

Juliana Quintino Trizzi

Survey of Endodontic Pain Treatment Performed In Prompt Dental Care: Need for Protocol

ARAÇATUBA - SP

2020

JULIANA QUINTINO TRIZZI

Survey of Endodontic Pain Treatment Performed In Prompt Dental Care: Need for Protocol

Dissertação apresentada à Faculdade de Odontologia de Araçatuba, Universidade Estadual Paulista “Julio de Mesquita Filho” – UNESP como parte dos requisitos para obtenção do título de Mestre em Ciências Odontológicas.

Área de concentração: Endodontia

Orientador: Prof. Ass. Eloi Dezan Junior

ARAÇATUBA – SP

2020

Dissertação elaborada de acordo com a Instrução Normativa No014-CPPGCO, de 14 de março de 2013

Catálogo na Publicação (CIP)

Diretoria Técnica de Biblioteca e Documentação – FOA / UNESP

Trizzi, Juliana Quintino.

M149c Survey of Endodontic Pain Treatment Performed In Prompt
Dental Care: Need for Protocol

/

Juliana Quintino Trizzi. - Araçatuba, 2020

31 f. ; tab.

Dissertação (Mestrado) – Universidade Estadual Paulista,
Faculdade de Odontologia de Araçatuba

Orientador: Prof. Eloi Dezan Júnior

1. Dor facial 2. Endodontia 3. Inquéritos epidemiológicos
I. T.

Black D24

CDD 617.67

Claudio Hideo Matsumoto CRB-8/5550

Dedicatória

Aos meus pais Exdras e Juzineide

A eles eu dedico toda minha vida, minha trajetória até aqui só foi possível pois com eles aprendi a dar valor no que se faz, a amar, ter disciplina e o quanto vale a pena se dedicar por um sonho.

Ao meu noivo Vinicius

Por me fazer entender que sou capaz, que posso me superar cada dia mais, por me dar motivação diária e por estar ao meu lado em mais essa conquista.

Agradecimentos

Agradeço primeiramente a Deus que sempre tem operado milagres em minha vida, estando presente em todas as batalhas, me dando força, aumentando a minha fé quando pensava em desistir, abençoando todo o meu caminho com pessoas maravilhosas.

Agradeço a meu pai que não está mais entre nós, mas que foi um exemplo de persistência, trabalhador e bom pai, a minha mãe a responsável por me tornar uma pessoa determinada e me motivar e acreditar nos meus sonhos, me lembro até hoje o dia em que sai de casa pra estudar e até hoje não voltei, pois acredito que os estudos são a grande herança que me deixarão, como assim sempre disseram.

Aos meus sogros que estão comigo diariamente, observando todas as lutas, me auxiliando de todas as formas desde uma palavra amiga que conforta.

Ao meu orientador Eloi, mais que um orientador, um amigo, que desde o início me deu oportunidades, desde começar um projeto do zero no qual ambos aprendemos juntos, até projetos paralelos essenciais. Agradeço a paciência, sabedoria e exemplo de profissional, me espelho muito em você.

Agradeço a secretaria de saúde e pronto atendimento de urgência da FOA por ter aberto as portas e me permitir realizar esse trabalho. Agradeço a todos os professores da Endodontia e professora Tania Saliba.

Agradeço aos funcionários do departamento pela boa convivência e eficiência.

Agradeço aos meus amigos, Carlos Bueno que nasceu realmente pra lecionar, sempre disposto a nos ajudar, muitas vezes deixando de fazer algo pra poder nos auxiliar. A Marina Cury e Ana Maria, sempre dispostas e solícitas, obrigada por me

ajudar desde o início, respondendo a todas as perguntas com paciência. A Jimena que não está mais aqui, mas que ajudou com todos os experimentos, sendo uma grande companheira.

Ao Fernando Chiba por me auxiliar em cada detalhe da estatística, obrigada pelos ensinamentos e por abrir as portas em plena sexta feira para fazer mil cálculos. Obrigada por agregar seu conhecimento ao meu trabalho.

A minhas amigas Lariana e Cristiane, que fizeram a rotina de laboratório, departamento e monitoria serem mais leves, com as jantinhas, cafezinhos da tarde e happy our, obrigada por tornar meus dias menos estressantes, sem a pressão de pós graduando.

Agradeço a banca examinadora Carlos e Robson por estarem enriquecendo meu trabalho, por disponibilizarem o tempo de vocês e por fazerem parte do final desse ciclo tão importante para minha carreira.

Agradeço a CAPES por ter fomentado essa pesquisa.

Ao Pedro, Felipe, Daniela, Henrique, Flavio, Flávia, Natalia, Ana, Carol, Amanda, Leopoldo, Renan companheiros de pós e das viagens a congresso.

Επίγραφε

“Seu trabalho vai preencher boa parte da
sua vida e a única maneira de ser
verdadeiramente satisfeito é fazer o que
acredita ser um ótimo trabalho. E a
única maneira de fazer um ótimo
trabalho é amar o que faz”. (Steve Jobs)

Resumo

Trizzi, JQ. Levantamento de tratamento de dor Endodôntica, Realizado em Pronto Atendimento Odontológico: Necessidade de Protocolo, 2020. 32p. Dissertação (Mestrado em Endodontia) – Universidade Estadual Paulista (Unesp), Faculdade de Odontologia, Araçatuba.

RESUMO

A dor de caráter endodôntico acomete grande parte da população mundial que procura por tratamento de urgência em pronto atendimento. Poucos trabalhos observam a casuística e o protocolo de atendimento que estão inseridos nos prontos atendimentos como: diagnóstico, presença de selamento coronário provisório, utilização de medicação intracanal, medicação sistêmica e o retorno do paciente com dor. Mediante ao exposto, foi realizado uma pesquisa quantitativa descritiva, retrospectiva e documental, e o levantamento de protocolo de urgência nas seguintes instituições: Serviços de Pronto Atendimento da cidade de Araçatuba (PAO) e na Faculdade de Odontologia da Universidade Estadual Paulista de “Júlio de Mesquita Filho” (FOA/UNESP). Dados como tipo de medicação intracanal, selamento coronário, medicação sistêmica e retorno do paciente com dor foram tabulados e avaliados estatisticamente pelo software SigmaPlot 13.0.

O protocolo FOA/PAO foram semelhantes nos diagnósticos de pulpite irreversível e necrose pulpar, não havendo associação ($P>0.05$). Houve associação ($P<0.05$) apenas no diagnóstico de abscesso endodôntico, o protocolo do PAO foi prescrever medicação sistêmica, não realizar selamento e não MIC, diferentemente da FOA. Referente a prescrição de medicação sistêmica, houve associação ($P<0.05$), pois o PAO realiza prescrição em todos os casos: pulpite irreversível, necrose e abscesso, já a FOA apenas em necrose e abscesso. No retorno do paciente com dor, nota-se associação ($P<0.05$) nos casos de abscesso que receberam MIC adversa e não retornaram com dor. Embora o protocolo FOA/PAO seja diferente para os casos de abscesso o objetivo do tratamento de urgência em ambas instituições foi alcançado, pois removeram a dor do paciente.

