ARTIGO ORIGINAL

Climaterium, food intake and medicines

Climatério, ingestão alimentar e medicamentos

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ABSTRACT

Background: Polytherapy treatment is a common practice observed among menopausal patients. This study aimed to quantify food intake and medications in climacteric patients living in community.
Methods: Eligible patients from Climacteric Outpatient Clinic (HCFMRP/USP) were recruited. The collected data were: food intake records, age, body weight, height, levels of physical activity and medications in use.
Results: Eighty women were studied. Their age was 548 years and body mass index 307kg/m^2. They had inadequate dietary Fe, K, Mg, Ca, thiamin, pyridoxine, vitamin E, folate and fiber consumption; 62% used 3 or more medications/day among hypotensive, micronutrients and anti-depressants.
Conclusion: Climacteric women need special attention regarding nutrient intake and medication prescription.

Keywords: climacteric, multiply therapy, food consumption.

1. INTRODUCTION

The climacteric period corresponds to the phase that precedes the woman's senility. In our environment, this phase has been subject of research with multidisciplinary approaches, and it highlights the importance of attention to physical health, socio-economic, educational and food aspects[1].

This view provides the encouragement and maintenance of a healthy lifestyle including a balanced diet and physical activity. In Brazil, between 1960 and 1980 there was an increase of 204% for those aged between 35 and 60 years, compared to an increase of 116% of the population over 60 years, which justifies the importance of a multidisciplinary approach to menopause.

The multiple diseases of this period accelerate the aging process and in the case of the gastrointestinal system cause dysfunction in the salivary glands, digestion and absorption of food[2,3]. Difficulties in chewing and swallowing cause decreased appetite and food intake. If associated with poor dietary habits, it becomes a significant risk factor for numerous diseases such as cardiovascular disease, osteoporosis, obesity, breast and colon cancer.

On the other hand, the low estrogen, by itself, cause symptoms from various systems that complicate the clinical logic, and, because of it, the doctor can be forced to resort to various specialists in different areas, inducing polytherapy. Despite it is useful in the treatment of

coexisting problems, polytherapy diminishes the effectiveness of medications due to medication interactions, adverse reactions and iatrogenic[4].

Faced with these complex issues, the purpose of this study was to quantify, in menopausal women living in community, their food intake and use of medications.

2. METHODS

Prospective study with patients recruited from the Climacteric Outpatient Clinic of Hospital das Clínicas de Ribeirão Preto FMRP-USP, using the following criteria:

- aged between 35 to 65 years;
- and be regularly attended in the Clinic.

The collected data were: food history, age, weight, height, level of practiced physical activity and medications in use.

The medications in use were observed by reading the medical records of the patients. We evaluated the medications in use during the current year of the study.

The food consumption was assessed by Food Frequency Questionnaire, adapted for the Brazilian adult population[5] and validated for the studied population.

The anthropometric data, weight and height, were measured in kg and cm respectively, using Filizola with accuracy of 0.1 kg and graduated extendable rod, according to Marchini et al. (1992)[6]. Using these values, BMI (Body Mass Index) was calculated in kg/m^2.

Participants were either assessed according to their level of physical activity using the Physical Activity Questionnaire - IPAQ (International Physical Activity Questionnaire), validated by Pardini et al. (2001)[7] and they were classified as:

- Sedentary: did not realize any physical activity for at least 10 continuous minutes during the week;
- Insufficiently active: realized physical activity for at least 10 minutes per week;
- Active: realized vigorous activity ≥ 3 days / week and ≥20 minutes per session; realized moderate activity or walking ≥ 5 days / week and ≥ 30 minutes per session; or realized any summed activity (walking + moderate + vigorous) ≥5 days / week and ≥150 minutes / week;
- Very active: realized vigorous activity ≥ 5 days / week and ≥ 30 minutes per session; or vigorous activity ≥ 3 days / week and ≥ 20 minutes per session + moderate and / or walk: ≥ 5 days / week and ≥ 30 minutes per session.

Jogging, aerobics, heavy housework at home, yard or garden were considered vigorous activity. Moderate activities were bike ride and swim at normal speed, dancing, aerobics and light housework at home, yard or garden as sweeping, vacuuming and gardening.

The study was approved by the Ethics Committee of the Hospital das Clínicas de Ribeirão Preto- HCFMRP / USP and Terms of Consent were signed by the participants.

Data were analyzed using GraphPad InStat 3.0® software and Dietsys 4.0®.

3. RESULTS

Eighty five patients participated in the study. Their age ranged from 38 to 74 years with a mean of 54±8 years, weight 7217 kg, height was 150 10 cm and mean body mass index 306 kg/m^2.

