

Symptom Pattern in Colorectal Cancer Patients according to Age

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Padrão Sintomatológico em Pacientes do Câncer Colorretal de acordo com a Idade

Patrón de Síntomas en Pacientes con Cáncer Colorrectal según la Edad

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Abstract

Introduction: Colorectal cancer is among the most common types of cancer in the Brazilian and world population, with high rates of mortality. Some studies show that there is a difference in the symptomatic burden for this cancer among young adults and elderly individuals, which can deteriorate the quality of life of these patients. **Objective:** To investigate the difference in the pattern of symptoms among young adults and elderly patients with colon and rectum cancer. **Method:** Cross-sectional study using dataset on the prevalence of symptoms among colorectal cancer patients attended at the National Cancer Institute José Alencar Gomes da Silva (INCA) through a recently adapted inventory of symptoms for Brazil. **Results:** A total of 348 patients were interviewed, of which 101 were young adults (29.1%) and 247 (70.9%) were elderly individuals. There was a difference between the symptoms analyzed for pain ($p=0.033$), nervousness ($p=0.013$), drowsiness ($p=0.033$), sadness ($p=0.003$), problem with sexual interest or activity ($p=0.014$), loss of appetite ($p=0.028$), irritation ($p=0.013$), change of food taste ($p=0.042$), hair loss ($p=0.002$) and “I don’t look like myself” ($p<0.001$). **Conclusion:** The symptomatic burden of colorectal cancer may differ according to age. This is relevant because reinforces the idea of individualizing the treatment to improve the care and, consequently, the quality of life of these patients.

Key words: Colorectal Neoplasms; Quality of Life; Symptoms Assessment; Adult; Aged.

Resumo

Introdução: O câncer colorretal está entre os tipos de câncer mais comuns na população brasileira e mundial com altos índices de mortalidade. Alguns estudos mostram que há uma diferença de carga sintomatológica para esse tipo de câncer entre adultos jovens e idosos que, consequentemente, podem deteriorar a qualidade de vida nesses pacientes. **Objetivo:** Investigar a diferença no padrão de sintomas entre pacientes adultos e idosos com câncer de cólon e reto. **Método:** Estudo transversal que utilizou um conjunto de dados sobre a prevalência de sintomas entre pacientes com câncer colorretal atendidos no Instituto Nacional de Câncer José Alencar Gomes da Silva (INCA), por meio de um inventário de sintomas recentemente adaptado para o Brasil. **Resultados:** Foram entrevistados 348 pacientes, destes, 101 pacientes eram adultos jovens (29,1%) e 247 idosos (70,9%). Obteve-se diferença entre os sintomas analisados para dor ($p=0,033$), nervosismo ($p=0,013$), sonolência ($p=0,033$), tristeza ($p=0,003$), problemas com desejo sexual ou atividade sexual ($p=0,014$), falta de apetite ($p=0,028$), irritação ($p=0,013$), mudança nos gostos dos alimentos ($p=0,042$), perda de cabelo ($p=0,002$) e “eu não pareço mais o mesmo” ($p<0,001$). **Conclusão:** A carga sintomatológica frente ao câncer colorretal pode apresentar distinção conforme a idade. Isso é relevante, pois reforça a ideia de individualizar o tratamento para melhorar a assistência e, consequentemente, a qualidade de vida desses doentes.

Palavras-chave: Neoplasias Colorretais; Qualidade de Vida; Avaliação de Sintomas; Adulto; Idoso.

Resumen

Introducción: El cáncer colorrectal se encuentra entre los tipos de cáncer más comunes en la población brasileña y mundial, con altas tasas de mortalidad. Algunos estudios muestran que existe una diferencia en la carga sintomática para este tipo de cáncer entre adultos jóvenes y viejos, lo que en consecuencia puede deteriorar la calidad de vida en estos pacientes. **Objetivo:** Investigar la diferencia en el patrón de síntomas entre pacientes adultos y ancianos con cáncer de colon y recto. **Método:** Estudio transversal que utiliza un conjunto de datos de prevalencia de síntomas entre pacientes con cáncer colorrectal tratados en el Instituto Nacional del Cáncer José Alencar Gomes da Silva (INCA) a través de un inventario de síntomas recientemente adaptado para o Brasil. **Resultados:** Se entrevistó a 348 pacientes, de estos 101 pacientes eran adultos jóvenes (29,1%) y 247 en ancianos (70,9%). Hubo una diferencia entre los síntomas analizados para el dolor ($p=0,003$), nerviosismo ($p=0,013$), somnolencia ($p=0,033$), tristeza ($p=0,003$), problemas con el deseo sexual o actividad sexual ($p=0,014$), falta de apetito ($p=0,028$), irritación ($p=0,013$), cambio en los gustos de los alimentos ($p=0,042$), pérdida de cabello ($p=0,002$) y “Ya no me veo igual” ($p<0,001$). **Conclusión:** La carga sintomática del cáncer colorrectal se puede distinguir según la edad. Esto es relevante porque refuerza la idea de individualizar el tratamiento para mejorar la atención y, en consecuencia, la calidad de vida de estos pacientes.