Palavras Chave: Dor Orofacial, Endodontia, Levantamento Epidemiológico.

Abstract

Trizzi, JQ. Survey of Endodontic Pain Treatment Performed In Prompt Dental Care: Need for Protocol, 2020. 32p. Dissertation (Master in Endodontics) - Paulista State University (Unesp), Faculty of Dentistry, Araçatuba.

ABSTRACT

Endodontic pain affects a large part of the world population, which leads for a seek for urgency treatment. Few reports studied the casuistry and protocol of dental care inserted in the prompt attendance, such as: diagnosis, provisional coronal sealing, intracanal medication, systemic medication and patient with pain complaint. The objective of this study was to carry out a survey of the urgency protocol in both dental care institutions: Prompt Dental Care Services of Araçatuba city (PAO) and the Araçatuba School of Dentistry/Sao Paulo State University Júlio de Mesquita Filho (FOA/UNESP). The medical records of patients who voluntarily sought care in the urgency department, with anamnesis and a description of the performed procedure, were evaluated. Data such as intracanal medication, coronary sealing, systemic medication and patient return with pain complaint were tabulated and statistically evaluated via SigmaPlot 13.0 software, with no association of these variables and the patient return with pain complaint ($P > 0.05$). However, association ($P < 0.05$) was observed between attendance institution where urgency was carried out and the presence of temporary coronal sealing in cases with abscess, whereas FOA performs the coronal sealing as attendance protocol and PAO doesn't. There was also an association ($P < 0.05$) between diagnosis, prescription of systemic medication and dental care attendance institution, since PAO performed the largest number of medication prescriptions. It is concluded that, although dental care attendance protocols were similar in cases of pulpitis or necrosis, differing only in abscess, the main objective of urgency treatment was achieved in both treatment protocols, since treated patients were painless for more than 7 days.

Key words: Pain, Endodontics, Urgency, Epidemiological Survey

Sumário

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INTRODUCTION

1. Introduction

Pain is the primary cause for seeking an urgency prompt attendance^{1,2}. Dental emergencies comprise a broad spectrum of clinical situations, including pulpitis, abscesses, fractured/lost restorations and postoperative complications. It is important for the dental clinician to comprehend the various criteria to identify the stages of pulpal inflammation, as well as other conditions that may simulate it, such as: periodontal diseases, sinus diseases, headaches, neuralgias, tumors and even temporomandibular disorders³. About 85% of patients seeking urgency treatment for dental pain relief are related to problems of pulp or periapical origin⁴.

There is still a considerable controversy regarding the type of treatment to be performed in endodontic urgency. The different treatment protocols observed in the literature^{5,6} hinders the formulation of a standardized protocol⁷. The knowledge of frequency and clinical factors associated with pulp and periapical pain provides paramount information for planning preventive/therapeutic approaches, as well as the outcome of the urgency endodontic treatment⁸.

When faced with endodontic emergencies, the clinician has frequent doubts such as: the tooth should or should not be isolated, what type of intracanal medication to use, when to prescribe systemic medication and whether to perform the provisional sealing or not. Many changes have been introduced in the approach to endodontic emergency care in recent years. The use of calcium hydroxide as an intracanal medication, replacing the classic phenolic compounds such as paramonocanforate and formocresol, the maintenance of the tooth with coronary sealing after the root canal intervention and the type of emergency endodontic treatment, through partial or complete instrumentation, can determine the success of the intervention¹⁵.

Many general clinical dental surgeons have been prescribing antibiotics in an unbridled manner, leading to bacterial resistance to endodontic infections, systemic antibiotics can be used as adjunct to endodontic clinical treatment whenever the host does not respond to treatment, to help and contain the infection, as in cases of persistent or systemic infections and in immunocompromised patients. The prescription of antibiotics influenced by the patient's demand or the expectation of referral from a dentist is inadequate²¹.

Therefore, the aim of this study was to conduct a survey of the urgency protocol in endodontic treatment performed in different institutions with divergent endodontic philosophies: Prompt Dental Care Services of Araçatuba city (PAO) and the Araçatuba school of dentistry (FOA), from Sao Paulo State University.

2. Material and Methods

A quantitative descriptive, retrospective and documentary research was conducted to evaluate 600 dental records fulfilled by dental clinicians from 2016 to 2017, from patients who voluntarily sought urgency dental care at the Prompt Dental Care Services of Araçatuba – Brazil (PAO) and Araçatuba School of Dentistry (FOA), from Sao Paulo State University – Brazil (300 dental records from each institution), due to discomfort or pain associated with inflammation, infection of endodontic origin or both. The clinical team at PAO consisted of five dental clinicians, graduated in distinct universities while at FOA only one professional conducts all the appointments, graduated in the same institution (FOA).

130 dental records from the Prompt Dental Care Services – PAO and 91 dental records from Aracatuba School of dentistry (FOA) followed the inclusion criteria, totaling 221 assessed dental records.

Data were gathered by a single endodontic researcher who tabulated all the data described in the clinical file fulfilled by the dentists. Dental records were evaluated from patients who voluntarily sought dental care regardless gender, ethnicity, class or social groups according to the following inclusion/exclusion criteria:

Inclusion criteria: pulp and periapical diagnosis, endodontic intervention, type of intracanal medication (ICM) used according to each diagnosis, if coronal access was sealed, if systemic medication was prescribed, if the patient returned with painful symptoms in the same tooth in which the initial care was performed.

Exclusion criteria: The dental records that did not allow data evaluation, as well as the lack of description of the urgency procedure were discarded from the research. Teeth with odontogenic developmental anomalies, trauma, primary teeth and non-endodontic care attendance were also excluded.

After analyzing the dental records, variables of the FOA / PAO groups were collected, such as: diagnosis, presence or absence of provisional sealing, type of intracanal medication, systemic medication, whether or not the patient returned with pain complaint after the urgency treatment.

To establish the number of dental records, a sample calculation was performed, which indicated a total of 196 dental records. The parameters were obtained from a previous pilot study that considered significant the total number of 30 dental records.

Chi-square and Fisher exact tests were performed using SigmaPlot 13.0 (Systat Software, Inc., San Jose, California, USA) and the significance level was set at 5%.

This research was approved by the Research Ethics Committee of the Araçatuba School of dentistry/Sao Paulo State University – FOA/UNESP, under protocol nº 96590518.4.0000.5420.

3. RESULTS:

Statistical Analysis

A total of 300 dental records were evaluated from each institution, totaling 600 records. In FOA, only 91 dental records were according the inclusion criteria (30,3%) and 130 dental records in PAO (43,3%), totaling 221 dental records (37%).

The 63% excluded dental records showed 43% cases of endodontic pain with incomplete data and 20% of non-endodontic origin pain.

Figure 1. Percentage distribution according to pulp and periapical diagnosis from FOA / PAO between 2016/2017.

