Original

http://dx.doi.org/10.1590/1981-86372025001920240093

Revista Gaúcha de Odontologia

Clinical conduct of dental surgeons in the dental care of patients with Parkinson's disease

Condutas clínicas de cirurgiões-dentistas frente ao atendimento odontológico de pacientes com doença de Parkinson

Lucas de Almeida **Barbosa**[1] 0009-0008-3213-8940
George Azevedo **Lemos**[2] 0000-0002-2140-216X
Pâmela Lopes Pedro da **Silva**[1] 0000-0003-4537-6821

ABSTRACT

Objective: To evaluate the clinical conduct of dental surgeons in the care of patients with Parkinson's disease. **Methods**: An electronic questionnaire (n=229) was applied to dental surgeons working in the city of Maceió (AL) (n=229) containing 20 statements based on previous studies. The data were analyzed descriptively and statistically, with a significant level of 5% (p<0.05). **Results**: The majority of dentists were female (71.1%), graduated less than 10 years ago (74.7%) and Specialists (43.7%), with emphasis on Dental Prosthesis (18.12%), in addition to only working in the private network (61.4%). The internal consistency of the questionnaire statements was substantial (Cronbach's alpha=0.632). The majority of professionals disagreed with the literature

How to cite this article

Barbosa LA, Lemos GA, Silva PLP. Clinical conduct of dental surgeons in the dental care of patients with Parkinson's disease.RGO, Rev Gaúch Odontol. 2025;73:e20250019. http://dx.doi.org/10.1590/1981-86372025001920240093

artigo alinhado ao objetivo Boa saúde e Bem-estar dos Objetivos de Desenvolvimento Sustentável (ODS)

[1] Centro Universitário Mauricio de Nassau. Curso de odontologia. R. José de Alencar, 511, Farol, 57051-565, Maceió, AL, Brasil. Correspondence to: LA Barbosa. E-mail: <barbosa.lucasdealmeida@gmail.com>.
[2] Universidade Federal de Alagoas, Instituto de Ciências Biológicas e da Saúde. Maceió, AL, Brasil.

in only one of the statements (n=95; 41.5%). There were no statistically significant associations related to gender and time since graduation. There was a statistical difference for those who only provide private care in statements 11 (p=0.040) and 14 (p=0.047). The majority stated that they had never seen patients with Parkinson's disease (70.3%) and did not feel prepared for this care (50.7%). **Conclusion**: Dental surgeons demonstrated the ability to provide dental care to individuals with Parkinson's disease, however, the majority have never performed this type of care and feel insecure about doing so. Measures such as publication of protocols, update cycles and clinical practices at undergraduate level could reduce this insecurity among professionals.

Indexing terms: Clinical protocols. Dental care. Parkinson disease.

RESUMO

Objetivo: Avaliar condutas clínicas de cirurgiões-dentistas no atendimento de pacientes com doença de Parkinson. **Métodos**: Foi aplicado um questionário eletrônico (n=229) à CDs atuantes na cidade de Maceió (AL) (n=229) contendo 20 afirmativas fundamentadas em estudos anteriores. Os dados foram analisados descritiva e estatisticamente, com nível de significância de 5% (p<0,05). **Resultados**: A maioria dos cirurgiões-dentistas foi do sexo feminino (71,1%), formada a menos de 10 anos (74,7%) e Especialistas (43,7%), com destaque para prótese dentária (18,12%), além de atuarem apenas na rede privada (61,4%). A consistência interna das afirmativas do questionário foi substancial (Alfa de Cronbach=0,632). A maioria dos profissionais se manteve discordante com a literatura em apenas uma das afirmativas (n=95; 41,5%). Não houve associações estatisticamente significantes relacionadas ao sexo e tempo de formado. Houve diferença estatística para aqueles que realizam apenas atendimento particular nas afirmativas 11 (p=0,040) e 14 (p=0,047). A maioria afirmou nunca ter atendido pacientes com doença de Parkinson (70,3%) e não se sentirem preparados para esse atendimento (50,7%). **Conclusão**: Os cirurgiões-dentistas demonstraram aptidão para exercer a assistência odontológica a indivíduos com doença de Parkinson, porém, a maioria nunca realizou esse tipo de atendimento e se sente inseguro para fazê-lo. Medidas como publicação de protocolos, ciclos de atualização e práticas clínicas na graduação poderiam diminuir esta insegurança dos profissionais.

Termos de indexação: Protocolo clínico. Assistência odontológica. Doença de Parkinson.

INTRODUCTION

The second most common neurodegenerative disease, behind only Alzheimer's, Parkinson's disease (PD) is a disease prevalent in men over 50 years of age that affects the central nervous system [1]. There are approximately 4 million people in the world with PD, which represents 1% of the world's population. Defined as a disease that affects cells present in the substantia nigra of the brain responsible for the production of dopamine, a neurotransmitter [2], this cellular degeneration causes tremors, slowness, muscle stiffness, loss of balance, among other symptoms. Its first classification, formulated by Hoehn and Yahr in 1967, had five stages, and currently stages 1.5 and 2.5 have been added [3,4].

