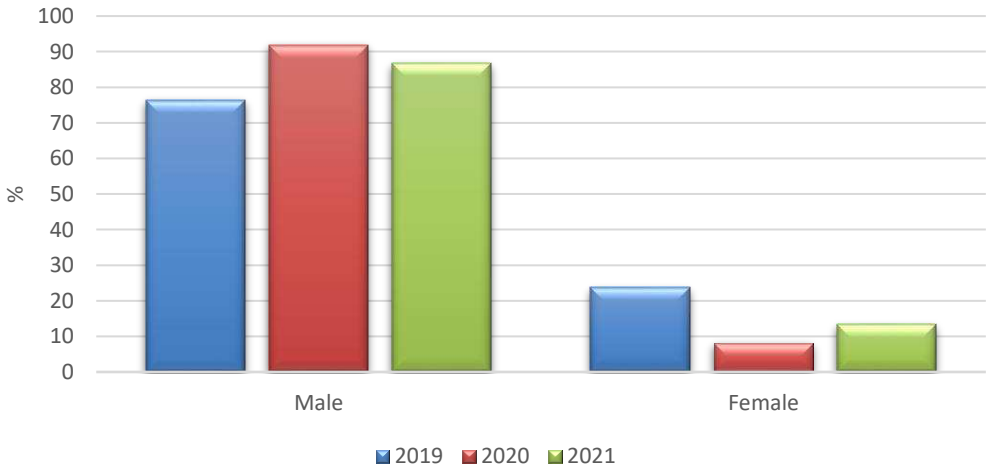

Figure 1. Incidence of facial fractures by gender and year

Graph 2 highlights the year regarding race, evidencing the highest incidence in brown individuals in all years of collection, with 81.6% in 2019, 73% in 2020 and 83.3% in 2021.

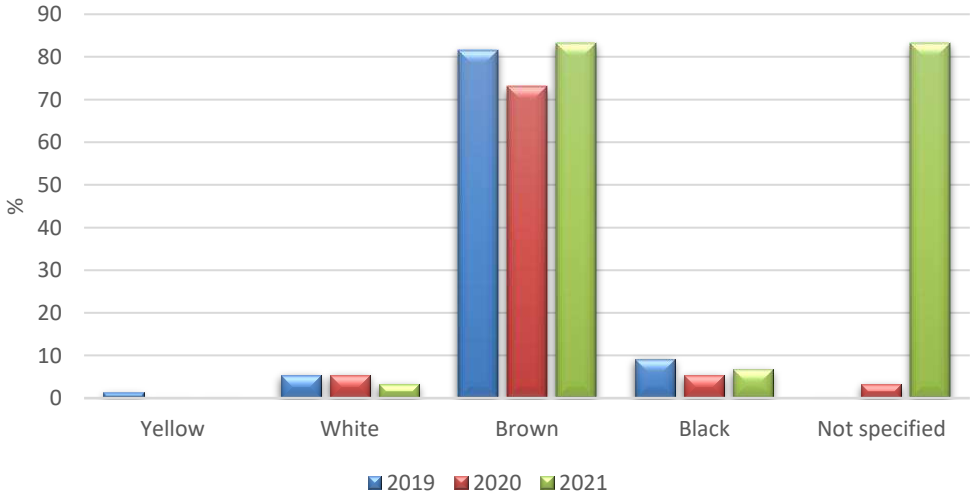

Figure 2. Incidence of facial fractures in each race per year

Table 3 shows a predominance of motorcycle accidents in the 3 years of the research. They also present diagnoses per year and demonstrate the decline in the number of cases in 2020 and 2021 when compared to 2019.

Table 3. Characteristics of hospitalizations per year regarding the causal factor and clinical diagnosis.

Variables	Ano					
	2019		2020		2021	
	N	%	n	%	n	%
Etiology						
Car accident	4	5,3	2	5,4	1	3,3
Animal accident	3	3,9	-	-	1	3,3
Sports accident	1	1,3	-	-	1	3,3
Motorcycle accident	29	38,2	12	32,4	13	43,3
Work accident	2	2,6	1	2,7	1	3,3
Physical assault	6	7,9	5	13,5	6	20,0
Run over	1	1,3	2	5,4	-	-
Temporomandibular desorder	2	2,6	1	2,7	-	-
Facial infection	19	25,0	6	16,2	6	20,0
Not specified	2	2,6	3	8,1	-	-
Firearm projectile	3	3,9	1	2,7	-	-
Fall from height	2	2,6	2	5,4	-	-
Fall from own height	2	2,6	2	5,4	1	3,3
Diagnosis						
Cellulitis/abscess	16	21,1	6	16,2	-	-
Drainage	-	-	-	-	6	20,0
Zygomatic arch fracture	5	6,6	1	2,7	-	-
Zygomatic arch and mandible fracture	1	1,3	-	-	-	-
Zygomatic/maxillary complex fracture	7	9,2	4	10,8	2	6,7
Zygomatic/maxillary complex and mandible fracture	3	3,9	-	-	3	10,0
Zygomatic/maxillary complex and mandible and nasal fracture	1	1,3	-	-	-	-
Mandible fracture	24	31,6	16	43,2	10	33,3
Fracture of mandible and maxilla	1	1,3	-	-	2	6,7
Maxillary fracture	1	1,3	1	2,7	-	-
Maxillary and nasal fracture	1	1,3	-	-	-	-
Nasal fracture	4	5,3	4	10,8	6	20,0
Naso-orbito-ethmoidal fracture	2	2,6	1	2,7	-	-
Panfacial fracture	2	2,6	1	2,7	-	-
Facial laceration	1	1,3	-	-	-	-
Tongue injury	-	-	2	5,4	1	3,3
Mandible dislocation	2	2,6	1	2,7	-	-
Pseudoarthrosis of the mandible	2	2,6	-	-	-	-
Sialoadenitis	1	1,3	-	-	-	-
Maxillary tumor	1	1,3	-	-	-	-
Maxillary sinus tumor	1	1,3	-	-	-	-

Graph 3 shows the mean age by the year of collection. In 2019 the average was 39.09 years, with a decline in 2020 (37.2 years), and a further rise in 2021 (38.4 years).