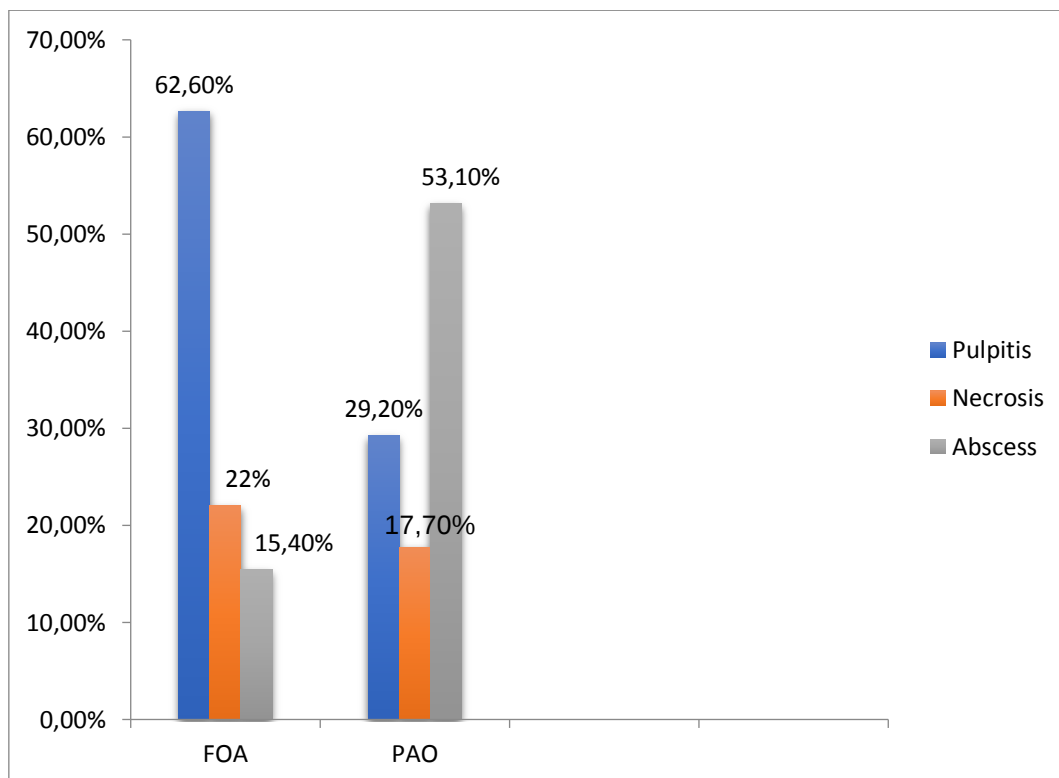


Table 1 shows the presence or absence of coronal sealing after urgency attendance, according to each diagnosis. There was a statistical association ($P < 0.05$) between the dental care attendance institution and presence of coronal sealing in cases diagnosed as abscess.

Table 1. Absolute and percentage distribution of teeth with or without coronary sealing according to the pulpal diagnosis of FOA / PAO between 2016/2017.

Coronal sealing	Pulp and Periapical Diagnosis											
	Pulpitis ^a (%)				Pulp Necrosis ^a (%)				Abscess ^b (%)			
	FOA		PAO		FOA		PAO		FOA		PAO	
YES	57	(100)	38	(100)	20	(100)	22	(95,7)	14	(100)	2	(2,9)
NO	0	0	0	0	0	0	1	(4,3)	0	0	67	(97,1)
TOTAL	57(62,6)		38(29,2%)		20(22,0%)		23(17,7)		14(15,4)		69(53,1)	
P Value	P=1,0				P=1,0				P=0,00001			

Table 2 shows the type of intracanal medication (ICM) used in FOA / PAO according to diagnosis. There was a statistical association ($P < 0.05$) between favorable and adverse ICM of FOA / PAO and cases diagnosed as abscess.

Table 2. Absolute and percentage distribution of teeth that received or not intracanal medication favorable to the specific diagnosis of FOA / PAO between 2016/2017. Pulpitis: 89.4% from FOA and 80% from PAO received otosporin, considered as favorable ICM. Other types of ICM such as tricresol, CPMC or calcium hydroxide were considered adverse representing 10.6% in FOA and 20% in PAO. Pulp necrosis: 90% of FOA and 95.6% of PAO received tricresol, considered as favorable ICM. Other types of ICM such as otosporin or calcium hydroxide were considered adverse representing 10% in FOA and 4.4% in PAO. Abscess: 100% of cases of FOA and 1.5% of PAO received tricresol, considered favorable ICM. The absence of ICM was considered adverse found in 98.5% of cases of PAO.

ICM	Pulp and Periapical Diagnosis											
	Pulpitis ^a (%)				Pulp Necrosis ^a (%)				Abscess ^b (%)			
	FOA		PAO		FOA		PAO		FOA		PAO	
Favorable	51	(89,4)	31	(80)	18	(90,0)	22	(95,6)	14	(100,0)	1	(1,5)
Adverse	6	(10,6)	7	(20)	2	(10,0)	1	(4,4)	0	0	68	(98,5)
P Value	P=0,43				P=0,59				P=0,00001			

Table 3 presents the prescribed systemic medication according to the diagnosis. There was an association between diagnosis, systemic medication and dental attendance institution ($P < 0.05$) whereas PAO shows a higher prescription of systemic medication.

Table 3. Absolute distribution and percentage of systemic drug prescription according to diagnosis of FOA / PAO between 2016/2017.

Systemic Medication	Pulpal and Periapical Diagnosis											
	Pulpitis				Pulp Necrosis				Abscesss			
	FOA		PAO		FOA		PAO		FOA		PAO	
None	57	100%	24	63,1%	0	0	15	65,2%	2	14,2%	0	0
Analgesic			4	10,5%							4	6%
NSAIDs			6	15,7%							1	1,4%
Corticosteroids											1	1,4%
Analgesic + anti-inflammatory					9	45%			10	71,4%		
Antibiotic			4	10,5%			1	4,34%	2	14,2%	22	32%
Antibiotic analgesic					6	30%					13	19%
Antibiotic Anti-Inflammatory					3	15%	1	4,34%			18	26%
Antibiotic Anti-Inflammatory + Analgesic					2	10%	6	26%			10	14,4%
Total/(%)	57	100%	38	100%	20	100%	23	100%	14	100%	69	100%
P value	P=0,00001				P=0,00001				P=0,03			

Table 4 - Shows the total number of patients which returned with pain complaint after the first urgent care in FOA and PAO according to ICM, systemic medication, diagnosis and presence/absence of coronal sealing. There was a statistical association ($P < 0.05$) regarding abscess diagnosis, ICM and patients returning with pain complaint, with less patients returning with pain when adverse ICM was used.

Table 4. Absolute and relative frequency of the return of patients with pain complaint in relation to diagnosis, ICM, systemic medication and coronary sealing from total FOA + PAO (2016/2017).

Pulpitis								
		Return with Pain						P Value
	ICM		Up to 7 days	After 7 days		No Return		
Favorable	82	86,3%	0	8	8,5%	74	77,8%	
Adverse	13	13,7%	0	0		13	13,7%	>0,05
TOTAL	95	100%						
		Systemic Medication						
			Up to 7 days	After 7 days		No Return		
YES	14	14,7%	0	0		14	14,7%	
NO	81	85,3%	0	15	15,8%	66	69,5%	>0,05
TOTAL	95	100%						
		Coronal Sealing						
			Up to 7 days	After 7 days		No Return		
YES	95	100%	0	15	15,7%	80	84,3%	
NO	0	0	0	0		0	0	>0,05
TOTAL	95	100%						

Continued from Table 4.

