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Impacto positivo do acompanhamento odontológico na qualidade de vida do paciente após o tratamento oncológico: estudo de caso

The positive impact of dental care on the patient's quality of life after cancer treatment: a case report

Impacto positivo de la atención dental en la calidad de vida del paciente después del tratamiento del cáncer: un estudio de caso

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Resumo

Objetivo: Relatar o caso de um paciente após tratamento oncológico e avaliar o impacto da saúde bucal na qualidade de vida, por meio do Perfil de Impacto na Saúde Bucal (OHIP-14) antes, durante e após tratamento odontológico. Metodologia: Paciente após tratamento antineoplásico procurou clínica especializada e em todas as consultas foi aplicado o questionário OHIP-14. Relato de caso: Homem de 68 anos com diagnóstico de carcinoma espinocelular queratinizante de laringe (T3N0MX), submetido a quimioterapia e radioterapia adjuvante (2878,2 Grays) e cirurgia de laringectomia parcial vertical sem esvaziamento ganglionar. Apresentou queixa de perda dentária e desconforto na língua pós-radioterapia. Ex-etilista há 5 anos, ex-fumante há 6 meses, mas alcoolista há> 10 anos e fumante <50 anos. Os efeitos colaterais do tratamento antineoplásico incluíram ressecamento labial, hipossalivação,

fraturas dentais, raízes residuais, alterações na deglutição, dor durante a abertura da boca e movimento cervical. O resultado do OHIP-14 foi médio (17,85), fraco (3,52), fraco (2,84) e nulo impacto da saúde bucal na qualidade de vida na consulta inicial, ao longo do tratamento odontológico, ao final do tratamento odontológico e 1 ano e 2 meses após tratamento odontológico, respectivamente. Houve alto impacto no desconforto psicológico (3,55), médio na deficiência psicológica (1,6) e limitação funcional (2,04), em 2015, 2017 e 2018, respectivamente. Conclusão: A atuação do cirurgião-dentista sobre os efeitos orais tardios da quimioterapia e radioterapia teve impacto positivo na melhora da qualidade de vida após tratamento oncológico, com auxílio da equipe multiprofissional.

Palavras-chave: Qualidade de vida; Saúde bucal; Assistência ao convalescente; Radioterapia; Tratamento farmacológico.

Abstract

Objective: To report the case of a patient after cancer treatment and evaluate the impact of oral health on quality of life, through the Oral Health Impact Profile (OHIP-14) before, during, and after dental treatment. Methodology: A patient after antineoplastic treatment attended the clinic specialized. In all consultations, OHIP-14 was applied. Case report: A 68-year-old man diagnosed with keratinizing squamous cell carcinoma of the larynx (T3N0MX), undergoing chemotherapy and adjuvant radiotherapy (2878.2 Grays) and vertical partial laryngectomy surgery without ganglionic emptying. After CT, he complained of tooth loss and discomfort in the tongue after radiotherapy. Ex-drinker for 5 years, ex-smoker for 6 months, but alcoholic for> 10 years and smoker <50 years. Side effects of antineoplastic treatment included labial dryness, hyposalivation, dental fractures, residual roots, changes in swallowing, pain during mouth opening, and cervical movement. The results OHIP-14 was medium (17.85), weak (3.52), weak (2.84) and null impact of oral health on quality of life in the initial consultation, throughout the dental treatment, at the end of dental treatment and 1 year and 2 months after dental treatment, respectively. There was a high impact on psychological discomfort (3.55), medium on psychological disability (1.6), and functional limitation (2.04), in 2015, 2017, and 2018, respectively. Conclusion: The performance of the dentist on the late oral effects of chemotherapy and radiotherapy had a positive impact on improving the quality of life after cancer treatment, with the help of the multidisciplinary team.

Keywords: Quality of life; Oral health; Aftercare; Radiotherapy; Drug Therapy.

Resumen

Objetivo: Informar el caso de un paciente después de un tratamiento oncológico y evaluar el impacto de la salud bucal en la calidad de vida, a través del Perfil de Impacto en la Salud Bucal(OHIP-14)

antes, durante y después del tratamiento odontológico. Metodología: un paciente tras tratamiento antineoplásico acudió a la consulta especializada y en todas las consultas se aplicó OHIP-14. Reporte de un caso: Varón de 68 años diagnosticado de carcinoma epidermoide queratinizante de laringe(T3N0MX), sometido a quimioterapia y radioterapia adyuvante(2878.2 Grays) y cirugía de laringectomía parcial vertical sin vaciamiento ganglionar. Tras la TC, se quejó de pérdida de dientes y molestias en la lengua tras la radioterapia. Ex-bebedor durante 5 años, exfumador durante 6 meses, pero alcohólico durante >10 años y fumador <50 años. Los efectos secundarios del tratamiento antineoplásico incluyeron sequedad labial, hiposalivación, fracturas dentales, raíces residuales, cambios en la deglución, dolor durante la apertura de la boca y movimiento cervical. Los resultados OHIP 14 fue medio(17,85), débil(3,52), débil(2,84) y nulo de la salud bucal en la calidad de vida en la consulta inicial, durante todo el tratamiento odontológico. Al final del tratamiento dental y 1 año y 2 meses después del tratamiento dental, respectivamente. Hubo un alto impacto en el malestar psicológico(3,55), medio en la discapacidad psicológica(1,6) y limitación funcional(2,04), en 2015, 2017 y 2018, respectivamente. Conclusión: La actuación del cirujano dentista sobre los efectos orales tardíos de la quimioterapia y la radioterapia tuvo un impacto positivo en la mejora de la calidad de vida tras el tratamiento del cáncer, con la ayuda del equipo multidisciplinario.