Understanding stages of Parkinson's disease through signs and symptoms during dental care is a necessary part of evaluating the best treatment [5], since PD can bring about conditions induced by motor and non-motor disorders that influence the procedure. As the patient spends a lot of time still during the consultation, resting tremor, bradykinesia (slowness of movement), akinesia (absence of movement) and postural instability can pose risks to the care. Sometimes, dental techniques require the use of sharp materials and/or anesthetics, leading the surgeon Dental Surgeon (DS) to be more careful to avoid accidents

[6,7]. In muscle rigidity, the patient has a tendency to keep the oral cavity closed or is unable to keep it open for a long time, leading the DS to adopt means that facilitate the care [8].

Changes found in the oral cavity are mostly linked to non-motor disorders, presenting conditions such as dysphagia, xerostomia, sialorrhea, burning sensation, cavities, periodontal diseases and problems with dentures [9]. Dysphagia or difficulty in chewing and swallowing causes choking and reflux, and can lead to obstruction of airways due to aspiration of fluids, in addition to sialorrhea (accumulation of saliva in the mouth), a condition that prevents the dentist from having a clean field to work. Xerostomia (dry mouth) in PD is likely related to medications prescribed to control the disease, which leads to an increase in carious lesions and periodontal problems, since saliva has a "buffering effect" and prevents bacterial action. Burning mouth is more closely linked to psychological disorders such as anxiety and depression due to the limited living conditions imposed by the disease. Patients with PD have deficient dental and periodontal conditions due to the motor and non-motor manifestations of the disease [8,10,11]. The mild degree of dementia and motor disabilities that patients may present means that companions are needed during consultations so that the caregiver or person responsible for the patient receives information on maintaining the patient's oral health [8,11].

Due to motor factors, the patient may present involuntary movements that cause accidents or worsen the degree of the dental condition. Non-motor conditions may present unfavorable oral characteristics such as high salivary levels and unsatisfactory prognoses [11]. Knowing the disease and how it affects the patient is essential to understand what situations the dentists may encounter. Discussing the methods to promote the health of these patients is important for a welcoming and coherent treatment; demonstrating knowledge and mastery implies the efficiency and ability of the professional to perform preventive and curative treatments [7-9].

Thus, the objective of this study was to evaluate the clinical conduct of CDs regarding the dental care of patients with Parkinson's Disease.

METHODS

a) Study description

This is a cross-sectional study with an inductive approach and descriptive statistical procedure, using an extensive direct observation technique through an electronic questionnaire [12].

b) Ethical considerations

This study was approved by the Human Research Ethics Committee (CEP) of the Mauricio de Nassau Maceió University Center (UNINASSAU), following the criteria established by resolutions no. 466/2012, 510/2016 and 580/2018 of the National Health Council, under CAAE n. 81790224.1.0000.0122.

c) Environment and sample

The environment consisted of active dental clinics in Maceió, Alagoas, according to the Federal Council of Dentistry (CFO), duly registered in 2024. Of these, those that provided public and/or private care to patients over 40 years of age and of both sexes, and who agreed to participate in the research by signing the *Termo de Consentimento Livre e Esclarecido* (TCLE, Free and Informed Consent Form), were included in the sample. Dental clinics that did not provide care to adults over 40 years of age were excluded.

To determine the sample size (n), a population frequency calculation was performed using an open source calculator from the statistical website OpenEpi.com, version 3, considering 2,946 registered and active CDs in Maceió (AL) in the year 2024 (according to data obtained from the CFO), standard error of 10%, significance level of 5% and hypothetical sampling frequency of 80% [13]. In a 95% confidence interval, the result was n=227.

d) Data collection

To collect data, an electronic questionnaire structured in Google forms® was applied with sociodemographic questions such as age, sex, specialization and type of care provided (private and/or public), in addition to 20 statements prepared based on previous studies [7,14,15] where the CD responded on a scale of 0 (totally disagree) to 10 (totally agree) about the management of patients with Parkinson's disease, responses between 0-3 were classified as disagreeing, 4-6 as neutral and 7-10 as agreeing. The questionnaire statements addressed patient's changes and disabilities, accessibility, office environment, approach and communication with the patient, presentations and clinical management, occurrence of accidents during care, use of methods that facilitate the procedure, knowledge about preventive treatments, time of care and choice of less invasive plans. The electronic questionnaire was distributed for convenience through the computer network (internet) by means of e-mail and messaging applications. To increase the possibility of response, the Regional Dental Council of Alagoas (CRO-AL) was asked to disseminate the survey to the associated CDs.

e) Data analysis

Data obtained were tabulated using SPSS software, version 2.0, and analyzed using descriptive and inferential statistics, adopting a significance level of 5% (p<0.05). The internal consistency of the questionnaire statements was assessed using Cronbach's alpha, considering the following values: 0.81 to 1.0, almost perfect internal consistency; 0.61 to 0.80, substantial; 0.41 to 0.60, moderate; 0.21 to 0.40, reasonable; and 0 to 0.21, small [16]. Possible associations between the variables gender, time since graduation and type of care provided by the CD, and the number of responses in agreement and disagreement with the literature, were assessed using Pearson's Chi-Square test with Linear Trend Association.