Necrosis									
			Return with Pain						P Value
	ICM		Up to 7 days		After 7 days		No Return		
Favorable	40	93,0%	1	2,3%	4	9,3%	35	81,4%	
Adverse	3	7%		0		0	3	7%	>0,05
TOTAL	43	100%							
Systematic Medication			Up to 7 days		After 7 days		No Return		
YES	28	65,1%		0	3	6,9%	25	58,2%	
NO	15	34,9%	2	4,6%		0	13	30,3%	>0,05
TOTAL	43	100%							
Coronal Sealing			Up to 7 days		After 7 days		No Return		
YES	42	97,6%		0	5	11,6%	38	86%	
NO	1	2,4%		0		0	1	2,4%	>0,05
TOTAL	43	100%							
Abscess									
			Return with Pain						P Value
	ICM		Up to 7 days		After 7 days		No Return		
Favorable	15	18,0%		0	9	2,4%	13	15,6%	
Adverse	68	82%	3	10,8%		0	59	71,2%	<0,05
TOTAL	83	100%							
Systemic Medication			Up to 7 days		After 7 days		No Return		
YES	81	97,5%		0	10	12%	71	85,5%	
NO	2	2,5%		0		0	2	2,5%	>0,05
TOTAL	83	100%							
Coronal Sealing			Up to 7 days		After 7 days		No Return		
YES	16	19,2%	1	1,2%		0	15	18%	
NO	67	80,8%	3	3,6%	7	8,4%	57	68,8%	>0,05
TOTAL	83	100%							

4. Discussion

Successful endodontic urgency care is directly related with the absence of postoperative pain, which will depend on the knowledge, skill and technique of the dentist. Although endodontic pain includes 85% of dental urgency cases, different clinical approaches are used, such as pulpectomy, intracanal medication and systemic medication⁹. The fact that pain of endodontic origin is the main reason why patients seek emergency services emphasizes the importance of the dentist being properly trained to provide effective prompt treatment for pain relief¹. In this context, the present study describes the emergency treatment protocol performed between 2016-2017 at the Prompt Dental Care Services (PAO) and Araçatuba School of Dentistry (FOA).

Of the 600 dental records evaluated, only 221 (37%) met the pre-established inclusion criteria. Even though 43% of the dental records reported endodontic pain, they were excluded from this research due to impossibility of data analysis, along with the 20% of non-endodontic pain.

With respect to pulp and periapical diagnosis (Figure 1), the irreversible pulpitis, which is characterized by intense and spontaneous pain, represented the most frequent pulp alteration observed in FOA (62.6%), corroborating previous reports stating that pulpitis is one of the most prevalent endodontic emergency, along with and pulp necrosis associated with acute apical periodontitis^{9,10}. In PAO abscess was the most frequent condition (53.1%).

There is a controversy philosophy among clinicians regarding leaving the tooth open in cases with abscesses¹⁰. Only PAO dentists have as protocol to leave the tooth open without the insertion of ICM or coronal sealing, observed in 97.1% of abscesses cases. A previous study reported that 38% of general practitioners in North America still leave teeth open when facing abscess associated with edema, whereas 12% indicates lack of time as the main reason for this decision¹¹. Currently, it's no longer acceptable to leave the tooth open, because consequences as the colonization of resistant microorganisms and the accumulation of food remnants within and beyond the canal system¹².

Theoretically, there would be more oxygen in a tooth left open and, therefore, less anaerobic bacteria, facilitating the reduction of bacterial load. However, this could lead to an invasion and perpetuation by different bacteria that were not present in the

initial infection, such as *E. faecalis*, reported as the most prevalent microorganism in periapical infections and endodontic failures cases^{13,22}.

Table 2 shows the types of ICM used in both FOA and PAO for each diagnosis, in which was not observed statistical difference. The use of Otosporin® (GlaxoWellcome) was considered favorable in cases of irreversible pulpitis, since the objectives of intracanal medication in pulpectomy fulfill the criteria pointed out by Fava et al.¹⁴: to control the inflammatory process that follows the surgical and mechanical trauma of pulp extirpation and control of possible infection. The adverse ICM considered for pulpectomy cases in this study were tricresol formalin, camphorated paramonochlorophenol (CPMC) and calcium hydroxide.

A study conducted in a Brazilian university showed a success of 93.1% using calcium hydroxide in cases of irreversible pulpitis, with instrumentation performed up to 2/3 of the root canal¹⁵. However, Estrela et al.¹⁶ suggests that the entire root canal should be prepared during urgency attendance and filled with calcium hydroxide paste. The protocol adopted in the FOA / PAO for cases of irreversible pulpitis is the pulp tissue disorganization in the 2/3 of the canal, without complete instrumentation of the root canal, which contraindicates the use of calcium hydroxide. Otosporin® was classified as favorable ICM in this study for irreversible pulpitis cases, used in 89.4% in FOA and 80% in PAO. It is important to highlight that the complete instrumentation of the root canal is not always feasible, since the basic health units do not have the necessary resources to perform this procedure¹⁷.

In the present study, favorable ICM in cases of pulp necrosis were the use of phenolic agents such as tricresol formalin and CPMC, due to their potent bactericidal action, low cost and are considered the first choice in cases where the canal has not been fully instrumented¹⁸. Both FOA / PAO advocate, in pulp necrosis cases, the instrumentation with a hand file only in 2/3 of the root canal, unblocking the root canal entrance from caries, carious dentin or food remnants for the proper ICM action, but also contraindicating the use of calcium hydroxide, since root canal was not properly instrumented. Therefore, 90% of the emergency professionals of FOA and 95, 6% of PAO used tricresol formalin as ICM.

Once abscess was diagnosed, the clinical conduct in FOA was 100% to perform the ICM received tricresol and seal the coronary access, while PAO professionals perform intraradicular drainage and keeping the tooth open in 98.5% of the cases. This

conduct aims an immediate relief due to root canal decompression via draining purulent collection¹⁹. However, as previously stated, leaving the tooth open for drainage may lead to consequences as the significant increase in the microbial population and obstruction by food debris⁶.

Antibiotic prescriptions after drainage of dentoalveolar abscesses increased between 1998 and 2006 according to the study by Houck et al.²⁰, which also stated that antibiotics should be indicated only in patients with health problems or immunocompromised. For Segura-Egea et al.²¹ proper treatment of abscesses comprises an effective drainage and removal of the local cause. Their study also agrees with Houck et al.²⁰ regarding the concern of antibiotics prescription in systemically healthy patients when only a localized edema is observed, without any further systemic consequence.

Table 3 shows the conduct of professionals regarding the prescription of antibiotics. In cases diagnosed as abscess, FOA prescribed in 14.2%, while PAO in 91.4%. As the data reveals, PAO professionals tend to prescribe systemic medication in cases of abscesses regardless the patient's systemic condition. For Segura-Egea et al.²¹ countries like Brazil need adequate research to determine the pattern of antibiotic prescribing in the treatment of endodontic infections. In FOA, 14.2% received only antibiotic prescription and 32% in PAO. When associating medication, PAO prescribed 19% of antibiotic with analgesic and 26% of antibiotic with anti-inflammatory. These data confirm the need for drug prescription standardization.

