Nutritional status, functional capacity and quality of life in endometrioid endometrial cancer patients

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BACKGROUND

Endometrial cancer (EC) is one of the most frequent malignant neoplasms among women in Brazil and in the world[1,2]. Obesity has been strongly associated with EC risk[1]. Although the incidence of EC is remarkable, insufficient data has addressed the impact of obesity on patients outcomes[3]. Since roughly 70% of women diagnosed with endometrioid endometrial cancer (EEC) are obese, the consequences of obesity-related diseases should be taken into account in order to implement strategies to improve survival in this population. Sedentary lifestyle and physical inactivity also seem to be relevant, and have been identified as predictors of poor prognosis in patients with different types of cancer[3,4].

AIMS

To evaluate the nutritional status, functional capacity and quality of life of patients with EEC undergoing oncological surgery.

METHODOLOGY

The present study is part of a major research project that aim to implement and evaluate the effect of a counseling program to promote healthy eating and physical activity in EEC outcomes. Patients between 20 and 69 years, referred to the Cancer Hospital II/INCA between November 2016 and May 2017 were enrolled (n=47). Clinical (comorbidities), anthropometric (weight, height and waist and hip circumferences), biochemical (fasting glucose, fasting insulin, cholesterol, HDL, LDL, triglycerides and C-reactive protein), quality of life (EORTC QLQ-C30 score and global health status) and functional capacity (Handgrip strength, 30-s chair stand test, Up and go, 6-min walk distance) data were collected. Data was recorded using the OpenClinica Enterprise program (version 3.4 2014). This project was approved by INCA's Ethics and Research Committee, under protocol Nº. 1,563,774, on May 29, 2016.

RESULTS

Table 1. Sociodemographic and clinical characteristics of endometrial cancer patients of National Cancer Institute of Brazil.

Characteristic	n(%)
Age category, y	
<60 years	24 (51.1)
≥60 years	23 (48.9)
Ethnic group	
Caucasian	29 (61.7)
Mixed	15 (31.9)
Black	2 (4.3)
Smoking	
Yes	22 (46.8)
No	25 (53.2)
Comorbidity	
Yes	28 (59.6)
No	19 (40.4)
Comorbidity type	
Hypertension	21 (44.7)
Diabetes	8 (17.0)
Dyslipidemias	6 (12.8)
Others	9 (19.1)

Table 2. Factors associated with cachexia in patients with advanced cancer treated at a Palliative Care Unit in the city of Rio de Janeiro- Brazil (n=525).

Characteristic	Adults (n=24)	Elderly (n=23)
BMI (OMS,2000)*(5) *(kg/m²)	**32.9 (±6.4)***	-
Normal weight	4 (16.7)	-
Overweight	5 (20.8)	-
Obese class I	6 (25.0)	-
Obese class II	5 (20.8)	-
Obese class III	4 (16.7)	-
BMI (OPAS,2002)*(6) *(kg/m²)	-	**30.5 (±5.9)***
Underweight	-	2 (8.7)
Normal weight	-	7 (30.4)
Overweight	-	3 (13.0)
Obese	-	11 (47.8)
Waist circumference (cm)	**97.6 (±14.1)***	**94.6 (±15.9)***
Least risk	3 (12.5)	3 (13.0)
High risk	2 (8.3)	6 (26.1)
Very high risk	18 (75.0)	13 (56.5)
Handgrip strength (kg)	**24.5 (±4.7)***	**22.1 (±5.2)***
Quartile 1	20.6	18.0
Quartile 2	24.0	22.0
Quartile 3	29.3	25.0
30-s chair stand test (repeat)	**11.1 (±2.9)***	**11.2 (±2.8)***
Quartile 1	9.0	9.0
Quartile 2	11.0	11.0
Quartile 3	12.0	14.0
Up and go (Seconds)	**8.7 (±2.5)***	**9.3 (±2.8)***
Quartile 1	7.0	7.0
Quartile 2	8.0	8.5
Quartile 3	10.0	11.3
6-min walk distance (m)	**510.8 (±107.8)***	**441.9 (±97.6)***
Quartile 1	416.0	374.6
Quartile 2	496.0	462.5
Quartile 3	593.0	537.2
Global health status	**66.6 (±25.9)***	**73.9 (±22.5)***
QLQ-C30 score	**79.7 (±17.3)***	**80.1 (±14.9)***
Biochemical tests **		
Fasting glucose (mg/dL)	**103.0 (78 - 153)**	**98.0 (85 - 145)**
Fasting insulin (uU/mL)	**17.7 (5 - 72)**	**13.18 (4 - 73)**
Cholesterol (mg/dL)	**209.0 (95 - 385)**	**216.5 (92 - 262)**
HDL (mg/dL)	**46.0 (22 - 91)**	**48.0 (21 - 92)**
LDL (mg/dL)	**132.0 (11 - 292)**	**135.0 (28 - 180)**
Triglycerides (mg/dL)	**109.5 (69 - 344)**	**119.0 (53 - 333)**
C-reactive protein (mg/dL)	**0.4 (0.1 – 3.0)**	**0.3 (0.1 – 2.4)**

BMI - Body Mass Index; QLQ-C30: Quality of Life Questionnaire-Core 30 *Mean (standard deviation)); **Median (range). Reference values: Fasting glucose: 70-90mg/dL; Fasting insulin: 2,6-24,9 uU/mL; Cholesterol: <200mg/dL; HDL: >65mg/dL; LDL: <100mg/dL; Triglycerides: <200mg/dL; C-reactive protein : <0,5mg/dL.

CONCLUSION

Preliminary data from the study showed that most patients are obese. The level of central adiposity was also high in this population, implying a very high risk for cardiovascular disease. Regarding functional capacity tests, both adult and elderly patients presented worse results compared to other studies[7,8,9]. In conclusion, an intervention directed toward the adoption of a healthy lifestyle may generate positive impacts on the health and quality of life of cancer survivors.

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