Only 6% did not consume medication. Among those who used medications, 18% used two medications, 61% consumed three or more, and the greatest number of medications consumed by a patient was 8 (two hypotensive, two antidepressant, one diuretic, one micronutrient supplement, one for gout and one antacid).

Among the most frequently used medications, hypotensive (47%), micronutrient supplements (44%), antidepressants (31%), and antacids could be highlighted (18%). The medicines were used by less than 10% of patients (Table 1).

Nutrients like iron, potassium, magnesium, calcium, thiamine, pyridoxine, vitamin E, folate and fiber, were consumed below the recommended at least by 70% of the population (Table 2).

Among the micronutrients, attention should be given to insufficient intake of potassium, magnesium, zinc, iron and calcium (Figure 1, 2 and 3), and the vitamins E, niacin and folate.

Regarding the level of physical activity, ten patients were classified as very active (12%), sixty one as active (72%), nine insufficiently active (11%) and three sedentary (3.5%).

4. DISCUSSION

The present study showed that participants consumed a large number of medications. It could be related to poor habits and unhealthy lifestyle when young. Because the medications possibly present undesirable side effects and interfere with the absorption and utilization of nutrients, this population group deserves a closer look by health professionals.

Regarding nutritional status and food intake, we noticed the high prevalence of overweight and obesity. Among the various risk factors for weight gain, we highlighted the drop in hormone levels that reorganize the distribution of adipose tissue (abdominal obesity)[8,9]. Regarding food intake, this study showed an inadequacy in 53% of patients. The nutrients evaluated were below the recommendation by the Dietary Reference Intakes[10].

Minerals like potassium, magnesium, calcium, iron and zinc presented low intake. Between vitamins, niacin, vitamin E, thiamin and folate were below the

recommendation. The low ingested values could be related to various impairments, including: decreased efficiency of the immune system, increased formation of free radicals and anemia among others. The fiber intake was also inadequate which may lead to a reduction of intestinal transit.

On the other hand, the level of physical activity showed more than 80% of the population practiced some type of activity, a fact that agrees with those of Robinson & Robinson (1990)[11], which says there is a tendency to regular physical activity with aging, while disputing the results of Oliveira & Marchini (1998)[1], which stated that menopausal women tend to move less. Regarding the discrepancies described above and, to our knowledge, there are not many reports in the area, which justifies the continuation of our studies, since physical activity plays an important role in life expectancy.

Considering all the aspects observed in this work, the multidisciplinary treatment is necessary to climacteric women, which allows the prevention of various diseases, reduction of the risk for developing others, an accurate determination of the causes for inadequate nutrition, and can contribute to the effectiveness of drug treatment. Especially the dietitian can estimate accurately dietary intake, detect possible errors in nutrient and energy consumption, help to select better dietary choices and can guide for ensuring a healthy lifestyle.

In this sense, we are led to interpret that, among the various groups of medications listed, certainly some have contributed to the spoliation of micronutrients as well as for the accumulation of other, revealing that the nutritional advice becomes indispensable in this period.

5. CONCLUSION

We conclude that the patients sent and attended in our service have been using a large number of medications and have been presenting poor dietary habits. Our results advise that during the climacteric period it is crucial to switch the curative approach to a preventive multidisciplinar one.

6. ACKNOWLEDGMENTS

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Table 1. Percentage of drug users by the medication group

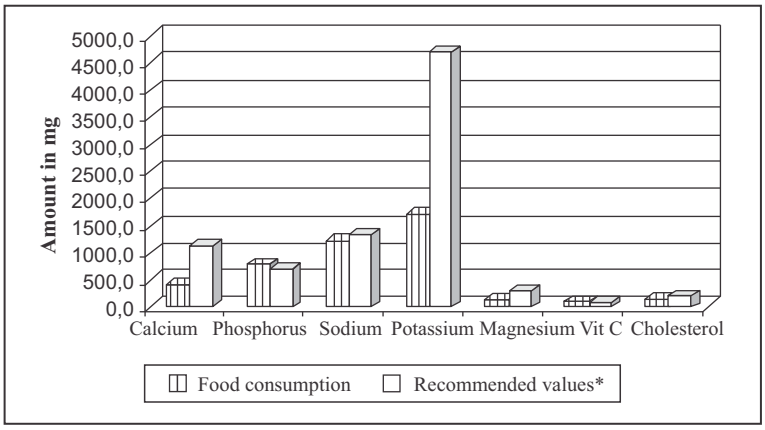
Medication group	Percentage users (%)	Medication group	Percentage users (%)
Hypotensive	47	Antithyroid medications	1
Micronutrients	44	Muscle relaxants	2
Antidepressants	31	Anti - inflammatory	5
Diuretics	18	Anticancer medications	5
Antiacids	18	Vasodilators	4
Anticoagulants	9	Cardiotonics	2
Anti - hyperlipidemic	8	Prolactin blockers	1
Hipoglycemic	7	Analgesics	1
Hormonal therapy	7	Antibiotics	1
Estrogenic theraphy	4	Antiemetics	2
Thyroid hormone	9	Anti - elipectics	5
Antiresorptive	5	Against headaches	1
Bronchodilators	2	Muscular astheni	1
Treatment of gout	1		