In table 4 (total PAO + FOA) there was no statistical difference when comparing ICM, systemic medication, coronal sealing with diagnoses of pulpitis and pulp necrosis. Only in abscess diagnosis there was a statistical difference regarding use of ICM, in which patients that received adverse ICM did not return with pain complaint. The fact that the pain is subjective and the appointments are not scheduled cannot confirm the causes in which the patient returned or not after the endodontic emergency.

We can conclude that the divergent results may be related to the different places of attendance, since one service is within the University and has only one clinician whereas PAO has five professionals from different dentistry universities, therefore different formation. Thus, constant clinical research is needed to compare divergent urgency protocols and their impact on postoperative pain, endodontic treatment and medication prescription in endodontic emergency.

Acknowledgments:

I thank CAPES for promoting this research to the Faculty Dentistry of Araçatuba, Paulista State University “Julio de Mesquita Filho” - UNESP and all the team that collaborated for the realization of this.

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Anexos

Anexo A- Comitê de Ética em Humanos Plataforma Brasil

Título da Pesquisa:

Instituição Proponente:

Versão:

CAAE: Protocolo de Urgência para tratamento de dor de Caráter Endodôntico, Realizado em Pronto Atendimento Odontológico

JULIANA QUINTINO TRIZZI

Faculdade de Odontologia do Campus de Araçatuba - UNESP

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Área Temática:

DADOS DO PROJETO DE PESQUISA

Número do Parecer: 3.010.860

DADOS DO PARECER

A dor de origem endodôntica acomete grande parte da população mundial, levando à procura de atendimento de urgência em Pronto Atendimento (PA). Há poucos trabalhos na literatura que observam casuísticas e protocolos de atendimento inseridos nos

prontos atendimentos, como o tipo de medicação sistêmica, medicação intracanal, presença de selamento provisório, diagnóstico e encaminhamento para o centro de especialidades

odontológico. O objetivo deste trabalho será realizar um levantamento do protocolo de tratamento de urgência nos Serviços de Pronto Atendimento da cidade de Araçatuba e da Universidade Estadual Paulista de “Júlio de Mesquita Filho” – UNESP/FOA.

Serão avaliados prontuários com anamnese e planos de tratamento, preenchidos pelos cirurgiões dentistas no momento do atendimento, e deverão estar de acordo com os critérios

de inclusão estabelecidos previamente, independente da faixa etária, gênero, etnia, classe ou grupos sociais dos pacientes que procuraram atendimento nos devidos pronto atendimentos referendados. Os prontuários que não farão parte do estudo serão aqueles que impossibilitem a avaliação dos dados, bem como a descrição do procedimento de urgência de interesse. Após levantamento dos prontuários, os dados coletados serão avaliados estatisticamente, propondo um novo protocolo para melhorias nas condições e qualidade de atendimento, que poderão otimizar a dinâmica de trabalho para os cirurgiões dentista e também para a população que procura o atendimento de urgência.

O objetivo deste trabalho será realizar um levantamento de prontuários e analisar o protocolo inserido para o tratamento de urgência nos Serviços de Pronto Atendimento de Urgências Odontológicas da cidade de Araçatuba e da Universidade Estadual Paulista de “Júlio de Mesquita Filho” – UNESP/FOA e diante do pressuposto, inserir um novo protocolo que seja exequível por ambos.

Avaliação dos Riscos e Benefícios:

Riscos:

Vazamento de informação coletadas dos prontuários.

Benefícios:

Será sugerido um novo protocolo para ser inserido em pronto atendimento odontológico da cidade de Araçatuba com o intuito de otimizar e melhorar as condições de atendimento de urgência.

Comentários e Considerações sobre a Pesquisa:

PESQUISA APTA PARA A SUA REALIZAÇÃO

Considerações sobre os Termos de apresentação obrigatória:

TODOS OS TERMOS FORAM APRESENTADOS DE ACORDO COM AS NORMAS ETICAS E LEGAIS,

Crítérios de Ética em Pesquisa com Seres Humanos conforme Resolução no. 466/12 do Conselho Nacional de Saúde.

Recomendações:

NÃO HÁ

Conclusões ou Pendências e Lista de Inadequações:

PROJETO APROVADO

Considerações Finais a critério do CEP:

Salientamos que, de acordo com a Resolução 466 CNS, de 12/12/2012 (título X, seção X.1., art. 3, item b, e, título XI, seção XI.2., item d), há necessidade de apresentação de relatórios semestrais, devendo o primeiro relatório ser enviado até 01/10/2017.

Tipo Documento	Arquivo	Postagem	Auto r	Situação
Informações Básicas do Projeto	PB_INFORMAÇÕES_BASICAS_DO_P ROJETO_1154634.pdf	12/11/2018 08:54:50		Aceito
TCLE / Termos de Assentimento / Justificativa de Ausência	Termoju.docx	12/11/2018 08:54:13	JULIANA QUINTINO TRIZZI	Aceito
Projeto Detalhado / Brochura Investigador	Projeto_cep.docx	09/11/2018 10:37:32	JULIANA QUINTINO TRIZZI	Aceito
Folha de Rosto	Folha.pdf	02/10/2018 10:54:15	JULIANA QUINTINO TRIZZI	Aceito

Situação do Parecer:

Aprovado

Necessita Apreciação da CONEP:

Não

ARACATUBA, 07 de Dezembro de 2018

Assinado por:

Aldiéris Alves Pesqueira (Coordenador(a))

Anexo B- Termo de Consentimento Livre e Esclarecido

Protocolo de Urgência para tratamento de dor de Caráter Endodôntico,
Realizado em Pronto Atendimento Odontológico

Nome do (a) Pesquisador (a): Juliana Quintino Trizzi

Nome do (a) Orientador (a): Prof. Adj. Elói Dezan Júnior

- 1. Natureza da pesquisa:** o(a) sr.(a) está sendo convidado (a) a participar desta pesquisa que tem como finalidade avaliar apenas sua ficha clínica, não havendo qualquer tipo de exposição ou danos.

Participantes da pesquisa: Uma amostra consecutiva de 600 prontuários será selecionada. Sendo 300 prontuários no Pronto Atendimento de Urgências da cidade de Araçatuba e 300 prontuários da Universidade Estadual Paulista de “Júlio de Mesquita Filho” – UNESP/FOA.