Palabras clave: Neoplasias Colorrectales; Calidad de Vida; Evaluación de Síntomas; Adulto; Anciano.

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INTRODUCTION

Colorectal cancer is among the most common cancers in the Brazilian and world population. Data from the International Agency for Research on Cancer¹ of 2018 estimated that colorectal cancer should increase nearly 75%, exceeding more than 11.4 million new cases and more than 6.1 million deaths until 2040¹. The National Institute of Cancer José Alencar Gomes da Silva (INCA)² estimated for the biennium 2018-2019, the incidence of 17,380 new cases in Brazil in males and 18,980 in females, it is the third more frequent among males and the second among females in the country². The symptoms related will depend on the location of the cancer and severity of the case. Gosselin et al.³ described the symptoms and its intensity in patients with rectal and colon cancer, observing that those more prevalent were dyspnea, nausea, inappetence, constipation, diarrhea, pain, fatigue, feeling of tiredness and insomnia. The severity of each case will depend on the histological type of the cancer and its staging, influencing the choice of the type of treatment⁴.

Despite the advances of the medicine about cancer treatment, the results in elder patients are considered less promising when compared to younger patients. Yates et al.⁵ showed that older oncologic patients reported a differentiated symptomatological pattern. Regardless of this, the older patients reported less severity and frequency of the symptoms and less anguish in relation to the treatment⁶. This difference of response to the treatment is not totally understood in the literature, but some studies quote as being consequence of bigger symptomatic load in older adults, lower adherence to the treatment, in addition to the greater mental and physical impact in response to the cancer treatment in these patients. In order to contribute with this analysis, the objective of the present study was to estimate the difference in the occurrence of symptoms in patients with colorectal cancer according to the age range.

METHOD

Cross-sectional study that utilized a set of data about the prevalence of symptoms among patients with colorectal cancer attended at INCA. The sample obtained by convenience enrolled 348 adult patients admitted at the Abdominopelvic Surgery Service between 2016 and 2018, equivalent to 82% of the patients hospitalized in that period.

The inclusion criteria were patients aged 18 years or older, with colorectal cancer, hospitalized at Cancer Hospital I (HCI)/INCA, regardless of staging. Exclusion criteria were patients who presented cognitive disorders evaluated through Mini-Mental State Exam (MMSE) or

in conditions capable of compromising the veracity of the responses, with neoplasm or metastasis of the central nervous system (CNS), whose information were obtained from the charts.

Data collection was done with the application of the Memorial Symptoms Assessment Scale (MSAS-BR) as a personal interview after previous information about the objectives of the study, agreement to participate in the study and signature of the Informed Consent Form – ICF. The MSAS-BR is a tool of evaluation of 32 symptoms created to measure the prevalence and the three characteristics associated to them (frequency, severity and distress), encompassing physical and psychological aspects experienced by oncologic patients in the week before the interview. This instrument was validated for oncologic patients in the Brazilian context and evaluated for consistency by former studies^{7,8}. For the collection of additional data, it was adopted a form elaborated by the authors, including sociodemographic and clinical data as age, gender, marital status, education, race, primary diagnosis, staging, use of devices and place of treatment (outpatient and hospital. These information were obtained through interviews with the patients.

To estimate the association between the occurrence of symptoms and age, two groups were formed: adults, between 18 and 59 years and older adults, with 60 years or more. To evaluate the statistical difference for categorical variables, the Pearson chi-square test was adopted and for continuous variables, the Anova variance analysis test. A statistically significant level of 95% was accepted. The data analyzes were performed in the Statistical Package for the Social Sciences (SPSS), version 22.

