

DYSPHAGIA INFLUENCE TOWARDS THE QUALITY OF LIFE OF CANCER PATIENTS UNDERGOING PALLIATIVE CARE

Influência da disfagia na qualidade de vida de pacientes com câncer em cuidados paliativos

Influencia de la disfagia em la calidad de vida de los pacientes con cáncer en cuidado paliativo

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ABSTRACT

Objective: The study's main purpose has been to investigate the dysphagia influence towards the quality of life of cancer patients undergoing palliative care. **Methods:** It is a descriptive-exploratory field study with a quantitative approach. The Chi-square test and the R statistical software (v2.11.0) were used, and significance lower than 5% was considered. **Results:** A total of 35 patients were included, most subjects were female (77%), 45.69 (± 12.35) years old on average and diagnosed with breast (37%) and lung (14%) cancers. It was observed that some symptoms associated to changes in swallowing were more present, as follows: in liquid and solid consistency, cough (20.0% and 8.6% respectively), in pasty, stasis in oral cavity (8.6%) and prolonged feeding time (8.6%). Changes in swallowing influenced patients' quality of life (37%), associated with escape of food, stasis, noise and cough. **Conclusion:** The occurrence of dysphagia impairs the quality of life of cancer patients undergoing palliative care.

Descriptors: Palliative care, Dysphagia, Cancer, Quality of life.

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RESUMO

Objetivo: Investigar a influência da disfagia na qualidade de vida de pacientes com câncer em cuidados paliativos. **Métodos:** Realizou-se um estudo de campo, exploratório descritivo, com abordagem quantitativa. Para análise dos dados foram utilizados os testes Qui-quadrado, o software estatístico R (v2.11.0) e considerada significância menor a 5%. **Resultados:** Foram incluídos 35 pacientes, com prevalência do gênero feminino (77%), idade média de 45 anos e diagnóstico de câncer de mama (37%) e de pulmão (14%). Nesse estudo observou que sintomas relacionados às alterações na deglutição estiveram presentes: na consistência líquida e sólida, a tosse (20,0% e 8,6% respectivamente), na pastosa estase em cavidade oral (8,6%) e tempo prolongado de alimentação (8,6%). As alterações na deglutição influenciaram na qualidade de vida dos pacientes (37%), com associação do escape de alimento, estase, ruído e tosse. **Conclusão:** A ocorrência da disfagia declina a qualidade de vida de pacientes com câncer em cuidados paliativos.

Descritores: Cuidados Paliativos, Disfagia, Câncer, Qualidade de vida.

RESUMEN

Objetivo: Investigar la influencia de la disfagia en la calidad de vida de los pacientes con cáncer en cuidados paliativos. **Métodos:** Se realizó un estudio exploratorio de campo descriptivo con un enfoque cuantitativo. Fueron utilizados la prueba Chi-cuadrado, el software estadístico R (v2.11.0) y considerada significación menor que a 5%. **Resultados:** Fueron incluidos 35 pacientes, con prevalencia del género femenino (77%), edad media de 45 años y diagnóstico de cáncer de mama (37) y de pulmón (14%). En este estudio se observó que algunos síntomas relacionados a las alteraciones en la deglución estuvieron más presentes: en la consistencia líquida y sólida, la tos (20,0% y 8,6% respectivamente), en la pastosa estasis en cavidad oral (8,6%) y tiempo prolongado de alimentación (8,6%). Las alteraciones en la deglución influenciaron en la calidad de vida de los pacientes (37%), con asociación del escape de alimento, estasis, ruido y tose. **Conclusión:** La ocurrencia de la disfagia declina la calidad de vida de pacientes con cáncer en cuidados paliativos.

Descritores: Cuidados Paliativos, Disfagia, Cáncer, Calidad de Vida.

INTRODUCTION

The World Health Organization (WHO) defined Palliative Care (PC) as a promotion of the quality of life of patients and family members, who face life-threatening diseases. This requires the identification, evaluation, and treatment of pain and other physical, social, psychological and spiritual symptoms, for the prevention and relief of suffering.¹ PC presuppose the action of a multidisciplinary team to the patient, who must be fully assisted, through complementation knowledge and responsibility sharing, where different demands are jointly resolved.²

Given this framework, dysphagia is a frequent symptom of terminality that increases the risk of dysfunction, infections, and death.³ Therefore, it seeks to identify and intervene early in dysphagia, through strategies for monitoring and rehabilitating the functions of breathing, swallowing, voice and speech.⁴ Accordingly, dysphagia should be investigated early, to allow improvement in the quality of life of cancer patients undergoing PC.⁵

Given both physiological and functional changes of dysphagia in cancer patients, this study applied the guiding question: Does dysphagia affect the quality of life of hospitalized cancer patients undergoing palliative care?