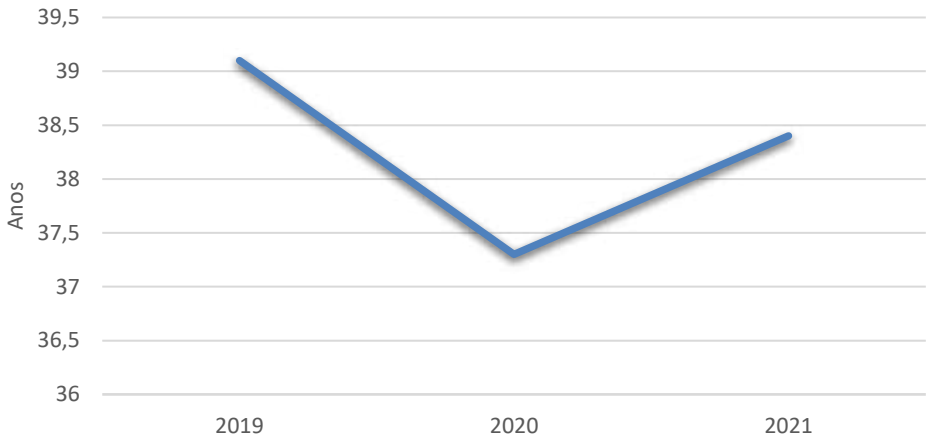

Figure 3. Hospitalizations according age per year

Inferential analyses indicated that, with respect to age, no significant association was observed (p=0.94) when the pre-pandemic period and during the pandemic was analyzed. There was also no statistically significant difference in hospitalizations for violence (p=0.31) or traffic accidents (p=0.75). Regarding the diagnosis, there was also no association regarding the increase or reduction of maxillofacial bone fractures (p=0.35) or infection (p=0.15) during the period before and during the pandemic. A significant association was noted with respect to gender (OR 0.98, CI 0.03 – 1.92, p=0.04, Cramer's V = 0.17), with a reduction in hospitalizations for women during the pandemic (from 23.68% to 10.45%) compared to the pre-pandemic period.

Among the participants who were hospitalized for violence, there were no significant differences between men and women (p=0.68) or age (p=0.05). Regarding hospitalizations due to infection, significant differences were observed regarding gender (OR 1.57, CI 0.65 – 2.50, p=4.38e-4, Cramer's V = 0.29), with a higher number of hospitalizations for males.

Hospitalizations for maxillofacial bone fractures (n=103) were observed predominantly in males (OR 1.30, CI 0.40-2.19, p=6.01e—3, Cramer's V 0.25) and it was observed that among patients hospitalized as a consequence of violence

(shooting or physical aggression, n=21), most (n=20, 95.24%) had bone fractures (OR 2.24, CI 0.33 – 5.99, p=8.21e-3, Cramer's V = 0.21).

Discussion

Hospitalizations in the Oral and Maxillofacial Surgery Service in this study decreased during the pandemic period when compared to the previous year (2019), as seen in studies conducted in Israel (Kasem *et al.,* 2022), Kerala, India (Philip *et al.,* 2022; Vishal *et al.,* 2021), Seattle, USA (Ludwig *et al.,* 2021). However, in Rochester, USA, there was an increase in the number of patients seen in the emergency room with facial involvement (Gangwani *et al*., 2021).

Significant gender differences were observed during the pandemic, with a reduction in women's admission. This finding may raise several issues, such as an unequal search for health services or possible differences in behavior between genders in response to the pandemic (Vázquez-Blanco *et al.,* 2021; Puglia e Chiu, 2022). The difference between the genders in hospitalizations for maxillofacial bone fractures, with a higher frequency among males, may also be related to differences in behavior patterns or exposure to risk between men and women (Vásquez-Blanco *et al.,* 2021). It would be relevant to further investigate the reasons behind this difference to develop appropriate prevention strategies.

The present study also pointed to a higher incidence of motorcycle accidents and facial infections. A similar study conducted in Chile revealed that, despite the pandemic context, within the maxillofacial specialty, trauma continued to be the most frequent condition, being associated mainly with automobile accidents and physical aggression (Raposo, *et al.,* 2021).

Physical aggression in this study was observed less frequently when compared to accidents and infections. Some studies (Bohneberger *et al.,* 2021; Press *et al., 2021;* Blackhall *et al.,* 2020) demonstrate that cases of aggression have decreased significantly during the pandemic. Other authors (Raposo *et al.,* 2021; Stanisce et al., 2021; Fatke *et al.,* 2020) highlight those cases resulting from domestic violence had a higher record in this period than in previous years. This increase was associated with the social lockdown measures adopted to minimize the spread of COVID-19 (Muller *et al.,* 2021). An interesting data related to violence in the present study is that

hospitalizations for violence (physical aggression and FAP) culminated in facial bone fractures in almost all cases.