This study complied with the ethical and legal specifications of Resolution 466/12 of the National Health Council/Ministry of Health and was authorized by the Institutional Review Board (CEP) of INCA through report number 863,339.

RESULTS

It was interviewed 348 patients, 101 young adults and 247 older adults. The characterization of these patients is presented in Table 1. It was possible to conclude that the sample was formed, in its majority by married, Caucasian males, middle level education, tumors at the colon, moderately differentiated in staging III. There was no difference of these characteristics among adults and older adults patients.

About the symptoms, among the 32 investigated analyzed by MSAS-BR, the most prevalent symptoms were weight loss, pain, dry mouth and concerns. The less prevalent were mouth bruises, difficulty to concentrate

Table 1. Clinical and demographical characteristics of the study sample (n=348)

Variables	Age				p value
	Young adults (<60 years) (n=101)		Older adults (60 years and more) (n=247)		
	n	%	n	%	
Gender					
Male	56	54.99	137	55.51	0.98
Female	45	45.01	110	44.49	
Marital Status					
Single	28	28.10	47	18.90	0.18
Married	61	60.30	165	66.60	
Widower	12	11.40	36	14.50	
Race					
Caucasian	62	60.90	157	63.40	0.36
Black/Brown	39	39.10	90	36.60	
Education					
Elementary	35	35.00	96	39.00	0.29
Middle	49	49.00	126	51.00	
University	16	16.00	25	10.00	
Tumor differentiation					
Well differentiated	9	8.55	22	8.86	0.45
Moderately differentiated	57	56.42	156	63.13	
Poorly differentiated	35	35.03	69	28.00	
Staging					
Stages I/II	48	47.66	109	44.08	0.56
Stages III/IV	53	52.34	138	55.92	
Location					
Colon	58	57.43	156	63.30	0.32
Rectum	43	42.57	91	36.70	
Metastasis					
Yes	41	41.00	96	38.70	0.38
No	60	59.00	151	61.30	

and swallow (Table 2). Overall, for most part of the symptoms, there was no difference in the occurrence among the younger and older adults. However, there was statistical significance for pain ($p=0.033$), nervousness ($p = 0.013$), feeling drowsy ($p = 0.033$) sadness ($p = 0.003$), problems with sexual arousal or sexual activity ($p=0.014$), loss of appetite ($p=0.028$), irritation ($p=0.013$), change in the way food taste ($p = 0.042$), hair loss ($p=0.002$) and “I don't look the same” ($p<0.001$).

DISCUSSION

The symptomatic burden of the disease and to cancer treatment differs according to the age range where it occurs

and, for many times, this difference is neglected because of the care provided, resulting in a dismal promotion of the quality of life of these patients⁹. It was observed that, in what concerns the difference in the age ranges investigated, when there were differences, there are clear complaints of psychic nature in older adults patients when compared to younger ones. Part of this is explained by the fact that older adults bring with them a higher load of previous diseases which creates fear of death because of thoughts of end of life. About this, Rao et al.¹⁰, when comparing patients with cancer and patients with chronic diseases without cancer in relation to a group control of healthy people, showed that patients with cancer and patients with chronic diseases had increased risk of presenting

Table 2. Description of the symptoms in patients with colorectal cancer according to the age-range (n=348)