Bearing the aforesaid in mind, this work meant to investigate the dysphagia influence towards the quality of life of cancer patients undergoing palliative care.

METHODS

The present field study was designed as cross-sectional and descriptive-exploratory, which applied a quantitative approach.

Data collection took place at the *Hospital Napoleão Laureano*, Assistance Center of High Complexity in Oncology, in *João Pessoa* city, *Paraíba* State, with a non-probabilistic random sample for the convenience of 35 patients, who met the inclusion criteria, over the months of May and June 2019.

For data collection, a deglutition assessment form was applied, based on the Protocol for Orofacial Myofunctional Evaluation⁶ and the Speech-Language Pathology Protocol for Dysphagia Risk Assessment,⁷ being directed to cancer patients undergoing PC of the aforesaid hospital. Then, the Quality of Life in Swallowing Disorders (SWAL-QOL-PT)^{8,9} was applied to assess the dysphagia influence towards the quality of life of cancer patients undergoing PC. It is worth mentioning that the semi-structured instruments were applied by the same examiner.

For inclusion, the following parameters were considered: being within the age group from 18 to 60 years old, hospitalized, and undergoing oral diet. Being excluded: patients with head and neck cancer, patients with previous dysphagia, palliative patients in terminality, instruments' incomplete filling, and those with neuromuscular deficits.

Data were categorized and allocated in a digital spreadsheet. Subsequently, the variables were analyzed in a descriptive manner (absolute and relative frequency, measures of central tendency) and inferential, (Pearson's Chi-square test), to verify the association between signs of dysphagia and reduced quality of life. The statistical software R, version 2.11.0 was used with a significance level of 5%.

The project was authorized by the Research Ethics Committee from the *Universidade Federal da Paraíba (UFPB)*, under the Legal Opinion No. 3.290.732 (Resolution No. 466/12), obtaining the Informed Consent Form (ICF) for voluntary participation.

RESULTS

Most subjects were female (77%), 45.69 (± 12.35) years old on average and diagnosed with breast (37%) and lung (14%) cancers. During the survey, most of the subjects did

not undergo either radiotherapy or chemotherapy at the time of admission (65.7%).

Table 1 contains the description of the swallowing function in liquid, pasty, and solid consistencies. According to the evaluation of 35 (100%) patients, it was observed that some symptoms related to changes in swallowing were more present in liquid consistency, such as stasis in the oral cavity in four (11%) subjects, noise in swallowing, in three subjects (8.6%), and cough in seven subjects (20%). In pasty consistency, stasis in the oral cavity stood out in three (8.6%) patients and prolonged feeding time also in three (8.6%). In solid consistency, the cough was found in three (8.6%) subjects.

Table 1: Description of the symptoms investigated during the evaluation of swallowing in cancer patients. *João Pessoa* city, *Paraíba* State, Brazil, 2019.

Swallowing	Liquid				Pasty				Solid			
	Yes		No		Yes		No		Yes		No	
	N	%	N	%	N	%	N	%	N	%	N	%
Escape	1	2.9	34	97.1	1	2.9	34	97.1	1	2.9	34	97.1
Stasis	4	11.4	31	88.6	3	8.6	32	91.4	2	5.7	33	94.3
Suction	2	5.7	33	94.3	1	2.9	34	97.1	1	2.9	34	97.1
Noise	3	8.6	32	91.4	1	2.9	34	97.1	1	2.9	34	97.1
Throat clearing	2	5.7	33	94.3	2	5.7	33	94.3	2	5.7	33	94.3
Cough	7	20.0	28	80.0	2	5.7	33	94.3	3	8.6	32	91.4
Increased time	1	2.9	34	97.1	3	8.6	32	91.4	2	5.7	33	94.3

Source: Research data, 2019.