It was observed that young male adults face a higher incidence of injuries in the region of oral and maxillofacial area. It is widely recognized that throughout history, men have demonstrated a more pronounced tendency to engage in high-risk activities such as riding motorcycles and participating in situations of interpersonal violence. These situations may or may not be associated with the consumption of alcoholic beverages. As a result, men are more likely to suffer maxillofacial trauma (Vásquez-Blanco *et al.,* 2021). The data of the present study corroborate the findings of the literature, also indicating that among the cases of bone fracture, there was a male predominance.

As described, motorcycle accidents accounted for most occurrences of accidents causing maxillofacial trauma both in the pre-pandemic period and during the pandemic, remaining the main cause found by the study, alongside facial infections, despite social distancing and quarantine policies, as found in several other studies (Pavelski *et al.,* 2022; Philip *et al.,* 2022; Vásquez-Blanco *et al.,* 2021; Raposo, *et al.,* 2021). It is suspected that the maintenance of motorcycle accident cases may be involved with work activities, recklessness in traffic, and disregard for quarantine policies. Alcohol use during the period associated with driving is also another factor that may influence this incidence (Ludwig *et al.,* 2021).

On the other hand, a different profile of causal factors for hospitalizations has been found in some centers. In the United Kingdom (Puglia *et al., 2021)*, interpersonal violence (Vishal *et al*., 2021) and falls in general, especially at home *(Philip et al.,* 2021) were more frequent. Falls were observed in the present study, but less frequently when compared to other causes of traffic accidents.

Regarding fractures, the mandible was the most affected bone, presenting 50 cases, followed by nasal fractures and fractures in the maxillary zygomatic complex. The literature shows that these are the most affected bones in the face, due to their projection (Raposo *et al.,* 2021). In a study, the distribution of fractures revealed that the mandible was the most frequently affected bone structure, accounting for 55.5% of cases, followed by zygomatic bone, which accounted for 22.2% of fractures (Da

Silva Maia *et al.,* 2021). Other authors such as Deus *et al.* (2015) and Lins *et al.* (2018) also found similar results.

Dentists and otorhinolaryngologists were identified as a high-risk group for contracting the infection by SARS-CoV-2. The lack of dental consultations, routine or urgent, due to fear was listed as an important factor related to infections (Vázquez-Blanco *et al.,* 2021; Pabst *et al*., 2020). Although there was no change in the number of hospitalizations for infections in the periods analyzed, it was possible to observe that among patients hospitalized for infections, there was a significant less hospitalization for this cause among females compared to males.

In summary, it was possible to verify a reduction of more than 50% in admissions to the Service of Oral and Maxillofacial Surgery and Traumatology during the period of the pandemic and that there were no changes in the underlying causes of hospitalizations when compared to the year 2019, the last year before the declaration of pandemic by the WHO. However, it was observed that there was a significant reduction in the number of women hospitalized. In general, it was also noted that bone fractures were the main causes of hospitalization, being predominant in males. Hospitalization for infection were more frequent in males. Among patients hospitalized for violence, fracture of the facial bones was observed in 95% of the cases.

The present study has limitations such as a small sample, non-localized medical records, and the exclusion of data due to incomplete data. It is also highlighted that the data represent a specific period and service. More research is needed to understand and characterize the profile of hospitalization in Oral and Maxillofacial services.

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4. Conclusão

Nos períodos avaliados, observou-se que as internações diagnosticadas como fraturas ósseas e infecções foram mais frequentes, com predomínio de pacientes do sexo masculino. Notou-se ainda que acidentes de trânsito foram a principal causa de internação, seguida por processos infecciosos e violência (agressão física e por arma de fogo). Dentre os pacientes internados por violência, houve fratura dos ossos faciais na maioria dos casos.

Os dados do presente estudo indicaram uma redução expressiva e progressiva nas admissões ao Serviço de Cirurgia e Traumatologia Bucomaxilofacial durante o período da pandemia (2020 e 2021) e que não houve alterações no cenário das causas subjacentes quando comparado com o ano de 2019, último ano antes da declaração de pandemia pela OMS, ocorrida em março de 2020. Entretanto, observou-se uma redução significativa nas internações para o sexo feminino, quando comparado ao masculino.

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APÊNDICE A – Autorização para realização da pesquisa

UNIVERSIDADE FEDERAL DE JUIZ DE FORA

AUTORIZAÇÃO PARA REALIZAÇÃO DA PESQUISA

Ilmo. Sr. Dr. Rodolfo Dias Ramalho

Diretor Clínico do Hospital Municipal de Governador Valadares

Solicito de Vossa Senhoria a autorização para a realização e divulgação da pesquisa: "Perfil epidemiológico das internações hospitalares por fraturas faciais em um hospital de Minas Gerais" que será desenvolvida por mim, Vinicius de Menezes Félix Ferreira, cirurgião dentista e mestrando da Universidade Federal de Juiz de Fora, sob a orientação do professor Dr. Fábio Alessandro Pieri.

Trata-se de um estudo epidemiológico, transversal e retrospectivo, que será realizado a partir da análise dos prontuários de pacientes internados para o Serviço de Cirurgia e Traumatologia Bucomaxilofacial no período compreendido entre os anos de 2019 e 2021 com o objetivo de investigar o perfil das internações hospitalares por traumas de face em um hospital público do interior de Minas Gerais.