RESULTS

Among 235 CDs that accessed the research form, only one did not agree to the TCLE, of the 234 who agreed to participate in the study, 5 were excluded for not responding completely to the questionnaire, totaling 229 favorable responses with the inclusion criteria in the research.

The majority of participants were female, accounting for 71.1% (n=162) of the sample. Age ranged from 21 to 60 years (mean of 31.37 years ±8.4). Most of the interviewees stated that they had graduated from the Dentistry course within 10 years, accounting for 74.7% (n=171). Sixteen postgraduate areas were reported, with Dental Prosthetics being the most frequent, 18.12% (n=31), followed by Orthodontics and Implantology, respectively. When asked about the types of care provided, the predominant type was private care, with 61.4% (n=140). The sample characterization is shown in table 1.

As shown in table 2, most CDs responded that they had never treated a patient with Parkinson's disease (n=161; 70.3%) nor did they feel prepared for this type of care (n=116; 50.7%).

The internal consistency of statements in the questionnaire on management and conduct for the care of patients with Parkinson's was assessed using Cronbach's alpha, obtaining a result of 0.632, which is classified as "substantial". The exclusion of any of the statements did not significantly alter this value.

Table 1. Characterization of the research sample, dental surgeons working in the city of Maceió (AL), regarding gender, time since graduation, highest qualification and postgraduate area.

Variables	n	%
Sex		
Female	162	71.1
Male	66	28.9
Time since graduation		
Up to 10 years after graduation	171	74.7
More than 10 years	58	25.3
Highest qualification		
Bachelor's degree	95	41.5
Specialization	100	43.7
Master's degree	21	9.2
Doctorate	13	5.7
Postgraduate area*		
Dental Prosthesis	31	18.12
Orthodontics	28	16.37
Implant dentistry	21	12.28
Orofacial harmonization	19	11.11
Dentistry	11	6.43
Colletive health	11	6.43
Endodontics	10	5.84
Periodontics	10	5.84
Surgery and Oral-maxillofacial traumatology	9	5.26
Pediatric dentistry	8	4.67
Hospital dentistry	6	3.5
Legal dentistry	2	1.16
Temporomandibular dysfunction and Orofacial pain	2	1.16
Oral and maxilofacial pathology	1	0.58
Dental radiology and Imaging	1	0.58
Gerodontology	1	0.58
Clinical service		
Private	140	61.4
Public	15	6.6
Both	73	32.0

Note: *Participants could indicate more than one postgraduate area.

Table 2. Dental care provided by dentists to patients with Parkinson's and their level of preparation.

Affirmatives	Yes		No	
	n	%	n	%
Have you ever treated patients with Parkinson's disease?	68	29.7	161	70.3
Do you feel prepared to care for patients with Parkinson's disease?	113	49.3	116	50.7

Table 3 shows questionnaire statements and the gold standard of responses, according to the literature. Among 20 statements, 13 should be answered as agreeing and 7 as disagreeing. Most CDs agreed with the literature on 19 statements, disagreeing only with statement 7: "The maximum number of planned procedures should be performed in a single consultation, aiming to reduce the number of patient visits to the doctor's office", which is considered false.

Table 3. Statements and gold standard responses on management and procedures for treating patients with Parkinson's; and the number (n) and percentage (%) of dentists who disagreed and agreed with the literature for each of them, or remained neutral.

1 of 2

Affirmative and gold standard response	Responses	n	%
A1 - Dental care should preferably be performed in the morning - **TRUE**	Agree	11	4.8
	Desagree	170	74.2
	Neutral	47	20.5
A2 - Patients with Parkinson's disease at any stage can normally attend appointments without a companion or family member - **FALSE**	Disagree	9	3.9
	Agree	199	86.9
	Neutral	20	8.7
A3 - The clinical environment must be well lit - **TRUE**	Disagree	30	13.1
	Agree	146	63.8
	Neutral	53	23.1
A4 - The clinic environment must have ramps for accessibility - **TRUE**	Disagree	3	1.3
	Agree	224	97.8
	Neutral	2	0.9
A5 - Due to the motor difficulties of patients with Parkinson's, such as bradykinesia and akinesia, some objects must be removed from passageways, such as rugs and doormats - **TRUE**	Disagree	2	0.9
	Agree	219	95.6
	Neutral	8	3.5
A6 - Caring and compassionate approaches should be taken to make the office environment more welcoming to the patient - **TRUE**	Disagree	1	0.4
	Agree	228	99.6
	Neutral	0	0.0
A7 - The maximum number of planned procedures should be carried out in a single consultation, aiming to reduce the patient's visits to the doctor's office - **FALSE**	Disagree	95	41.5
	Agree	87	38.0
	Neutral	46	20.1
A8 - For a better understanding, questions should be asked to the patient objectively - **TRUE**	Disagree	6	2.6
	Agree	209	91.3
	Neutral	14	6.1
A9 - The dental chair must be kept essentially in a horizontal position - **FALSE**	Disagree	52	22.7
	Agree	95	41.5
	Neutral	81	35.4

Table 3. Statements and gold standard responses on management and procedures for treating patients with Parkinson's; and the number (n) and percentage (%) of dentists who disagreed and agreed with the literature for each of them, or remained neutral.