- 2. Envolvimento na pesquisa:** ao participar deste estudo o(a) sr.(a) permitirá que o (a) pesquisador (a) realize o levantamento do prontuário que possui informações relevantes a essa pesquisa como: diagnóstico pulpar e periapical, apenas os casos que foram realizados o acesso endodôntico, qual tipo de medicação intracanal (MIC) realizada de acordo com cada diagnóstico pulpar e periapical, se foi realizado ou não o selamento provisório da cavidade, se houve a prescrição de medicação sistêmica, se o paciente retornou com sintomatologia dolorosa no mesmo dente em que foi realizado o curativo inicial e se o paciente foi encaminhado para o centro de especialidades em Endodontia. O(a) sr.(a) tem liberdade de se recusar a participar e ainda se recusar a continuar participando em qualquer fase da pesquisa, sem qualquer prejuízo para o(a) sr.(a) nome do participante. Sempre que quiser poderá pedir mais informações sobre a pesquisa

através do telefone do (a) pesquisador (a) do projeto e, se necessário através do telefone do Comitê de Ética em Pesquisa.

3. **Sobre as entrevistas:** será realizada a análise dos prontuários sem intervenção clínica ao paciente.
4. **Riscos e desconforto:** a participação nesta pesquisa não infringe as normas legais e ética. Os procedimentos adotados nesta pesquisa obedecem aos Critérios da Ética em Pesquisa com Seres Humanos conforme Resolução nº. 466/12 do Conselho Nacional de Saúde. Nenhum dos procedimentos usados oferece riscos à sua dignidade.
5. **Confidencialidade:** todas as informações coletadas neste estudo são estritamente confidenciais. Somente o (a) pesquisador (a) e seu (sua) orientador (a) (e/ou equipe de pesquisa) terão conhecimento de sua identidade e nos comprometemos a mantê-la em sigilo ao publicar os resultados dessa pesquisa.
6. **Benefícios:** ao participar desta pesquisa o(a) sr.(a) não terá nenhum benefício direto. Entretanto, esperamos que este estudo resulte em informações importantes, para que seja instituído um protocolo único de atendimento nos prontos atendimentos em urgência odontológica, para haver melhorias nas condições técnicas de trabalho e otimização do atendimento ao paciente, onde pesquisador se compromete a divulgar os resultados obtidos, respeitando-se o sigilo das informações coletadas, conforme previsto no item anterior.
7. **Pagamento:** o(a) sr.(a) não terá nenhum tipo de despesa para participar desta pesquisa, bem como nada será pago por sua participação.

Após estes esclarecimentos, solicitamos o seu consentimento de forma livre para participar desta pesquisa. Portanto preencha, por favor, os itens que se seguem: Confiro que recebi via deste termo de consentimento, e autorizo a execução do trabalho de pesquisa e a divulgação dos dados obtidos neste estudo.

Obs: Não assine esse termo se ainda tiver dúvida a respeito.

Consentimento Livre e Esclarecido

Tendo em vista os itens acima apresentados, eu, de forma livre e esclarecida, manifesto meu consentimento em participar da pesquisa.

Nome do Participante da Pesquisa

Assinatura do Participante da Pesquisa

Assinatura do Pesquisador

Assinatura do Orientador

Pesquisador(a): Juliana Quitino Trizzi (18) 981720595

Orientador(a): Prof. Adj. Eloi Dezan Júnior Jacinto (18) 997836300

Coordenador(a) do Comitê de Ética em Pesquisa: Prof. Dr. André Pinheiro de M. Bertoz

Vice-Coodenador(a): Prof. Dr. Aldiéres Alves Pesqueira

Telefone do Comitê: (18) 3636-3234

E-mail cep@foa.unesp.br

Anexo C- Guidelines for Publishing Papers in the JOE

General Points on Composition

1. Authors are strongly encouraged to analyze their final draft with both software (e.g., spelling and grammar programs) and colleagues who have expertise in English grammar. References listed at the end of this section provide a more extensive review of rules of English grammar and guidelines for writing a scientific article. Always remember that clarity is the most important feature of scientific writing. Scientific articles must be clear and precise in their content and concise in their delivery since their purpose is to inform the reader. The Editor reserves the right to edit all manuscripts or to reject those manuscripts that lack clarity or precision, or have unacceptable grammar or syntax. The following list represents common errors in manuscripts submitted to the *JOE*:
2. The paragraph is the ideal unit of organization. Paragraphs typically start with an introductory sentence that is followed by sentences that describe additional detail or examples. The last sentence of the paragraph provides conclusions and forms a transition to the next paragraph. Common problems include one-sentence paragraphs, sentences that do not develop the theme of the paragraph (see also section “c” below), or sentences with little to no transition within a paragraph.
3. Keep to the point. The subject of the sentence should support the subject of the paragraph. For example, the introduction of authors’ names in a sentence changes the subject and lengthens the text. In a paragraph on sodium hypochlorite, the sentence, “In 1983, Langeland et al., reported that sodium hypochlorite acts as a lubricating factor during instrumentation and helps to flush debris from the root canals” can be edited to: “Sodium hypochlorite acts as a lubricant during instrumentation and as a vehicle for flushing the generated debris (Langeland et al., 1983).” In this example, the paragraph’s subject is sodium hypochlorite and sentences should focus on this subject.
4. Sentences are stronger when written in the active voice, *i.e.*, the subject performs the action. Passive sentences are identified by the use of passive verbs such as “was,” “were,” “could,” etc. For example: “Dexamethasone was found in this study to be a factor that was associated with reduced inflammation,” can be edited to: “Our results demonstrated that dexamethasone reduced inflammation.” Sentences written in a direct and active voice are generally more powerful and shorter than sentences written in the passive voice.
5. Reduce verbiage. Short sentences are easier to understand. The inclusion of unnecessary words is often associated with the use of a passive voice, a lack of focus or run-on sentences. This is not to imply that all sentences need be short or even the same length. Indeed, variation in sentence structure and length often helps to maintain reader interest. However, make all words count. A more formal way of stating this point is that the use of subordinate clauses

adds variety and information when constructing a paragraph. (This section was written deliberately with sentences of varying length to illustrate this point.)

6. Use parallel construction to express related ideas. For example, the sentence, “Formerly, endodontics was taught by hand instrumentation, while now rotary instrumentation is the common method,” can be edited to “Formerly, endodontics was taught using hand instrumentation; now it is commonly taught using rotary instrumentation.” The use of parallel construction in sentences simply means that similar ideas are expressed in similar ways, and this helps the reader recognize that the ideas are related.
7. Keep modifying phrases close to the word that they modify. This is a common problem in complex sentences that may confuse the reader. For example, the statement, “Accordingly, when conclusions are drawn from the results of this study, caution must be used,” can be edited to “Caution must be used when conclusions are drawn from the results of this study.”
8. To summarize these points, effective sentences are clear and precise, and often are short, simple and focused on one key point that supports the paragraph’s theme.
9. Authors should be aware that the *JOE* uses iThenticate, plagiarism detection software, to assure originality and integrity of material published in the *Journal*. The use of copied sentences, even when present within quotation marks, is highly discouraged. Instead, the information of the original research should be expressed by new manuscript author’s own words, and a proper citation given at the end of the sentence. Plagiarism will not be tolerated and manuscripts will be rejected, or papers withdrawn after publication based on unethical actions by the authors. In addition, authors may be sanctioned for future publication.
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Organization of Original Research Manuscripts

Please Note: *All abstracts should be organized into sections that start with a one-word title (in bold), i.e., Introduction, Methods, Results, Conclusions, etc., and should not exceed more than 250 words in length.*

1. **Title Page:** The title should describe the major emphasis of the paper. It should be as short as possible without loss of clarity. Remember that the title is your advertising billboard—it represents your major opportunity to solicit readers to spend the time to read your paper. It is best not to use abbreviations in the title since this may lead to imprecise coding by electronic citation programs such as PubMed (e.g., use “sodium hypochlorite” rather than NaOCl). The author list must conform to published standards on authorship (see authorship criteria in the Uniform Requirements for Manuscripts Submitted to Biomedical Journals at icmje.org). The manuscript title, name and address (including email) of one

author designated as the corresponding author. This author will be responsible for editing proofs and order reprints when applicable. The contribution of each author should also be highlighted in the cover letter.