Informo ainda, que o nome da instituição não será citado na divulgação de resultados, que serão utilizados apenas para fins exclusivamente científicos e será mantido o absoluto anonimato em relação aos participantes envolvidos, seguindo os preceitos da resolução 466/12 do Ministério da Saúde, que traz as Diretrizes e Normas Regulamentadoras de Pesquisa envolvendo seres humanos. A pesquisa, antes de ser realizada, será analisada pelo Comitê de Ética da UFJF através da Plataforma Brasil, para verificação do cumprimento das recomendações legais e éticas.

Desde já, coloco-me a disposição para maiores esclarecimentos.

Vinicius de Menezes Félix Ferreira
Cirurgião Dentista e Mestrando

Prof. Dr. Fábio Alessandro Pieri
Prof. Dr. Orientador

AUTORIZAÇÃO:

Declaro que fui devidamente informado(a) quanto às finalidades dessa pesquisa, que a Instituição possui infraestrutura para sua realização e autorizo a realização da coleta de dados.

Dr. Rodolfo Dias Ramalho
Diretor Clínico HMGV/SMS
CRM MG 41105

Diretor Clínico do Hospital Municipal de Governador Valadares

Governador Valadares, 23/11/24

APÊNDICE B – Termo de Confidencialidade e Sigilo

Termo de Confidencialidade e Sigilo

Eu, Vinícius de Menezes Félix Ferrreira, aluno do Mestrado em Ciências Aplicadas à Saúde da Universidade Federal de Juiz de Fora/ GV, orientando do professor Dr. Fábio Alessandro Pieri, pesquisador responsável pelo projeto de pesquisa intitulado "Perfil epidemiológico das internações hospitalares por fraturas faciais em um hospital de Minas Gerais", solicito a dispensa da aplicação do Termo de Consentimento Livre, com a seguinte justificativa: A pesquisa irá investigar dados de prontuários, derivados dos registros de internações, não sendo necessário efetuar contato direto com o paciente, nem realizar a identificação dos mesmos ou utilizar os seus dados individuais. Por essa razão os riscos oferecidos aos participantes serão mínimos, não sendo necessário também a utilização de um Termo de Consentimento Livre e Esclarecido (TCLE).

Declaro:

a) Que o acesso aos dados registrados em prontuário de pacientes ou em bases de dados para fins da pesquisa cientifica será feito somente após aprovação do projeto de pesquisa pelo Comitê de Ética Em Pesquisa Humana;

b) Que o acesso aos dados será supervisionado por uma pessoa que esteja plenamente informada sobre as exigências de confiabilidade;

c) Meu compromisso com a privacidade e a confidencialidade dos dados utilizados preservando integralmente o anonimato e a imagem do participante bem como a sua não estigmatização;

d) Não utilizar as informações em prejuízo das pessoas e/ou das comunidades, inclusive em termos de autoestima, de prestígio e/ou econômico-financeiro;

e) Que o pesquisador responsável estabeleceu salvaguardar e assegurar a confidencialidades dos dados de pesquisa;

f) Que os dados obtidos na pesquisa serão usados exclusivamente para finalidade prevista no protocolo;

g) Que os dados obtidos na pesquisa somente serão utilizados para o projeto vinculado, os quais serão mantidos em sigilo, em conformidade com o que prevê os termos da resolução 466/12 do Conselho Nacional de Saúde, assino este termo para salvaguardar seus direitos.

Nome do Pesquisador Responsável: Dr. Fábio Alessandro Pieri.
Campus Universitário da UFJF – Governador Valadares
Faculdade/Departamento/Instituto: Programa De Pós-Graduação Stricto Sensu Mestrado Em Ciências Aplicadas À Saúde da Universidade Federal De Juiz De Fora. Campus Governador Valadares
CEP: 35010-180
Fone: 33999691044
E-mail: fabio.pieri@ufjf.br
Governador Valadares, ____de _____de 20___.

Assinatura
Dr. Fábio Alessandro Pieri.

APÊNDICE C – Dispensa do TCLE

DISPENSA DO TCLE (TERMO DE CONSENTIMENTO LIVRE E ESCLARECIDO)

Eu, Vinícius de Menezes Félix Ferreira, aluno do Mestrado em Ciências Aplicadas à Saúde da Universidade Federal de Juiz de Fora/ GV, orientando do professor Dr. Fábio Alessandro Pieri, pesquisador responsável pelo projeto de pesquisa intitulado "Perfil epidemiológico das internações hospitalares por fraturas faciais em um hospital de Minas Gerais", solicito a dispensa da aplicação do Termo de Consentimento Livre, com a seguinte justificativa: A pesquisa irá investigar dados de prontuários, derivados dos registros de internações, não sendo necessário efetuar contato direto com o paciente, nem realizar a identificação dos mesmos ou utilizar os seus dados individuais. Por essa razão os riscos oferecidos aos participantes serão mínimos, não sendo necessário também a utilização de um Termo de Consentimento Livre e Esclarecido (TCLE).