Affirmative and gold standard response	Responses	n	%
A10 - During the consultation, the patient may present movements that interfere with the consultation, even so the dentist cannot use retainers - **FALSE**	Disagree	77	33.6
	Agree	79	34.5
	Neutral	72	31.4
A11 - If necessary, support the patient's head during care - **TRUE**	Disagree	4	1.7
	Agree	211	92.1
	Neutral	14	6.1
A12 - The anamnesis must be very detailed in order to understand the complete picture of the patient's condition - **TRUE**	Disagree	0	0.0
	Agree	228	99.6
	Neutral	1	0.4
A13 - It is recommended to measure the patient's blood pressure before the procedure - **TRUE**	Disagree	2	0.9
	Agree	219	95.6
	Neutral	8	3.5
A14 - In patients with Parkinson's, we find some conditions such as sialorrhea, causing difficulties in the use of absolute isolation, these difficulties can be controlled with constant suction - **TRUE**	Disagree	23	10.0
	Agree	148	64.6
	Neutral	54	23.6
A15 - The use of mouth openers is not recommended as they cause difficulties during the procedure - **FALSE**	Disagree	53	23.1
	Agree	114	49.8
	Neutral	62	27.1
A16 - The dentist surgery must adopt preventive procedures, aiming to avoid harm to the patient's dental condition - **TRUE**	Disagree	0	0.0
	Agree	223	97.4
	Neutral	6	2.6
A17 - In planning, highly invasive procedures are avoided - **TRUE**	Disagree	26	11.4
	Agree	152	66.4
	Neutral	50	21.8
A18 - When adminis,hetics, the dentist must perform the anesthesia with caution - **TRUE**	Disagree	1	0.4
	Agree	215	93.9
	Neutral	12	5.2
A19 - At any stage of Parkinson's disease, the procedure should only be performed using general anesthesia - **FALSE**	Disagree	8	3.5
	Agree	204	89.1
	Neutral	17	7.4
A20 - Whenever possible, tooth extractions should be performed in preference to other less invasive procedures - **FALSE**	Disagree	57	24.9
	Agree	119	52.0
	Neutral	50	21.8

No statistically significant association was found among responses when compared in relation to gender and time since graduation. According to the type of service, a significant association was found only for statements 11 (p=0.040) and 14 (p=0.047), where the CDs who work exclusively in the private service agreed to a greater degree with the literature when compared to those who work only in the public service or in both, as observed respectively in figures 1 and 2.

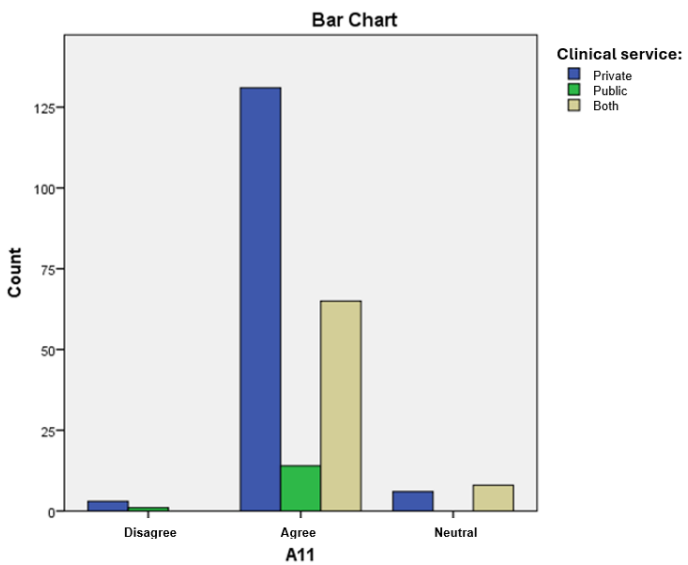

Figure 1. Responses of dentists regarding agreement and disagreement with the literature for statement 11 (A11) and its association (p=0.040) with the type of care they provide: only private, only public or both.