Table 2. Food intake of patients according to the Food Frequency Questionnaire

Nutrients	Median±SD
Energy intake (kcal/d)	1378±644
Calcium (mg/d)	423±323
Phosphorus (mg/d)	783±453
Iron (mg/d)	8±5
Sodium (mg/d)	1234±953
Potassium (mg/d)	1725±911
Zinc (mg/d)	6±7
Magnesium (mg/d)	132±69
Vitamin A (gRE/d)	908±635
Thiamine (mg/d)	0,8±0,5
Riboflavin (mg/d)	1,0±0,6
Niacin (mg/d)	10±6
Pyridoxine (mg/d)	1,1±0,6
Vitamin C (mg/d)	99±723
Vitamin E (mg TE/d)	5,3±2,2
Folate (g/d)	138±69
Saturated fat (g/d)	13±10
Cholesterol (mg/d)	147±107
Fiber (g/d)	11±6
Protein (% TEV/d)*	16±5
Total fat (% TEV/d)*	32±6
Carbohydrate (% TEV/d)*	53±8

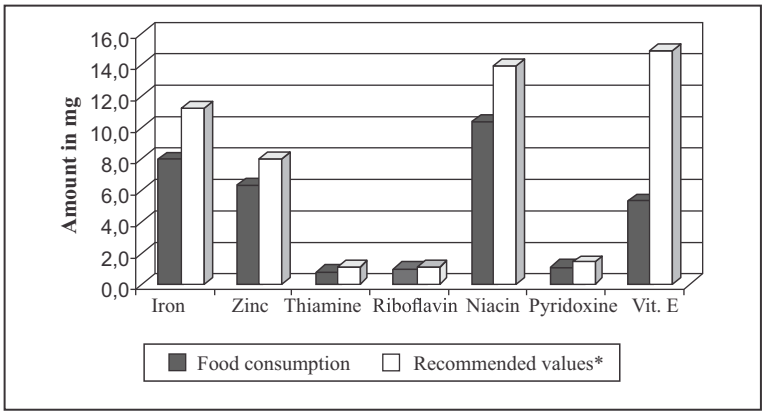
*Percentage of nutrient in relation to the total energy value (TEV) consumed during the day.

Figure 1. Sample values of dietary intake and recommendations for calcium, phosphorus, sodium, potassium, magnesium, vitamin C and cholesterol for women aged between 38 to 74 years



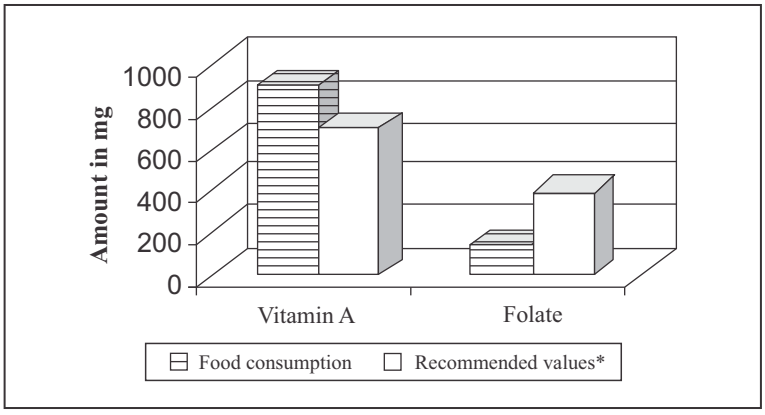
* Accordiong to RDA (Recommended Dietary Allowances) and AI (Average Intake)

Figure 2. Sample values of dietary intake and recommendations for iron, zinc, thiamine, riboflavin, niacin, pyridoxine and vitamin E for women aged between 38 to 74 years



* Accordiong to RDA (Recommended Dietary Allowances) and AI (Average Intake)

Figure 3. Sample values of dietary intake and recommendations for vitamin A and folate for women aged between 38 to 74 years



* Accordiong to RDA (Recommended Dietary Allowances) and AI (Average Intake)