Declaro:

a) Que o acesso aos dados registrados em prontuário de pacientes ou em bases de dados para fins da pesquisa científica será feito somente após aprovação do projeto de pesquisa pelo Comitê de Ética Em Pesquisa Humana;

b) Que o acesso aos dados será supervisionado por uma pessoa que esteja plenamente informada sobre as exigências de confiabilidade;

c) Meu compromisso com a privacidade e a confidencialidade dos dados utilizados preservando integralmente o anonimato e a imagem do participante bem como a sua não estigmatização;

d) Não utilizar as informações em prejuízo das pessoas e/ou das comunidades, inclusive em termos de autoestima, de prestígio e/ou econômico-financeiro;

e) Que o pesquisador responsável estabeleceu salvaguardar e assegurar a confidencialidades dos dados de pesquisa;

f) Que os dados obtidos na pesquisa serão usados exclusivamente para finalidade prevista no protocolo;

g) Que os dados obtidos na pesquisa somente serão utilizados para o projeto vinculado, os quais serão mantidos em sigilo, em conformidade com o que prevê os termos da resolução 466/12 do Conselho Nacional de Saúde, assino este termo para salvaguardar seus direitos.

Devido à impossibilidade de obtenção do TCLE (Termo de Consentimento Livre Esclarecido) de todos os participantes, assino este termo para salvaguardar seus direitos.

Nome do Pesquisador Responsável: Dr. Fábio Alessandro Pieri.
Campus Universitário da UFJF – Governador Valadares
Faculdade/Departamento/Instituto: Programa De Pós-Graduação. Stricto Sensu Mestrado Em Ciências Aplicadas À Saúde da Universidade Federal De Juiz De Fora. Campus Governador Valadares
CEP: 35010-180
Fone: 33999691044
E-mail: fabio.pieri@ufjf.br
Governador Valadares, ____de _____ de 20___.

Assinatura
Dr. Fábio Alessandro Pieri.

APÊNDICE D – Instrumento de coleta de dados

INSTRUMENTO PARA COLETA DE DADOS

Título do Projeto:	Perfil epidemiológico das internações hospitalares por fraturas faciais em um hospital de Minas Gerais
Pesquisador Responsável:	Prof. Dr. Fábio Alessandro Pieri
Assistente da Pesquisa:	Vinicius de Menezes Félix Ferreira
Endereços para contato:	E-mail: viniciusmenezesfferreira@yahoo.com.br fabio.pieri@ufjf.br Tel.: (33) 999691044
Unidade/Departamento /Instituto/Instituição:	Programa De Pós-Graduação Stricto Sensu Mestrado Em Ciências Aplicadas À Saúde. Universidade Federal De Juiz De Fora. Campus Governador Valadares.

1. Dados sociodemográficos:

Idade: _____
Sexo: _____
Etnia: _____

2. Dados epidemiológicos:

Etiologia do trauma: _____
Tipo de fratura: _____
Desfecho primário (conservador, cirúrgico): _____
Desfecho secundário (alta, óbito): _____
Período da internação: _____

3. **Notas (alguma informação importante, como prontuário incompleto, com rasuras, ilegível, entre outros:**

_____
_____
_____
_____
_____

E-mail: fabio.pieri@ufjf.br
Governador Valadares, ____de _____ de 20___.

Assinatura
Dr. Fábio Alessandro Pieri.

ANEXO A – Parecer de aprovação do Comitê de Ética em Pesquisa

UFJF - UNIVERSIDADE FEDERAL DE JUIZ DE FORA - MG

PARECER CONSUBSTANCIADO DO CEP

DADOS DO PROJETO DE PESQUISA

Título da Pesquisa: PERFIL EPIDEMIOLÓGICO DAS INTERNAÇÕES HOSPITALARES PORFRATURAS FACIAIS EM UM HOSPITAL DE MINAS GERAIS.

Pesquisador: Fábio Alessandro Pieri

Área Temática:

Versão: 2

CAAE: 58352722.1.0000.5147

Instituição Proponente: Campus Avançado Governador Valadares -UFJF

Patrocinador Principal: Financiamento Próprio

DADOS DO PARECER

Número do Parecer: 5.555.235

Apresentação do Projeto:

As informações elencadas nos campos "Apresentação do Projeto", "Objetivo da Pesquisa" e "Avaliação dos Riscos e Benefícios" foram retiradas do arquivo Informações Básicas da Pesquisa.

"Trata-se de um estudo epidemiológico, transversal e retrospectivo, a partir da análise dos prontuários de pacientes internados para o Serviço de Cirurgia e Traumatologia Bucomaxilofacial de um hospital público do interior de Minas Gerais no período compreendido entre os anos de 2019 e 2021, com o objetivo de investigar o perfil das internações hospitalares por traumas de face em um hospital público do interior de Minas Gerais, cujos leitos são destinados em sua totalidade ao Sistema Único de Saúde (SUS). A pesquisa irá investigar dados secundários, derivados dos registros de internações, não sendo necessário efetuar contato direto com o paciente, nem realizar a identificação. Serão avaliados itens como dados sociodemográficos, sexo, idade, etnia, etiologia do trauma, tipo de fratura, desfecho (conservador, cirúrgico) e data do evento. Os dados coletados serão analisados inicialmente por meio de uma análise descritiva, calculando-se a frequência e o percentual para as variáveis categóricas. Para as variáveis quantitativas será calculada média e desvio padrão. Análise estatística será realizada e o teste selecionado de acordo com a natureza das variáveis (qualitativas ou numéricas). Os dados serão analisados no software SPSS

Endereço: JOSE LOURENCO KELMER S/N
Bairro: SAO PEDRO **CEP:** 36.036-900
UF: MG **Município:** JUIZ DE FORA
Telefone: (32)2102-3788 **E-mail:** cep.propp@ufjf.br

12.0 e o nível mínimo de significância adotado será de 5%."

Objetivo da Pesquisa:

"Objetivo primário

- Investigar o perfil das internações hospitalares por traumas de face em um hospital público do interior de Minas Gerais entre os anos de 2019 e 2021.