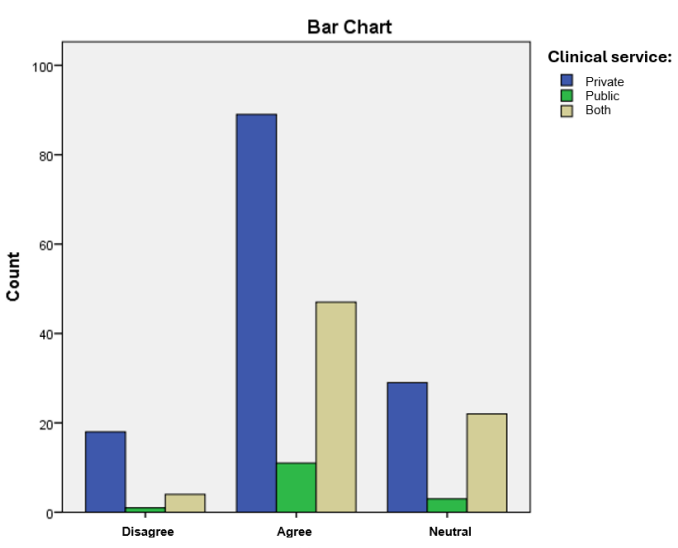

Figure 2. Responses of dentists regarding agreement and disagreement with the literature for statement 14 (A14) and its association (p=0.047) with the type of care they provide: only private, only public or both.

DISCUSSION

This study had the unique character of evaluating and showing the knowledge of dental hygienists about procedures for treating patients with PD, in addition to raising awareness about the importance of discussing appropriate management and knowing whether professionals are prepared to meet the needs of these individuals. Its differential was to provide evidence of the importance of disseminating a protocol with information and procedures that help dental hygienists feel confident in the outcome of dental care for patients with PD. The interest of this research is to show that individuals with this condition present complications and changes justified by their illness, implying the need for dental hygienists to prepare themselves to promote health in a welcoming manner when presented to patients with PD, showing that it is essential to know the appropriate care and management.

The majority of participants were female, aged among 21 and 60 years old. This profile of professionals in the city of Maceió (AL) was similar to that found in a national survey, where the most prevalent gender of the CDs was female (72% of the sample) and the age range between 22 and 67 years old [17]. In the present study, at the regional level, the prevalence of the sample was repeated, composed of 71.1% of female participants. In another study carried out with the objective of evaluating access to public health by special patients from the perspective of the CD in Fortaleza (CE), in addition to the prevalence of female professionals (77.3%), there was the same profile regarding the level of training, with Specialization being the most cited (81.2%) [18]. This result was repeated in the research of the present article, where the most prevalent level was Specialization. Among the most cited specialties in the current survey, the main ones were Dental Prosthetics, Orthodontics and Implantology, respectively. In a national study that analyzed the distribution of CDs by specialties, two of the most cited were repeated, Orthodontics and Implantology. Dental Prosthetics was the fourth most cited specialty, while Endodontics occupied the third position [19]. It is also noteworthy that there was no participation of any professional specialized in the care of Patients with Special Needs.

The time since graduation was one of characteristics of the sample where the percentage was different compared to another study, the majority of participants represented less than 10 years of graduation (74.7%); in Campina Grande (PB), a study was carried out on the knowledge of CDs in the care of diabetic patients, where the number of participants graduated more than 10 years ago was 79.1% [20]. This difference in the time of graduation of professionals may be the result of regional differences, especially when comparing the capitals with cities in the interior of the Northeast.

In dental care divisions, the option with the highest prevalence of responses was private care. This prevalence was repeated in studies conducted in Porto Velho (RO) [21] and in São Paulo [22], with professionals from the private network making up the majority of the sample in both. There are several justifications for choosing this type of care, among the main ones are the flexibility of hours and remuneration.

Although more than 1% of the world population has PD [2], most of the dentists who responded to the survey stated that they had never treated patients with this condition, revealing the need to promote public policies and awareness campaigns on the importance of dental care for systemic patients. Often, due to a lack of information, individuals with systemic conditions develop diseases in the stomatognathic system and do not understand that this condition can be avoided with regular visits to the dentist.

Even though most of the responses showed that the dental hygienists demonstrated their ability to care for patients with PD, the majority responded that they did not feel prepared to provide this care. This data sheds light on the validity of the present research, demonstrating the need to disseminate protocols,

courses and lectures to dental professionals, in addition to making adjustments to the courses taught at the faculties to inform and provide more confidence to undergraduates and professionals in oral care related to this comorbidity.

According to the literature, statement 7 "as many planned procedures as possible should be performed in a single consultation, aiming to reduce the number of patient visits to the office" is considered false, however, most CDs disagreed with the literature (41.5%) or remained neutral. Not only the number of sessions, but also the patient's chair time should be considered by the professional during treatment planning; it is important to emphasize that the patient may not tolerate an excessively long consultation time, limiting this consultation to 45 minutes per session [14] and making it not recommended to perform several procedures in a consultation only.

Supporting the patient's head is essential to ensure that the consultation is safer for the dentist and the patient, in order to control involuntary movements and making it necessary to use stabilization devices [14]. Regarding constant suction when using absolute isolation, in relation to dysphagia, the patient may choke due to the aspiration of fluids, so the recommendation to perform constant suction at high intensity is motivated by the aim of avoiding this complication [14,15]. For the statements related to these topics, the results were relevant in the sense that the dentists who only provide private care had a predominance of responses that were in agreement with the literature, to the detriment of those professionals who provide public care or both. This relationship may be explained by different working conditions, where in the public network, care generally has some limitations in terms of infrastructure, equipment and/or materials.