2. **Abstract:** The abstract should concisely describe the purpose of the study, the hypothesis, methods, major findings, and conclusions. The abstract should describe the new contributions made by this study. The word limitations (250 words) and the wide distribution of the abstract (e.g., PubMed) make this section challenging to write clearly. This section often is written last by many authors since they can draw on the rest of the manuscript. Write the abstract in past tense since the study has been completed. Three to ten keywords should be listed below the abstract.
3. **Introduction:** The introduction should briefly review the pertinent literature in order to identify the gap in knowledge that the study is intended to address and the limitations of previous studies in the area. The purpose of the study, the tested hypothesis and its scope should be clearly described. Authors should realize that this section of the paper is their primary opportunity to establish communication with the diverse readership of the *JOE*. Readers who are not expert in the topic of the manuscript are likely to skip the paper if the introduction fails to succinctly summarize the gap in knowledge that the study addresses. It is important to note that many successful manuscripts require no more than a few paragraphs to accomplish these goals. Therefore, authors should refrain from performing the extensive review of the literature, and discuss the results of the study in this section.
4. **Materials and Methods:** The objective of the materials and methods section is to permit other investigators to repeat your experiments. The four components of this section are the detailed description of the materials used and their components, the experimental design, the procedures employed, and the statistical tests used to analyze the results. The vast majority of manuscripts should cite prior studies using similar methods and succinctly describe the essential aspects used in the present study. Thus, the reader should still be able to understand the method used in the experimental approach and concentration of the main reagents (e.g., antibodies, drugs, etc.) even when citing a previously published method. The inclusion of a “methods figure” will be rejected unless the procedure is novel and requires an illustration for comprehension. If the method is novel, then the authors should carefully describe the method and include validation experiments. If the study utilized a **commercial product**, the manuscript must state that they either followed manufacturer’s protocol or specify any changes made to the protocol. If the study used an *in vitro* model to simulate a clinical outcome, the authors must describe experiments made to validate the **model**, or previous literature that proved the clinical relevance of the model. Studies on **humans** must conform to the Helsinki Declaration of 1975 and state that the institutional IRB/equivalent committee(s) approved the protocol and that informed consent was obtained after the risks and benefits of participation were described to the subjects or patients recruited. Studies involving **animals** must state that the institutional animal care and use committee approved the protocol. The statistical analysis section should describe which tests were used to analyze which dependent measures; p-values should be specified. Additional details may include randomization scheme, stratification (if any), power analysis as a basis for sample size

computation, drop-outs from clinical trials, the effects of important confounding variables, and bivariate versus multivariate analysis.

5. **Results:** Only experimental results are appropriate in this section (*i.e.*, neither methods, discussion, nor conclusions should be in this section). Include only those data that are critical for the study, as defined by the aim(s). Do not include all available data without justification; any repetitive findings will be rejected from publication. All Figures, Charts, and Tables should be described in their order of numbering with a brief description of the major findings. The author may consider the use of supplemental figures, tables or video clips that will be published online. Supplemental material is often used to provide additional information or control experiments that support the results section (*e.g.*, microarray data).
6. **Figures:** There are two general types of figures. The first type of figures includes photographs, radiographs or micrographs. Include only essential figures, and even if essential, the use of composite figures containing several panels of photographs is encouraged. For example, most photos, radio- or micrographs take up one column-width, or about 185 mm wide X 185 mm tall. If instead, you construct a two columns-width figure (*i.e.*, about 175 mm wide X 125 mm high when published in the *JOE*), you would be able to place about 12 panels of photomicrographs (or radiographs, etc.) as an array of four columns across and three rows down (with each panel about 40 X 40 mm). This will require some editing to emphasize the most important feature of each photomicrograph, but it greatly increases the total number of illustrations that you can present in your paper. Remember that each panel must be clearly identified with a letter (*e.g.*, "A," "B," etc.), in order for the reader to understand each individual panel. Several nice examples of composite figures are seen in recent articles by Jeger et al (*J Endod* 2012;38:884–888); Olivieri et al., (*J Endod* 2012;38:1007–1011); Tsai et al (*J Endod* 2012;38:965–970). Please note that color figures may be published at no cost to the authors and authors are encouraged to use color to enhance the value of the illustration. Please note that a multi-panel, composite figure only counts as one figure when considering the total number of figures in a manuscript (see section 3, below, for the maximum number of allowable figures). The second type of figures is graphs (*i.e.*, line drawings including bar graphs) that plot a dependent measure (on the Y-axis) as a function of an independent measure (usually plotted on the X axis). Examples include a graph depicting pain scores over time, etc. Graphs should be used when the overall trend of the results are more important than the exact numerical values of the results. For example, a graph is a convenient way of reporting that an ibuprofen-treated group reported less pain than a placebo group over the first 24 hours, but was the same as the placebo group for the next 96 hours. In this case, the trend of the results is the primary finding; the actual pain scores are not as critical as the relative differences between the NSAID and placebo groups.
7. **Tables:** Tables are appropriate when it is critical to present exact numerical values. However, not all results need be placed in either a table or figure. For example, the following table may not be necessary: Instead, the results could simply state that there was no inhibition of growth from 0.001-0.03% NaOCl, and a 100% inhibition of growth from 0.03-3% NaOCl (N=5/group). Similarly, if the results are not significant, then it is probably not necessary to include the

results in either a table or as a figure. These and many other suggestions on figure and table construction are described in additional detail in Day (1998).

1. **Discussion:** This section should be used to interpret and explain the results. Both the strengths and weaknesses of the observations should be discussed. How do these findings compare to the published literature? What are the clinical implications? Although this last section might be tentative given the nature of a particular study, the authors should realize that even preliminary clinical implications might have value for the clinical leadership. Ideally, a review of the potential clinical significance is the last section of the discussion. What are the major conclusions of the study? How does the data support these conclusions
2. **Acknowledgments:** All authors must affirm that they have no financial affiliation (e.g., employment, direct payment, stock holdings, retainers, consultantships, patent licensing arrangements or honoraria), or involvement with any commercial organization with direct financial interest in the subject or materials discussed in this manuscript, nor have any such arrangements existed in the past three years. Any other potential conflict of interest should be disclosed. Any author for whom this statement is not true must append a paragraph to the manuscript that fully discloses any financial or other interest that poses a conflict. Likewise, the sources and correct attributions of all other grants, contracts or donations that funded the study must be disclosed
3. **References:** The reference style follows Index Medicus and can be easily learned from reading past issues of the JOE. The JOE uses the Vancouver reference style, which can be found in most citation management software products. Citations are placed in parentheses at the end of a sentence or at the end of a clause that requires a literature citation. Do not use superscript for references. Original reports are limited to 35 references. There are no limits to the number of references for review articles.
- 4.