Objetivo secundário

- Analisar os dados sociodemográficos;
- Comparar os dados antes e durante pandemia;
- Comparar os grupos por sexo;
- Avaliar variáveis associadas;
- Analisar a frequência e os tipos de traumas por faixas etárias e sexo. "

Avaliação dos Riscos e Benefícios:

"Riscos:

A pesquisa irá investigar dados de prontuários, derivados dos registros de internações, não sendo necessário efetuar contato direto com o paciente. Ainda que exista o risco à segurança dos prontuários, de invasão de privacidade e de divulgação de dados confidenciais em caso de extravio da pesquisa, medidas serão tomadas para minimizar esses riscos, como assegurar a confidencialidade e a privacidade dos dados, a não utilização das informações em prejuízo das pessoas, garantir a não violação e a integridade dos documentos e limitar o acesso aos prontuários apenas para obtenção das informações específicas para a pesquisa, medidas essas firmadas através do Termo de Confidencialidade e Sigilo (anexo I). Por essa razão os riscos oferecidos aos participantes serão mínimos.

Benefícios:

Espera-se que a partir de uma melhor descrição do perfil traumatizado na região, seja possível potencializar tratamentos de uma forma mais assertiva, pois conhecendo melhor a origem do trauma é possível encontrar uma terapêutica mais adequada para o paciente assim como medidas de prevenção ao trauma."

Comentários e Considerações sobre a Pesquisa:

Realizadas as correções nas pendências, o projeto está bem estruturado, apresenta o tipo de estudo, número de participantes, critério de inclusão e exclusão, forma de recrutamento. As

referencias bibliográficas são atuais, sustentam os objetivos do estudo e seguem uma normatização. O cronograma mostra as diversas etapas da pesquisa, além de mostra que a coleta de dados ocorrerá após aprovação do projeto pelo CEP. O orçamento lista a relação detalhada dos custos da pesquisa que serão financiados com recursos próprios conforme consta no campo apoio financeiro. A pesquisa proposta está de acordo com as atribuições definidas na Resolução CNS 466 de 2012, itens IV.6, II.11 e XI.2; com a Norma Operacional CNS 001 de 2013. Itens: 3.4.1-6, 8, 9, 10 e 11; 3.3 - f; com o Manual Operacional para CEPS Item: VI - c.

Considerações sobre os Termos de apresentação obrigatória:

O protocolo de pesquisa está em configuração adequada, apresenta FOLHA DE ROSTO devidamente preenchida,com o título em português, identifica o patrocinador pela pesquisa, estando de acordo com as atribuições definidas na Norma Operacional CNS 001 de 2013 item 3.3 letra a; e 3.4.1 item 16. Apresenta o TERMO DE DISPENSA DO TCLE de acordo com a Resolução CNS 466 de 2012, item: IV.8. O Pesquisador apresenta titulação e experiência compatível com o projeto de pesquisa, estando de acordo com as atribuições definidas no Manual Operacional para CPEs. Apresenta DECLARAÇÃO de infraestrutura e de concordância com a realização da pesquisa de acordo com as atribuições definidas na Norma Operacional CNS 001 de 2013 item 3.3 letra h.

Conclusões ou Pendências e Lista de Inadequações:

Diante do exposto, o projeto está aprovado, pois está de acordo com os princípios éticos norteadores da ética em pesquisa estabelecido na Res. 466/12 CNS e com a Norma Operacional Nº 001/2013 CNS. Data prevista para o término da pesquisa: dezembro de 2022.

Considerações Finais a critério do CEP:

Diante do exposto, o Comitê de Ética em Pesquisa CEP/UFJF, de acordo com as atribuições definidas na Res. CNS 466/12 e com a Norma Operacional Nº001/2013 CNS, manifesta-se pela APROVAÇÃO do protocolo de pesquisa proposto. Vale lembrar ao pesquisador responsável pelo projeto, o compromisso de envio ao CEP de relatórios parciais e/ou total de sua pesquisa informando o andamento da mesma, comunicando também eventos adversos e eventuais modificações no protocolo.

Este parecer foi elaborado baseado nos documentos abaixo relacionados:

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Continuação do Parecer: 5.555.235

Tipo Documento	Arquivo	Postagem	Autor	Situação
Informações Básicas do Projeto	PB_INFORMAÇÕES_BÁSICAS_DO_PROJETO_1917293.pdf	26/06/2022 19:44:03		Aceito
Projeto Detalhado / Brochura Investigador	PROJETO_DETALHADO_CEP.pdf	26/06/2022 19:42:36	VINICIUS DE MENEZES FELIX FERREIRA	Aceito
Declaração de Instituição e Infraestrutura	Autorizacao_hospitalar.pdf	26/06/2022 19:28:04	VINICIUS DE MENEZES FELIX FERREIRA	Aceito
TCLE / Termos de Assentimento / Justificativa de Ausência	Dispensa_TCLE_junho.pdf	26/06/2022 19:19:23	VINICIUS DE MENEZES FELIX FERREIRA	Aceito
Outros	Lattes_Vinicius.pdf	27/04/2022 22:28:20	VINICIUS DE MENEZES FELIX FERREIRA	Aceito
Outros	Lattes_Sibele_Nascimento_de_Aquino.pdf	26/04/2022 20:04:57	VINICIUS DE MENEZES FELIX FERREIRA	Aceito
Outros	Lattes_Fabio_Alessandro_Pieri.pdf	26/04/2022 20:04:31	VINICIUS DE MENEZES FELIX FERREIRA	Aceito
Folha de Rosto	folha_de_rosto.pdf	25/03/2022 22:36:57	VINICIUS DE MENEZES FELIX FERREIRA	Aceito
Outros	Termo_sigilo.pdf	22/03/2022 00:05:28	VINICIUS DE MENEZES FELIX FERREIRA	Aceito