Patients with PD may have some degree of dementia, so even if the patient is visibly lucid, it is important that the consultation be held in the presence of a companion, who will provide information and receive instructions to assist with the patient's oral hygiene. Consultations held in the morning are recommended, since the patient is more rested and has reduced tremors [14]. Regarding the time of the consultation, the research participants agreed with the information about morning care, but a portion of the professionals remained neutral (20.1%), demonstrating that this information is not yet fully consolidated among professionals.

Some conditions interfere with quality of life and the ability to perform good oral hygiene. Motor alterations show the need for an accessible clinical environment to avoid accidents and promote patient cooperation. Measures can be taken, such as a well-lit environment to increase visibility, installation of ramps to facilitate access for wheelchair users, and removal of objects from passageways, such as rugs and doormats, which can cause falls or trips [7,14]. In the results presented on the clinical environment, most professionals agreed with the literature on these accessibility measures.

Treating the patient in a caring and compassionate manner will make the patient feel comfortable, accepting the treatment, the dental environment and the professional presence. Speaking clearly and objectively will help in understanding what is being asked and what is being reported [14]. In the anamnesis of the patient with PD, complementary exams such as measuring blood pressure are essential to compile the patient's file and initiate safe care [7,14,23,24]. Regarding the way to speak to the patient and the need for a detailed anamnesis and physical examination, the CDs agreed with what was presented.

The use of mouth openers is an excellent alternative to keep the oral cavity open and facilitate the procedure, in addition to allowing greater relaxation of the mouth by the patient [15]. Regarding the use of openers, several participants remained neutral, showing uncertainty about agreeing with the statement. Bradykinesia (slow movements) and resting tremor are motor conditions that interfere with the session;

the patient may make sudden movements or gradually change position, requiring greater attention to the handling of materials and instruments [14].

According to the literature, statement 10 "during the treatment, the patient may present movements that interfere with the treatment, even so the dentist cannot use retainers" is considered false, the majority of the CDs remained neutral (35.4%) or disagreed with the literature (22.7%). As PD is directly related to the motor system, during dental care, the patient may have difficulty controlling these movements, making it necessary to use retainers such as vacuum mattresses, padded straps and tie tapes [14,15], always valuing the best technique to combine excellence in the procedure with patient comfort.

Sialorrhea can compromise the surgical field, preventing it from remaining clean and dry, and constant suction is an ideal alternative for controlling salivation [14,15,25,26]. Dysphagia (difficulty chewing and swallowing) associated with sialorrhea (excessive salivation) can cause choking or aspiration of fluids, for which the dental chair should be kept in a 45° position, seeking to avoid setbacks during care [7,15,23,25,26]. When asked about the position of the chair, many dental hygienists were neutral, showing that they did not feel safe regarding the angle of the chair to perform care. Regarding constant suction related to sialorrhea, the majority agreed.

The recommendation is to avoid tooth extraction surgeries, and only perform them if they are the only alternative. Another invasive procedure is periodontal surgery, which should be replaced by preventive periodontal treatments, such as scaling in short sessions or, in some cases of deep periodontal pockets, antibiotic therapy [7,14,15,26]. Although most professionals agreed with the literature on this topic, a portion of the dental professionals disagreed (24.9%) or remained neutral (21.8%), demonstrating that a mutilating dental approach, with the indication of tooth extractions in situations where this could be replaced by other less invasive procedures, is still a reality in Brazil.

In addition to the insecurity on the part of the CDs, most professionals also stated that they had never treated patients with PD. A likely reason for this may be the lack of knowledge on the part of patients and their caregivers about the need for regular visits to the CD or the insecurity of not finding welcoming and effective care.

The importance of dental hygienists in paying attention to progressive conditions of PD, aiming to develop a specific plan based on existing protocols, has proven to be fundamental tools for the management and maintenance of the patient's oral health and hygiene [26-28]. In this sense, we have as examples the initiative of the extension project carried out by the Federal University of Pernambuco (UFPE) [29] which, in addition to performing dental procedures, focused on educational activities and distributing manuals, as well as the incentive of the Hospital Dia do Idoso de Anápolis – GO26 for the inclusion of dental hygienists in the multidisciplinary care of individuals with PD. Thus, with the results achieved in this research, we hope to provide data that show an overview of the Brazilian scenario regarding the care applied to patients with PD; and guide professionals on the importance of preventive and curative treatment and conduct for clinical care as described throughout this discussion.

One of limitations of this study was working with a sample of CDs operating only in the city of Maceió (AL). However, it can be observed from the profile of professionals presented here that this sample was very similar to that found at a national level, and it can be inferred that the same results would be repeated in other Brazilian cities. This limitation was mitigated by using a robust sample calculation and internal consistency analysis of the questionnaire applied, reducing risks of bias arising from the sample and/or data collection instrument.