Palabras clave: Calidad de vida; Salud bucal; Cuidados posteriores; Radioterapia; Quimioterapia.

1. Introduction

Post-cancer treatment patients may have late consequences manifested in the oral cavity and deficit in the defense of the organism, which can negatively impact the quality of life (QoL) (Abed, Reilly, Burke & Daly, 2019), especially in head and neck cancer. Instruments that measure QoL assess functional, physical, psychological, and social aspects, through generic or specific questionnaires about the type of disease (Barrios *et al.*, 2015).

The Oral Health Impact Profile (OHIP-14) questionnaire (Slade, 1997), through self-perception and psychometric qualities, assesses the impact of oral health on QoL (Allen, 2003; Locker, 1997). QoL in a patient after head and neck radiotherapy has the main impacts on pain, social, and functional impairments (Abed *et al*., 2019). Other tools to measure QoL in cancer patients, such as OHIP-49 (Fromm, Gotfredsen, Wessel & Ozhayat, 2019), University of Washington QoL Questionnaire (HNC-PCI) (Ghazali, Roe, Lowe & Rogers, 2015; Biazevic *et al*., 2010), EORTC QLQ - C30 and QLQ-H and N35 (Karimi *et al.*, 2019) are also useful tools.

There is a limited understanding of the impact of radiotherapy on the state of oral health in the immediate post-radiotherapy period (Epstein, Robertson, Emerton, Phillips &

Stevenson-Moore, 2001). The measurement of QoL after cancer treatment is performed at different times, from the first day after radiotherapy (RT), 3 months after RT (Kamiri *et al*., 2019), before adherence to dental care and 4 weeks after (Abed *et al*., 2019). Thus, assessing how the consequences of antineoplastic treatment affect the routine of these individuals has been the subject of study by researchers.

The objective of this study is to report the case of a patient after cancer treatment and to evaluate the impact of oral health on QoL, through the application of the OHIP-14 questionnaire before, during and after dental treatment (DT).

2. Methodology

The study was approved by the Human Research Ethics Committee (CAEE 35405620.0.0000.5417). The participant gave her informed consent about her participation in the study.

A patient after antineoplastic treatment attended at the clinic specialized in patients with systemic involvement, in which multidisciplinary treatment is available. At dental examination, anamnesis, clinical, and physical examination were carried out, and, subsequently, a treatment plan was created including dental, psychological, nutritional, and physiotherapeutic approach.

In all consultations, OHIP-14 in its version translated into Brazilian Portuguese was applied (De Oliveira & Nadanovsky, 2005) and the seven dimensions were assessed (functional limitation, physical pain, psychological discomfort, physical disability, psychological disability, social disability, and disability) according to the score assigned by the patient using the Lickert scale (0 to 4).

3. Case Report

A 68-years-old male with the medical diagnosis of keratinizing squamous cell carcinoma of the larynx in April 2013 with T3N0MX staging. In May 2013, chemotherapy treatment (CT) was started. In October 2013, CT was associated with RT, 45 Grays on the base of the tongue, and supraclavicular fossa with a 25.2 Gy reinforcement, totaling 2878.2 cGy. An adjuvant RT was completed in December 2013 and the CT in June 2014. In 2015, he underwent a partial vertical laryngectomy surgery without ganglionic emptying.

In November 2015, the patient was seen at a specialized center for a systemically

compromised patient, complaining that after RT there was tooth loss and the remaining teeth caused discomfort on the tongue. A smoking patient for more than 50 years, interrupting the habit for 6 months, reported at the time of the dental appointment and alcoholic for more than 10 years, being stopped at the time of diagnosis of the disease. Side effects of cancer treatment included labial dryness, hyposalivation, dental fractures resulting in residual roots, changes in swallowing, painful symptoms during mouth opening measurement 5.29, and cervical movement.

A total of four OHIP-14 questionnaires from 2015 to 2019 were obtained. The result of the impact of oral health on QoL, according to each dimension, was described in Table 1. The chronology of events from the initial consultation to the last assessment of QoL was described in Figure 1.

Table 1. Result of the impact of oral health on QoL.

Dimensions	November/2015	October/2017	May/2018	July/2019
Functional Limitation	1.96	1.02	2.04	0
Physical Pain	3.34	0	0	0
Psychological Discomfort	3.55	0.9	0	0
Physical Disability	3.04	0	0	0
Psychological Disability	1.6	1.6	0.8	0
Social Disability	2	0	0	0
Disability	2.36	0	0	0
TOTAL	17.85	3.52	2.84	0

Source: Authors.