Situação do Parecer:
Aprovado

Necessita Apreciação da CONEP:
Não

JUIZ DE FORA, 01 de Agosto de 2022

Assinado por:
Jubel Barreto
(Coordenador(a))

Endereço: JOSE LOURENCO KELMER S/N
Bairro: SAO PEDRO **CEP:** 36.036-900
UF: MG **Município:** JUIZ DE FORA
Telefone: (32)2102-3788 **E-mail:** cep.propp@ufjf.br

ANEXO B – Brazilian Journal of Oral Sciences - instruções aos autores

Submissions

Brazilian Journal of Oral Sciences

Submissions

Login or Register to make a submission.

Submission Preparation Checklist

As part of the submission process, authors are required to check off their submission's compliance with all of the following items, and submissions may be returned to authors that do not adhere to these guidelines.

- 1. The submission has not been previously published, nor is it under consideration in another journal.
- 2. The submission file is in OpenOffice, Microsoft Word, RTF, or WordPerfect document file format.
- 3. Where available, URLs for the references have been provided.
- 4. The text is 1.5 spacing in the 12-point font; employs italics rather than underlining (except with URL addresses); and all illustrations, figures, and tables are placed within the text at the appropriate points.

- 5. The text adheres to the stylistic and bibliographic requirements outlined in the Author Guidelines,, found in About the Journal.
- 6. If submitting to a peer-reviewed journal section, the instructions in Ensuring a Blind Review have been followed.
- 7. Brazilian Journal of Oral Sciences only adopts an **Open Peer Review system** when authors and reviewers explicitly agree to interact directly with one another. Authors must clarify their options in the **"Open Science Compliance Form."** Reviewers must make their choice clear when indicating their availability for reviewing the submission by email.
- 8. I declare that I am aware that all items of the above conditions have been met and that if any of them are omitted, I will have the manuscript returned or rejected, according to the pre-evaluation.

Author Guidelines

Correspondence, when applicable, should be addressed to:

BRAZILIAN JOURNAL OF ORAL SCIENCES
A/C Altair A. Del Bel Cury, Editor-in-Chief
Faculdade de Odontologia de Piracicaba - UNICAMP
Avenida Limeira, 901
Zip code: 13.414-903 – Piracicaba, SP - Brasil
Phone: +55 (19) 2106-5706
E-mail: brjorals@unicamp.br
Website: https://periodicos.sbu.unicamp.br/ojs/index.php/bjos

Manuscripts and all corresponding documentation should be exclusively submitted via the online submission link: https://periodicos.sbu.unicamp.br/ojs/index.php/bjos/about/submissions

Basic Information

Brazilian Journal of Oral Sciences, e-ISSN 1677-3225, published by the Piracicaba Dental School – UNICAMP, is an international non-profit open-access online journal. *Brazilian Journal of Oral Sciences* is an internationally distributed scientific journal that uses **continuous publication**. This journal provides immediate open access to its content on the principle of making research freely available to the public, supporting a greater global exchange of knowledge.

The abbreviated title is **Braz. J. Oral Sci.** It should be used in bibliographies, footnotes, references, and bibliography legends.

Intellectual Property

Sponsors

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INSTRUCTIONS TO AUTHORS

Scope and Policy

The primary goal of the Brazilian Journal of Oral Sciences is to publish the outcomes of original investigations and reviews, short communications, and letters to the editor in the field of Dentistry and related disciplines. According to the quality indicators and peer-reviewed material, the Brazilian Journal of Oral Sciences is committed to publishing the scientific and technological advances achieved by the dental community and related areas to assure its acceptability at

the local, regional, national, and international levels. The Brazilian Journal of Oral Sciences is a gold open access journal in line with the current and good national and international scientific communication practices. There is no fee to authors for submitting to the Brazilian Journal of Oral Sciences or Article Processing Charge (APC). Also, the Brazilian Journal of Oral Sciences accepts preprints manuscripts. *Preprints* are scientific texts ready for submission to a journal that their authors deposit in a public server before or during their submission to a specific journal.

Authors who opt for preprints and further or simultaneous submission to the Brazilian Journal of Oral Sciences a) have their manuscripts deposited at Pre Print Server, such as the SciELO Preprints server https://preprints.scielo.org/index.php/scielo). It should be informed that the manuscript is deposited at the Preprints server and provide their name and URL at the "Open Science Compliance Form" (a document to the filled out and submitted as a supplementary file to the manuscript). If it is a preprint, the Name of the Preprint server and Preprint DOI are informed. The authors declare the possible conflicts of interest in conducting and communicating research if they exist.

Form and preparation of manuscripts

The manuscript sent for publication must be original, and simultaneous submission to another national or international journal is not allowed. This is an Open Access Journal. Its articles are distributed under the terms of the **Creative Commons Attribution License** (**CC BY**), which permits unrestricted use, distribution, and reproduction in any medium provided the original article is properly cited. Thus, the Brazilian Journal of Oral Sciences does not require that copyright be submitted with the manuscript; however, the authors should retain the manuscript's copyright.