The greatest difficulty in carrying out this study was reaching the target audience. Although the use of electronic questionnaires in scientific research has become widespread with the Coronavirus Disease 2019 (COVID-19) pandemic, the participation of individuals is still low, and most of the professionals requested did not participate in the research. To mitigate this issue, contact was made with CDs through direct messages on social networks and text messaging applications, in addition to visits to public and private dental offices and events related to Dentistry as a way to encourage the participation of professionals.

Another difficulty was the limited number of scientific articles published that were up-to-date and of methodological quality on care and management practices for patients with PD. This fact, together with the findings of this study, suggests the need for future studies with the publication of protocols to consolidate this knowledge in the dental profession. Additionally, professional refresher courses on this topic are suggested, in addition to encouraging undergraduate courses that address the approach to systemically compromised patients and/or those with special needs.

CONCLUSION

It is concluded that the dental hygienists demonstrated the ability to provide dental care to individuals with PD, however, most professionals have never performed this type of care and feel insecure about doing so. This insecurity may be related to the lack of access to updated protocols. Viable solutions to increase the confidence of these professionals, especially those who work in the public health system, would be to invest in public policies with lecture series, in addition to updating the curricula of undergraduate dentistry courses with the inclusion of clinical practices aimed at caring for systemically compromised patients.

Conflicts of interest: The authors declare that there are no conflicts of interest.

Collaborators

LA Barbosa and PLP Silva, conceptualization. GA Lemos, data curation. GA Lemos and PLP Silva, formal analysis. LA Barbosa, investigation. LA Barbosa, writing – original draft. GA Lemos and PLP Silva, writing – review and editing. LA Barbosa, GA Lemos and PLP Silva, supervision.

REFERENCES

1. Elbaz A, Carcaillon L, Kab S, Moisan F. Epidemiology of Parkinson's disease. Rev Neurologique. 2016;172(1):14-26. https://doi.org/10.1016/j.neurol.2015.09.012
2. Steidl EMS, Ziegler JR, Ferreira FV. Doença de Parkinson: revisão bibliográfica. Disc Sci Saúde. 2007;8(1):115-29. https://doi.org/10.37777/921
3. Silva FS, Pabis JVPC, De Alencar AG, Da Silva KB, Peternella FMN. Evolução da doença de Parkinson e comprometimento da qualidade de vida. Rev Neurociências. 2001;18(4):463-8. https://doi.org/10.34024/rnc.2010.v18.8432
4. Goulart F, Santos CC, Teixeira-Salmela LF, Cardoso F. Analysis of functional performance in patients with Parkinson's disease. Acta Fisiátr. 2004;11(1):12-6. https://doi.org/10.5935/0104-7795.20040001
5. Prete BRJ, Ouanounou A. Medical management, orofacial findings, and dental care for the patient with Parkinson's disease. J Can Dent Assoc. 2021;87:l10.
6. Bollero P, Franco R, Cecchetti F, Miranda F. Oral health and implant therapy in Parkinson's patients: review. Oral Implantol. 2017;10(2):105. https://doi.org/10.11138/orl/2017.10.2.105
7. Pistori J, Machado M. A Interprofissionalidade no tratamento de pacientes com Parkinson: uma análise odontológica [trabalho de conclusão de curso]. Bragança Paulista: Universidade São Francisco; 2019.