Figure 1. Chronology of the moments from cancer diagnosis to the last dental treatment.

Apr/2013	May/2013	Dec/2013	Jun/2014	2015	Nov/2015	Oct/2017	May/2018	Jul/2019
CA Diagnostic	First QT + RT	Last RT	Last QT	Laryngect. Surgery	Initial Consultation (1º OHIP)	During DT (2º OHIP)	At the end DT (3º OHIP)	Follow-up 1 year and 2 months post-DT (4º OHIP)

Source: Authors.

The impact of each dimension was classified as low (0 - 1.33), medium (1.33 - 2.68), and high (> 2.68), and the total value: weak impact (<9.33), medium (9.33-18.66) and strong (> 18.66).

In November 2015, the OHIP-14 dimensions that had a high impact were physical pain, which includes painful sensitivity in the mouth, psychological discomfort related to stress, and physical disability associated with impaired nutrition. In October 2017, there was a decrease in that values related to "functional limitation" and "psychological discomfort". In May 2018, there was a reduction in the average corresponding to “psychological discomfort” compared to the years 2015 and 2017. In July 2019, there was zero attribution to the dimensions of the OHIP-14, evidencing a progressive improvement in the impact of oral health to the patient's QoL.

4. Discussion

Dental care improved the patient's QoL after antineoplastic treatment. There was a progressive improvement over DT until the last follow-up, with a zero value of oral health impact on QoL. The QoL measurement was performed at different times, since the initial consultation; throughout DT, including periodontics, extraction, endodontics, and dentistry; at the end of DT; and in the follow-up of 1 year and 2 months post-DT.

Barrios, Tsakos, García-Medina, Martínez-Lara and Bravo (2014) reported that the majority of head and neck cancer patients had five or more impacts on QoL and 97% with at least one impact, just like Abed *et al*. (2019), with an average of eight per patient, including pain, social and functional impairment. Other studies (Barrios *et al*., 2015; Becker *et al.*, 2012; Viet, Corby, Akinwande & Schmidt, 2014) also reported a negative physical impact on the health-related QoL of these patients. As for the elderly, they are more susceptible to functional limitations, and when the edentulous, physical disability may become prevalent (Mesquita & Vieira, 2009). In the present study, the patient initially had an impact on all the

dimensions evaluated, which can be related to the lack of support and dental guidance throughout the antineoplastic treatment, especially regarding the possible sequelae of treatment on oral health condition.

Two years after the initial consultation, the positive result can be due to the multidisciplinary treatment, whose objective is to provide favorable conditions for the cancer patient (Epstein *et al*., 2012). Speech therapy and nutrition were inserted in the team to assist the patient to evaluate swallowing and orientation regarding the nectar and pasty diet, use of neuromuscular electrical stimulation therapy, as well as protective and facilitating swallowing maneuvers, in the supraglottic region, training with thick water and multiple swallows.

The discomfort caused by cancer treatment promotes an emotional imbalance and reduces self-esteem, so the psychological field demands special attention. The psychologist will seek to prevent and reduce the emotional and physical symptoms caused by cancer and its treatment, helping cancer patients in the search for meaning in the process they experience (Leitão, Duarte & Bettega, 2013), with a psychosocial approach (Bissinger *et al.*, 2017). In the present study, the psychological approach was initiated from the first consultation, remaining throughout the dental treatment, corroborating the positive and prolonged results.

The positive result in the impact of conditions related to the patient's QoL can be attributed to humanized dental care, which highlights the importance of multidisciplinarity in the treatment of cancer, to minimize sequelae and inconveniences. The recovery of the cancer patient is individualized, in which some factors are associated with the stage of cancer, the intensity of the treatment, and the therapies adopted for recovery, therefore, there is no predictability of the post-treatment condition (Barrios *et al*., 2015).

For QoL research, there is no gold standard questionnaire, with a variety (Karimi *et al.*, 2019) including OHIP-14 (Abed *et al.*, 2019; Stuani *et al*., 2018), OHIP-49 (Fromm *et al.*, 2019; Gotfredsen & Abdullah, 2015), questionnaires from the European Organization for Research and Treatment of Cancer (EORTC) QLQ-C30 / QLQ-H / N35 (Karimi *et al*., 2019). The OHIP-14 is used to assess the repercussion resulting from adverse oral conditions on QoL. Important for the design and implementation of a multidisciplinary service, with a focus on promoting general and oral health, not prioritizing only mechanistic dentistry, but rather reestablishing the patient's well-being (Slade, 1997).

As it is a report of a single case, the findings of the present study make it impossible to compare it with other patients with head and neck cancer in the pre, trans and post-TD periods, as well as the lack of standardization regarding the evaluation period of the disease. QOL with other studies, therefore, future research in the area is necessary.

5. Conclusion

The performance of the dental surgeon in the diagnosis and treatment of the oral health condition on the late effects of CT and RT had a positive impact on the improvement of the QoL of the patient after cancer treatment, together with the help of a multidisciplinary team, including psychologist, speech therapist and nutritionist.

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