Concerning cervical auscultation (**Table 2**), it was observed that two (5.7%) patients had changed, with noises in vocal quality before the swallowing evaluation, and two (5.7%) had changed after swallowing with a liquid consistency.

Table 2. Description of auscultation and vocal quality during the evaluation of swallowing of cancer patients. *João Pessoa* city, *Paraíba* State, Brazil, 2019.

Swallowing	Liquid				Pasty				Solid									
	Before		After		Before		After		Before		After							
	Suitable N	%	Suitable N	%	Suitable N	%	Suitable N	%	Suitable N	%	Suitable N	%						
Auscultation	33	94.3	0	0.0	2	5.7	35	100	0	0.0	0	0.0	34	97.1	0	0.0	1	2.9
Vocal quality	33	94.3	2	5.7	0	0.0	35	100	0	0.0	0	0.0	35	100	0	0.0	0	0.0

Source: Research data, 2019.

Observing the impact of swallowing changes on patients' quality of life (**Table 3**), it was observed that 13 (37%) participants showed a decrease in the protocol scores, then demonstrating that changes in swallowing impair their quality of life.

Table 3. Protocol scores' central tendency measures. *João Pessoa* city, *Paraíba* State, Brazil, 2019.

Quality of Life scores	Minimum	Maximum	Average	Standard Deviation
Trouble swallowing	0	100	89.69	26.58
Desire to feeding	25	100	89.14	22.70
Frequency of symptoms	14	100	90.23	19.28
Food selection	0	100	90.40	24.76
Communication	25	100	94.66	16.95
Fear of feeding	0	100	89.00	26.19
Mental health	0	100	90.57	28.58
Social	0	100	91.71	25.40
Sleep and fatigue	0	100	63.57	32.25
Quality of life impact %	Yes	13	37.1	
	No	22	62.9	

Source: Research data, 2019.

In regard to the association between symptoms and their impacts on people's quality of life, it was observed that escape of food, stasis, noise, and cough, in the three consistencies, affected the quality of life of patients with statistical significance (**Table 4**).

Table 4. Association between aspects related to swallowing and impact on people's quality of life. *João Pessoa* city, *Paraíba* State, Brazil, 2019.

Swallowing	QUALITY OF LIFE	Liquid				Pasty				Solid			
		Yes		No		Yes		No		Yes		No	
		N	%	N	%	N	%	N	%	N	%	N	%
Escape	NORMAL	0	0.0	22	100	0	0.0	22	100	22	100	0	0.0
	AFFECTED	1	7.7	12	92.3	1	7.7	12	92.3	9	69.2	4	30.8
p-value		0.022*				0.022*				0.014*			
Stasis in the oral cavity	NORMAL	0	0.0	22	100	0	0.0	22	100	0	0.0	22	100
	AFFECTED	4	30.8	9	69.2	3	33.1	10	76.9	2	15.4	11	84.6
p-value		0.012*				0.007*				0.006*			
Noise	NORMAL	0	0.0	22	100	0	0.0	22	100	0	0.0	22	100
	AFFECTED	3	33.1	10	76.9	1	7.7	12	92.3	1	7.7	12	92.3
p-value		0.007*				0.022*				0.022*			
Cough	NORMAL	0	0.0	22	100	0	0.0	22	100	0	0.0	22	100
	AFFECTED	8	61.6	5	38.5	2	15.4	11	84.6	3	33.1	10	76.9
p-value		0.003*				0.006*				0.007*			

Source: Research data, 2019. Pearson's Chi-square test, significance $p < 0.05^*$.

Table 5 shows that the most widely used Speech-language pathology conduct was free oral approach 32 (91%). It was also observed that most patients consider their health to be reasonable (51%).

Table 5. Speech-language pathology and self-health assessment of cancer patients. *João Pessoa* city, *Paraíba* State, Brazil, 2019.

Variables	N	%	
Conduct	Alternative approach and Speech therapy	0	0.0
	Assisted oral approach and Speech therapy	2	5.7
	Free oral approach and Speech therapy	1	2.9
	Free oral approach	32	91.4
Do you consider that your health is	Poor	4	11.4
	Reasonable	18	51.4
	Good	7	20.0
	Very good	3	8.6
	Excellent	3	8.6

Source: Research data, 2019.