Only manuscripts written in English language shall be accepted, and the authors are fully responsible for the texts, citations, and references. The Brazilian Journal of Oral Sciences has the right to submit all manuscripts to the Editorial Board, which is fully authorized to settle the convenience of their acceptance or return them to the authors with suggestions for modifications in the text for adaptation to the editorial rules the Journal. In this case, the manuscript will be re-evaluated by the Editor-in-Chief and Editorial Board. The concepts stated in the manuscript published are the authors' full responsibility and do not necessarily reflect the opinion of the Editor-in-Chief and Editorial Board. The dates of receipt and acceptance of the original manuscript will be indicated on the occasion of its publication. Additionally, the editor dealing with the accepted manuscript will be shown.

Structure of the manuscript: Title page – must be submitted as a Title Page file through the online submission system, which should contain only:

- Title of the manuscript in English.
- Names of the authors in direct order, affiliations, institutions, city, state, and country.
- Full address of the corresponding author, to whom all correspondence should be addressed, including phone number and e-mail address.
- The Scopus Author ID (**ORCID number**) of **all authors** should be provided. It can be obtained for free at: https://orcid.org/register. The full URL must be informed. Ex: *http://orcid.org/0000-0002-1825-0097*
- The participation of each author must be justified and should meet the authorship and co-authorship criteria adopted by **the International Committee of Medical Journal Editors:** http://www.icmje.org/recommendations/browse/roles-and-responsibilities/defining-the-role-of-authors-and-contributors.html

- It is imperative to declare that all authors actively participated, at least, in two distinct criteria about the authorship 1. the manuscript's findings, and 2. have revised and approved the final version of the manuscript.

Main Text

1. The paper must be previously translated or reviewed by a professional or company responsible for the English language. Authors with English as their native language must submit a signed letter as a supplementary file taking responsibility for the quality of the English language and editing the text.
2. Title
3. Structured abstract (containing Aim, Methods, Results, and Conclusion) and keywords
4. Introduction, Materials and Methods, Results, Discussion/Conclusion
5. References
6. Acknowledgments
7. Data availability
8. Tables
9. Figure legends
10. Figures, Images

The trade name of the material used must be followed by the manufacturer, city, state, and country within parentheses upon the first mention. All abbreviations must be explained at first mention.

Title Page

This page should contain:

- Informative and concise title: The title should be limited to 110 characters, including spaces. It should describe the article's content specifically, clearly, and concisely and MUST NOT contain commercial names of products.

- Author(s)' full name(s), institutional/professional affiliation, including university (or other institution), department, city, state, and country. Data of institutional/professional affiliation should be presented according to internal citation norms established by each author's institution.
- Name and address of the author responsible for correspondence (corresponding author), including phone number, e-mail address, and ORCID number.

- The participation of each author must be justified and should meet the authorship and co-authorship criteria adopted by **the International Committee of Medical Journal Editors:** http://www.icmje.org/recommendations/browse/roles-and-responsibilities/defining-the-role-of-authors-and-contributors.html
- It is imperative to declare that all authors actively participated in discussing the manuscript's findings and have revised and approved the final version of the manuscript.

We recommend that authors collect the names present in the Cover Letter with the profile created into the site registration to avoid discrepancies.

Abstract

- The abstract should be presented as a single structured paragraph of 250 words and should clearly state the aim, methods, results, and conclusions drawn from the study.

Keywords

- The authors should provide 3 (three) to 5 (five) main descriptors chosen from the keywords registered at MeSH (Medical Subject Headings (http://www.ncbi.nlm.nih.gov/mesh) or DeCS (Health Sciences Descriptors (http://decs.bvs.br).

- Authors must use periods to separate the keywords, which must have the word's first letter in capital letters Ex: Dental Materials. Clinical Trial. Orthodontics, Preventive.

Introduction

The study's relevance and its relationship with other published works in the same line of research or field should be addressed. Authors should identify its limitations and possible biases and the objective, and the working hypothesis should be concisely stated at the end of this section.

Materials and methods

- The characteristics of the material pertinent to the research subject should be presented.
- The experimental, analytical, and statistic methods should be described concisely but in sufficient detail to allow others to recreate the work.
- Information from manufacturers or suppliers of products, equipment, or software must be explicit when first mentioned in this section (manufacturer's name, city, and country). The computer programs and statistical methods must also be specified.
- The trade names of techniques, products, or scientific and clinical equipment should only be cited in the "Materials and methods" and "Acknowledgments" sections (according to each case), except when the objective of the work is to compare products or specific systems. Generic names should be used in the remainder of the manuscript, including the title.
- Manuscripts containing radiographs, microradiographs, or SEM images must include information regarding radiation source, filters, and kV levels.

Results

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Molina-Frechero N, Durán-Merino D, Castañeda-Castaneira E, Juárez-López ML. [Dental caries experience and its relation to oral hygiene in mexican children]. Gac Med Mex. 2015 Jul-Aug;151(4):485-90. Spanish.

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Organization as author

International Association for Dental Research. Code of ethics for dental researchers. J Am Coll Dent. 2014 Summer;81(3):19-22.

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Tobacco and dental caries: a systematic review. Br Dent J. 2013 Nov 8;215(9):463.

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Sundaram M, Nayak UA, Ramalingam K, Reddy V, Rao AP, Mathian M. A comparative evaluation of Oratest with the microbiological method of assessing caries activity in children. J Pharm Bioallied Sci. 2013 Jun;5(Suppl 1): S5-9.

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