Abstract

Background: Breast cancer is the most common cancer in women worldwide. Differences in breast cancer incidence suggest a significant role of environmental factors in the aetiology: obesity, central adiposity, excess body fat and some dietary factors have been suggested as risk factors. This pilot study aimed to analyse the pattern of nutritional status, body fat, and the usual dietary intake among women diagnosed with breast cancer, consecutively referred to the Radiotherapy Department of the University Hospital Santa Maria. Patients and methods: Throughout 2006, 71 consecutive women with breast cancer were included. Evaluations: weight (kg) & height (m), determined with a SECA® floor scale + stadiometer to calculate body mass index (BMI), waist circumference, percentage body fat with bipolar hand-held bio-impedance analysis (BF-306®), Food Frequency Questionnaire validated for the Portuguese population to assess the usual dietary intake. Frequency analysis and Mann-Whitney U test were used to evaluate prevalence and associations. Results: Mean age was 60 ± 12 (36-90) years. Invasive ductal carcinoma was the most frequent histology (68%), p < 0.05. Most patients were in stage I (30%) or stage IIA (25%) of disease vs IIB (10%), IIIB (4%), IV (4%) or others (21%), p < 0.05. Regarding nutritional status, 82% were overweight/obese; 89% of patients had a %body fat mass above the maximum limit of 30% vs only 8 (11%) with %body fat within normal range (p < 0.002); 62% pts had a waist circumference > 88 cm (prevalence analysis: p < 0.04), and 61% of pts had gained weight after diagnosis. Univariate analysis did not show any association between histology, BMI, %body fat and waist circumference; by multivariate analysis there was an association between higher BMI, %body fat & aggressive histologies (p < 0.005). Food frequency analysis showed a low intake of vegetables and wholegrain cereals rich in complex carbohydrates (sources of fibre and phytochemicals), of fatty fish & nuts, primary sources of n-3 PUFA’s and a high intake of saturated fat; more aggressive histologies were correlated with low intake of green leafy vegetables (p = 0.05) and n-3 fatty acids food sources (p = 0.01). Conclusions: Our findings show a vast prevalence & homogeneous pattern of overweight/obesity, excessive body and abdominal fat, as well as weight gain after diagnosis, combined with diets deficient in protective nutrients. Further investigation is warranted as cancer rates in Portugal continue to increase.

Keywords

Breast cancer, Diet, Obesity, Body fat, Waist circumference.