DISCUSSION

Herein, most subjects were female (77%), 45.69 (± 12.35) years old on average and diagnosed with breast (37%) and lung (14%) cancers.

Worldwide, breast cancer is the most common cancer site amongst women, corresponding to about 25% and 20%, respectively, of new cases each year.¹⁰ Lung cancer is the second most common in men and women in Brazil, being the first worldwide since 1985, both in incidence and mortality.¹⁰

Concerning the quality of swallowing (**Table 1**) in liquid, pasty and solid consistencies, according to that research, it was observed that some symptoms related to changes in swallowing were more present. In liquid consistency, coughing (20%), stasis in the oral cavity (11%) and swallowing noise (8.6%) predominated. In the pasty consistency, stasis in the oral cavity (8.6%) and prolonged feeding time (8.6%) stood out. In the solid consistency, the presence of cough (8.6%) predominated. Regarding the auscultation, it is observed that 5.7% presented changes after swallowing with liquid consistency and 5.7% changes in vocal quality before the evaluation.

According to the literature,^{11,12} the swallowing of food deteriorates as the terminal phase progresses. Patients with swallowing disorders in the oral preparatory phases may present stasis in the oral cavity and prolonged feeding time, resulting from the loss of muscle tone, reduced movement and tongue conditions during the swallowing process.¹³

Another study corroborates these data, mentioning that cancer treatment can have difficulties with swallowing, with alterations in the oral control of the bolus, extraoral escape of solid and liquid foods, longer time of oral transit, presence of cough and/or choking and regurgitation.¹⁴

Another investigation was performed to describe the characteristics of dysphagia cancer patients undergoing PC, excluding the diagnosis of head and neck cancer. The results supported the hypothesis that patients with cancer, which does not affect the head and neck, are also at risk of developing symptoms of oropharyngeal dysphagia.¹⁵ Although these studies exist, no bibliographic support was found to distinguish between the difficulties swallowing liquid and solid foods in patients undergoing PC. Other studies reveal the most evident changes in the swallowing of liquids or solids, depending on the body structures affected and the disease progression.¹⁶

Swallowing imbalance can cause severe pulmonary complications, malnutrition and dehydration, as well as impacting social and family life and carrying out activities of daily living and leisure, through feelings such as shame, anxiety, depression and isolation.¹⁷

In the assessment of swallowing changes in patients' quality of life, it was observed that 37% of the participants showed a reduction in the protocol scores, demonstrating that changes in swallowing reflect in the quality of life of

individuals diagnosed with non-head and neck cancer.

In aforementioned research, an association was made between symptoms related to swallowing and the presence of impacts on quality of life. It was observed that escape of food, stasis, noise and cough, the most prevalent changes in the three consistencies, are associated with the decline in the patients' quality of life. According to the literature,¹⁶ when a patient has problems with the swallowing process, their well-being and that of their family will be altered, and it was observed that the patients considered their health as reasonable.

With regard to the speech-language pathology, during the research 91% free oral conduct was indicated, however speech therapy intervention in PC depends on the different pathophysiological, anatomical, psychological and social conditions of the patients. The incidence of dysphagia varies according to the cause and stage of the disease, and speech therapy is necessary at the beginning, in the progression and the final stage, seeking to favor safe and effective swallowing.¹⁷ Nevertheless, the presence of the speech therapist in the PC team is still timidly seen as essential.¹⁸

Several studies address that the focus of the speech therapist in PC, concerning patients with dysphagia, is to provide satisfaction and pleasure during food, with maximum comfort.^{11,14-6} Oral feeding¹⁹ is the option most selected by people who are undergoing PC. Nonetheless, the speech therapist's intervention to maintain the oral feeding route must be early, which sometimes does not happen and, thus, patients stop feeling such pleasure.^{14,19}

CONCLUSIONS

There were evidenced the early presence of dysphagia in patients with non-head and neck cancer, and that its presence negatively affected the patients' quality of life. Hence, this work ratifies that dysphagia should be investigated and treated early in the beginning of cancer diagnosis and treatment, even if not head and neck, by the specialist in speech-language pathology.

Even being prospective, whose instruments were applied by the same examiner, this work recognizes the study's limitations due to the small sample of patients, excluding non-inpatients, not covering a larger variation of primary tumor sites, as well as a comparative analysis of patients bearing head and neck cancer.

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