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Manuscripts Category Classifications and Requirements

Manuscripts submitted to the *JOE* must fall into one of the following categories. The abstracts for all these categories would have a maximum word count of 250 words:

1. **CONSORT Randomized Clinical Trial-**Manuscripts in this category must strictly adhere to the Consolidated Standards of Reporting Trials-CONSORT- minimum guidelines for the publication of randomized clinical trials. These guidelines can be found at consort-statement.org. These manuscripts have a limit of 3,500 words, [including abstract, introduction, materials and methods, results, discussion, and acknowledgments; excluding figure legends and references]. In addition, there is a limit of a total of 4 figures and 4 tables*.

2. Review Article-Manuscripts in this category is either narrative articles, or systematic reviews/meta-analyses. Case report/Clinical Technique articles even when followed by the extensive review of the literature will be categorized as “Case Report/Clinical Technique”. These manuscripts have a limit of 3,500 words, [including abstract, introduction, discussion, and acknowledgments; excluding figure legends and references]. In addition, there is a limit of a total of 4 figures and 4 tables*.
3. Clinical Research (e.g., prospective or retrospective studies on patients or patient records, or research on biopsies, excluding the use of human teeth for technique studies). These manuscripts have a limit of 3,500 words [including abstract, introduction, materials and methods, results, discussion, and acknowledgments; excluding figure legends and references]. In addition, there is a limit of a total of 4 figures and 4 tables*.
4. Basic Research Biology (animal or culture studies on biological research on physiology, development, stem cell differentiation, inflammation or pathology). Manuscripts that have a primary focus on biology should be submitted in this category while manuscripts that have a primary focus on materials should be submitted in the Basic Research Technology category. For example, a study on cytotoxicity of a material should be submitted in the Basic Research Technology category, even if it was performed in animals with histological analyses. These manuscripts have a limit of 2,500 words [including abstract, introduction, materials and methods, results, discussion, and acknowledgments; excluding figure legends and references]. In addition, there is a limit of a total of 4 figures or 4 tables*.
5. Basic Research Technology (Manuscripts submitted in this category focus primarily on research related to techniques and materials used, or with potential clinical use, in endodontics). These manuscripts have a limit of 2,500 words [including abstract, introduction, materials and methods, results, discussion, and acknowledgments; excluding figure legends and references]. In addition, there is a limit of a total of 3 figures and tables *.
6. Case Report/Clinical Technique (e.g., report of an unusual clinical case or the use of cutting-edge technology in a clinical case). These manuscripts have a limit of 2,500 words [including abstract, introduction, materials and methods, results, discussion, and acknowledgments; excluding figure legends and references]. In addition, there is a limit of a total of 4 figures or tables*.* Figures, if submitted as multi-panel figures must not exceed 1-page length. Manuscripts submitted with more than the allowed number of figures or tables will require the approval of the JOE Editor or associate editors. If you are not sure whether your manuscript falls within one of the categories above, or would like to request preapproval for submission of additional figures please contact the Editor by email at jendodontics@uthscsa.edu. Importantly, adhering to the general writing methods described in these guidelines (and in the resources listed below) will help to reduce the size of the manuscript while maintaining its focus and significance. Authors are encouraged to focus on only the essential aspects of the study and to avoid inclusion of extraneous text and figures. The Editor may reject manuscripts that exceed these limitations.

Available Resources

Strunk W, White EB. The Elements of Style. Allyn & Bacon, 4th ed, 2000, ISBN 020530902X.

Day R. How to Write and Publish a Scientific Paper. Oryx Press, 5th ed. 1998. ISBN 1-57356-164-9.

Woods G. English Grammar for Dummies. Hungry Minds:NY, 2001 (an entertaining review of grammar).

Alley M. The Craft of Scientific Writing. Springer, 3rd edition 1996 SBN 0-387-94766-3.

Alley M. The Craft of Editing. Springer, 2000 SBN 0-387-98964-1.

Anexo D



UNIVERSIDADE ESTADUAL PAULISTA
"JÚLIO DE MESQUITA FILHO"
Campus de Aracatuba



INSTRUÇÃO NORMATIVA N.º 014-CPPGCO, de 14 de março de 2013.

Dispõe sobre as Normas para Redação de Dissertações e Teses do Programa de Pós-Graduação em CIÊNCIA ODONTOLÓGICA, de acordo com a Resolução UNESP-24, DE 24/02/2012.

O Coordenador do Programa de Pós-Graduação em Ciência Odontológica desta Faculdade, considerando a decisão do Conselho do Programa, por ocasião de sua reunião, levada a efeito em 08/03/2013, baixa a seguinte instrução normativa:

Artigo 1º - A redação do trabalho de Dissertação ou Tese do aluno do Programa de Pós-Graduação em Ciência Odontológica poderá ser realizada pela forma tradicional ou em formato de artigo.

Artigo 2º - O trabalho em formato de artigo deverá conter os seguintes elementos em sua estrutura:

I – Trabalho resultando em somente um artigo

1. Capa;
2. Folha de Rosto;
3. Ficha catalográfica (no verso da folha de rosto);
4. Dados Curriculares (facultativo);
5. Dedicatória (facultativo);
6. Agradecimentos (facultativo);
7. Epígrafe (facultativo);
8. Título e Resumo em Português;
9. Título e Resumo em Inglês (Abstract);
10. Lista de figuras (facultativo);
11. Lista de tabelas (facultativo);
12. Lista de abreviaturas (facultativo);
13. Sumário;
14. Artigo na íntegra (redigido nas normas do periódico escolhido)
15. Anexos

II – Trabalho resultando em dois artigos ou mais

1. Capa;
2. Folha de Rosto;
3. Ficha catalográfica (no verso da folha de rosto);
4. Dados Curriculares (facultativo);
5. Dedicatória (facultativo);
6. Agradecimentos (facultativo);
7. Epígrafe (facultativo);
8. Título e Resumo Geral em Português;
9. Título e Resumo Geral em Inglês (Abstract);
10. Lista de figuras (facultativo);
11. Lista de tabelas (facultativo);
12. Lista de abreviaturas (facultativo);
13. Sumário;
14. Introdução Geral (com referências inseridas como notas de rodapé);
15. Artigos na íntegra (redigido nas normas do periódico escolhido)
16. Anexos

Parágrafo único – Os anexos deverão obrigatoriamente conter as normas dos periódicos nos quais os artigos foram redigidos. Além disso, toda a informação que vier a complementar o trabalho e que não constar no texto do artigo deverá ser colocada sob a forma de anexos. Estes poderão incluir, mas não se limitam a, imagens, fluxogramas, protocolos laboratoriais, tabelas, etc.

Artigo 3º - Esta instrução normativa entra em vigor na data de sua publicação.

Conselho do Programa, 14 de março de 2013.

Prof. Adj. ALBERTO CARLOS BOTAZZO DELBEM
Coordenador do Programa