8. Paulino LYL, Canuto JAS, Silva AP, Souza RLH. Medicações utilizadas no tratamento de Parkinson e a influência na saúde bucal: revisão de literatura. In: Anastacio DB, organizador. Ciências Médicas: estudos clínicos e revisões bibliográficas. Triunfo: Omnis Scientia; 2023. v.2. http://dx.doi.org/10.47094/978-65-6036-029-7/61-71
9. Verhoeff MC, Thymi M, Brandwijk AN, Heres MS, Koutris M, Berendse HW, et al. Clinicians' view on the management of oral health in Parkinson's disease patients: a qualitative study. BDJ Open. 2023;9(20):1-8. https://doi.org/10.1038/s41405-023-00144-w
10. Zlotnik Y, Balash Y, Korczyn AD, Giladi N, Gurevich T. Disorders of the Oral Cavity in Parkinson's Disease and Parkinsonian Syndromes. Parkinson's Dis. 2015:1-6. https://doi.org/10.1155/2015/379482
11. Spezzia S. Implicações odontológicas oriundas do acometimento pela doença de Parkinson: abordagem das manifestações bucais. Int J Sci Dent. 2023;3(62):1-8. https://doi.org/10.22409/ijosed.v3i62.53184
12. Marconi AM, Lakatos EM. Fundamentos de metodologia científica. São Paulo: Atlas; 2008.
13. Assis JFC, Silva PLP, Lima JAS, Forte FDS, Batista AUD. The knowledge level of dental surgeons regarding the relationship between occlusal factors and Temporomandibular Disorders (TMD). Rev Odontol Unesp. 2015;44(6):360-7. https://doi.org/10.1590/1807-2577.11615
14. Castro APF, Pereira CS, Santos MPS, Alves VA, Nobre MCO, Bonfim MLC. Abordagem odontológica em pacientes idosos portadores da doença de Parkinson. Rev Unimontes Cient. 2021;23(1):1-17. https://doi.org/10.46551/ruc.v23n1a08
15. Picciani BLS, Santos PS, Soares Junior LAV, Santos BM. Diretrizes para atendimento odontológico de pacientes sistemicamente comprometidos. São Paulo: Santos; 2019.
16. Landis J, Koch G. The measurement of observer agreement for categorical data. Biometrics. 1977; 33:159-74. https://doi.org/10.2307/2529310
17. Silva PLP. Tratamento da disfunção temporomandibular e dor orofacial no âmbito do Sistema Único de Saúde [tese]. João Pessoa: Universidade Federal da Paraíba; 2024.
18. Lawrence H, Sousa LP, Gonçalves FL, Saintrain M, Vieira APGF. Acesso à saúde bucal pública pelo paciente especial: a ótica do cirurgião-dentista. Rev Bras Promoção Saúde. 2014;27(2):190-7. https://doi.org/10.5020/2620
19. Júnior ECF, Pereira JV. Análise e caracterização do panorama da distribuição de Cirurgiões-Dentistas no Brasil por especialidades odontológicas. Arch Health Invest. 2020;8(9). https://doi.org/10.21270/archi.v8i9.3802
20. Leite RB, Targino Marssoni ACL, Barbosa DN, Sousa KD, Soares RSC, Gomes RCB. Conhecimento de cirurgiões-dentistas em relação ao atendimento de diabéticos. Cad UniFOA. 2019;(41):119-25. https://doi.org/10.47385/cadunifoa.v14.n41.2942
21. Lima FRN, Melo AUC, Ribeiro CF, Neves ACC, Brandt WC, Silva-Concílio LR. Avaliação das condutas de biossegurança em consultórios odontológicos da rede pública e privada. ClipeOdonto. 2012;4(1):2-6.
22. Ponte TM, Zaitter WM, Biazzevic MGH, Crosato E, Michel-Crosato E. Prática odontológica: perfil dos cirurgiões-dentistas que exercem suas atividades em empresas do setor privado - São Paulo, 2008. Rev Sul-Bras Odontol. 2009;6(3):265-71.
23. Fioravanti KS, Garcia AMN, Mengoa MGR, Porto VC, Neppelenbroek KH, Soares S. O desafio no manejo do paciente com doença de Parkinson na confecção de prótese total: limitações e benefícios: relato de caso. Salusvita. 2023;41(3). https://doi.org/10.47296/salusvita.v41i03.409
24. Silva Neto JMA, Lucas JNV, Vilar VR, Silva ATV, Lucas JNV, Santos JMB, et al. Cuidados em pacientes com doença de Parkinson na odontologia: revisão narrativa. Rev Eletr Acervo Saúde. 2020;12(11):e4828. https://doi.org/10.25248/reas.e4828.2020
25. Špiljak B, Lisak M, Pašić H, Trkanjec Z, Lovrenčić Huzjan A, Bašić Kes V. Sialorrhea and xerostomia in Parkinson's disease patients. Acta Clin Croatica. 2022;61(2):320-6. https://doi.org/10.20471/acc.2022.61.02.19
26. Ferreira BBM, Andrade BG, Sales SCAC, Rodrigues TE, Oliveira JMR. A Intervenção odontológica e a visão da equipe multidisciplinar em pacientes portadores de Parkinson do Hospital Dia Geriátrico de Anápolis. Sci Invest Dent. 2017;22(1):76-81. https://doi.org/10.29232/2317-2835.2017v22i1.p76-81
27. De-La-Fuente AMG, Mendoza ILI, Sebastián MJL, Mendia XM, Goikouria MÁE, Urizar JMA. Facts and controversies regarding oral health in Parkinson's disease: a case-control study in Spanish patients. Med Oral Patol Oral Cir Bucal. 2022;1;27(5):e419-25. https://doi.org/10.4317/medoral.25348
28. Noble JM, Ciucci MR, Dental Lifeline Network. Dental health in Parkinson's. Miami, FL: Parkinson's Foundation; 2018 [cited 2025 Mar 8]. Available from: https://www.parkinson.org
29. Lins CCDA, Melo ACMA, Lima GA. Atenção à saúde bucal de idosos com Parkinson na Universidade Federal de Pernambuco: relato de experiência. Rev Portal Div. 2015 [citado 2025 Mar 8];44:56-62. Disponível em: http://www.portaldoenvelhecimento.com/revista-nova

Received on: 7/12/2024
Final version resubmitted on: 12/3/2025
Approved on: 24/4/2025

Assistant editor: Luciana Butini Oliveira