Item	Young Adults				Older adults				p value
	Yes		No		Yes		No		
	n	%	n	%	n	%	n	%	
Difficulty concentrating	6	5.94	95	94.06	15	6.07	232	93.93	0.663
Pain	61	60.40	40	39.60	136	55.06	111	44.94	0.033
Lack of energy	48	47.52	53	52.48	117	47.37	130	52.63	0.979
Cough	12	11.88	89	88.12	28	11.34	219	88.66	0.885
Nervousness	32	31.68	69	68.32	73	29.55	174	70.45	0.013
Dry mouth	54	53.47	47	46.53	132	53.44	115	46.56	0.997
Nausea	45	44.55	56	55.45	110	44.53	137	55.47	0.997
Feeling drowsy	38	37.62	63	62.38	97	39.27	150	60.73	0.033
Numbness/tingling in hands and feet	21	20.79	80	79.21	51	20.65	196	79.35	0.976
Difficulty sleeping	40	39.60	61	60.40	99	40.08	148	59.92	0.934
Feeling bloated	48	47.52	53	52.48	118	47.77	129	52.23	0.966
Problems with urination	11	10.89	90	89.11	27	10.93	220	89.07	0.991
Vomiting	24	23.76	77	76.24	58	23.48	189	76.52	0.955
Shortness of breath	14	13.86	87	86.14	34	13.77	213	86.23	0.981
Diarrhea	13	12.87	88	87.13	31	12.55	216	87.45	0.935
Sadness	43	42.57	58	57.43	112	45.34	135	54.66	0.003
Sweats	12	11.88	89	88.12	29	11.74	218	88.26	0.971
Concerns	53	52.48	48	47.52	129	52.23	118	47.77	0.966
Problems with sexual interest or activity	22	21.78	79	78.22	49	19.84	198	80.16	0.014
Itching	13	12.87	88	87.13	32	12.96	215	87.04	0.983
Lack of appetite	43	42.57	58	57.43	113	45.75	134	54.25	0.028
Dizziness	20	19.80	81	80.20	50	20.24	197	79.76	0.926
Difficulty swallowing	10	9.90	91	90.10	24	9.72	223	90.28	0.958
Irritation	29	28.71	72	71.29	76	30.77	171	69.23	0.013
Mouth sores	2	1.98	99	98.02	5	2.02	242	97.98	0.979
Change in the way food tastes	22	21.78	79	78.22	58	23.48	189	76.52	0.042
Weight loss	68	67.33	33	32.67	167	67.61	80	32.39	0.959
Hair loss	17	16.83	84	83.17	37	14.98	210	85.02	0.002
Constipation	30	29.70	71	70.30	73	29.55	174	70.45	0.978
Swelling of arms or legs	26	25.74	75	74.26	63	25.51	184	74.49	0.963
"I don't look like myself"	50	49.50	51	50.50	114	46.15	133	53.85	<0.001
Skin alterations	32	31.68	69	68.32	79	31.98	168	68.02	0.956

psychologic symptoms and that, when added – cancer and chronic diseases – increase even more the risk to develop this kind of profile. Thong et al.⁹ reinforce this thesis, affirming that patients with multi-comorbidities tend to have more psychological complaints in relation to those without comorbidities.

Among the younger patients, it is observed that the physical complaints were more frequent in those with significant difference when compared to older adults.

About pain, the younger tend to be more complaintive. This is possibly due to the pain perception threshold because as result of the previous comorbidities associated and, consequently, of larger previous experiences in relation to pain, that, overall, are more associated with the older adults, make them more resilient about the self-perception of the pain than the younger⁹. It is perceived, also, that the alteration of the self-image and life style during the process of the disease can contribute for

complaints as nervousness, problems with sexual arousal or activities, hair loss and “I don’t look like myself” being more remarkable in this group, since social changes and life style have greater impact in the youngsters. This result is corroborated by Barr and Feeny¹¹, who added to the discussion the form of colorectal cancer that involves the use of colostomy bag, which usually affects negatively the self-image of the patients for being considered a “social embarrassment”¹¹.

Overall, it is noticed that the experience of a patient in face of cancer generates multiple co-occurring symptoms either psychological or organic that influence negatively the quality of life. Psychosocial factors, as age, can interfere in the complaints presented and in the symptomatic load because of the disease¹². In relation to the quality of life of these patients, studies still emphasize that, because of this comprehensive and complex concept, there are discrepancies about which age-range is more compromised because of the colorectal cancer. Consequently, the acknowledgment of specific symptoms and its frequency among the age ranges are extremely important.

CONCLUSION

The symptomatic load in face of colorectal cancer can present differences according to age, with more psychological symptoms in older adults than in younger patients, and adverse social impacts and physical symptoms influenced more younger individuals. Therefore, to individualize the treatment through symptomatologic recognition and ponder which are more susceptible according to age are relevant strategies for care management.

CONTRIBUTIONS

Silmara Fernandes Moura and Marianne Regina Silva Potengy de Mello participated of the data collection, analysis and wording of the final manuscript. Camila Drumond Muzi and Raphael Mendonça Guimarães participated of the conception of the study, analysis of the data, wording and final review of the manuscript. All the authors approved the final version for publication.

DECLARATION OF CONFLICT OF INTERESTS

There is no conflict of interests to declare.

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