35 - RELATIONSHIP BETWEEN THE PREVALENCE OF METABOLIC SYNDROME AND NON-PHARMACOLOGICAL TREATMENT: PHYSICAL EXERCISE AND FOOD PROFILE

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INTRODUCTION

The increasing prevalence of metabolic syndrome (MS) is emerging as a major public health problems in the world, since it is an important risk factor especially for type II diabetes, cardiovascular disease, and also for many types of cancer (Galisteo; DUARTE, Zarzuela, 2008).

Metabolic syndrome (MS) is a set of metabolic changes that are associated with primary disturbances in adipose tissue. In genetically susceptible individuals occurs an increase of the accumulation of body fat, especially visceral, that comes from physical inactivity and excess calorie intake. The disorders of metabolic syndrome is defined as the increase in waist circumference, decreased serum high density lipoprotein, and increased serum levels of triglycerides, hypertension and insulin resistance, besides abnormalities in prothrombotic state and proinflammatory. However, changes in lifestyle such as smoking cessation, regular physical activity and eating a balanced diet, contributes to a better control of the disease, preventing its complications and improving quality of life (Santos et al, 2006; POTENZA; MECHANICK, 2009).

Physical inactivity and low fitness level are considered risk factors for premature mortality as important as smoking, dyslipidemia and hypertension. Epidemiological studies have shown a strong link between physical inactivity and the presence of cardiovascular risk factors like hypertension, insulin resistance, diabetes, dyslipidemia and obesity. In the other hand, regular physical activity has been recommended for the prevention and treatment of cardiovascular disease, its risk factors, and other chronic diseases. Since the metabolic syndrome characterized by the clustering of cardiovascular risk factors, epidemiological and clinical studies have shown that regular physical activity is an important factor for the prevention and treatment of this disease (CIOLAC; GUIMARÃES, 2004).

Although the prevalence of MS has been studied in several populations, data concerning the correlation between non-pharmacological treatment and the prevalence of individuals with MS are scarce. This present study intends to investigate the prevalence of metabolic syndrome and the relation of non-pharmacological treatment in patients in the Outpatient Nutrition, University Hospital Lauro Wanderley (HULW), Federal University of Paraíba (UFPB).

2 METHODOLOGY
2.1 STUDY DESIGN
This is an observational epidemiological study and cross-sectional descriptive.

2.2 SUBJECT OF STUDY
It was randomly included, patients treated at University Hospital Lauro Wanderley from Federal University of Paraíba - João Pessoa in the period between November and December 2009, comprising a sample of 62 patients aged between 28 and 58 years (mean age 39, 58 ± 12.57 years), 12 males (38.17 ± 11.88 years) and 50 females (40.40 ± 13.18 years).

The study excluded patients who had insufficient data to complete the questionnaires.

2.3 DATA COLLECTION
Data collection took place at the Outpatient Nutrition of the University Hospital Lauro Wanderley (HULW) by nutrition professionals and fitness trainers previously trained. The patients were given the term of informed consent, which ensures the autonomy, anonymity and non-malfeasance on the part of the study. This present study followed the requirements of Resolution 196/96 of the National Health Ministry of Health for studies in humans. The article presents a semi-structured questionnaire about their clinical history, evaluation of recent biochemical exams (fasting glucose, HDL-C and triglycerides), anthropometric measurements (weight, height and waist circumference) and blood pressure measurement. It was made the 24-hour recall and food frequency questionnaire for assessing the nutritional profile

For diagnosis of metabolic syndrome, the data were interpreted according to the First Brazilian Guideline for Diagnosis and Treatment of Metabolic Syndrome, which has adopted the full set by National Cholesterol Education Program's Adult Treatment Panel III (NCEPT-ATP III, 2002), whose criterias require the finding of three or more of the following components: waist circumference for men> 102 cm and women> 88 cm; Triglycerides   150 mg / dL, HDL cholesterol <40 mg / dL (men) and <50 mg / dL (women); Pressure systolic   130 mmHg and diastolic blood pressure   85 mmHg and / or use of antihypertensives and fasting glucose   110 mg / dL and / or use of hypoglycemic agents.

Body weight was measured with an anthropometric scale electric MIC 200 PPA, with a capacity of 200 kg and precision of 50g.To measure the height, we used a metal rod of the anthropometric scale, which has a length of 2 m fractions of 0.5 cm. Waist circumference was measured with a tape measure mark Sany. For blood pressure measurement was used indirect method and auscultatory aneroid sphygmomanometer.

The Body Mass Index (BMI) to assess the nutritional status was done according to what is advocated by the World Health Organization (WHO, 1997) which has the following cutoff points: <18.5 kg/m2 (Thinness) , 18.5 to 24.9 kg/m2 (Eutrophic) 25.0 to 29.9 kg/m2 (overweight) and> 30.0 kg/m2 (obesity). For analysis of food macronutrient profile were followed the recommendations of the Dietary Reference Intakes for Macronutrients (FOOD AND NUTRITION, 2010) for the age group of study participants: Carbohydrates (45-65%), proteins (10-35%) and fats Total (20-35%).
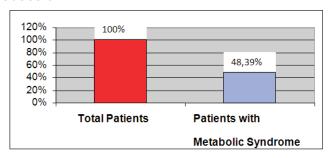
2.4 STATISTICAL ANALYSIS
The data were computed in a program of Electronic Database (EPIINFO 2002). After typing, data were exported to SPSS 15.0 program, where it performed the statistical analysis.

In statistical analysis, descriptive methods were used (percentages and averages) for each answer found. Percentages are presented with only one decimal place, which can exceed values of 100% because of the possibility of more
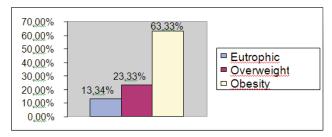
than one answer allowed. For categorical variables we used the chi-square test. To determine the factors of association was considered statistically significant $p < 0.05$ and confidence interval of 95%.
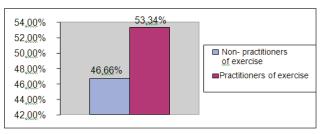
3 RESULTS AND DISCUSSION

Graph 1 - Prevalence of Metabolic Syndrome in general patients in the Outpatient nutrition HULW in the period of data collection, according NCEPT-ATP III, 2002.

Based on the criteria recommended by National Cholesterol Education Program's Adult Treatment Panel III (NCEPT-ATP III, 2002) from 62 patients attending the outpatient clinic of nutrition in the period of data collection, 30 of them were diagnosed with metabolic syndrome (MS) representing an overall prevalence of 48.39%. This result is similar to what was found in the study made by Oliveira, Souza Lima (2006), in semi-arid region that has detected an overall prevalence of MS by 30%.
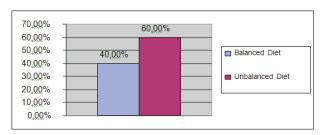

GRAPHIC-2: Prevalence of nutritional status of the patients with metabolic syndrome studied, according to WHO (1997).

Graphic 2 presents the nutritional status of the patients with metabolic syndrome of the research, according to the recommendations by the World Health Organization (1997). It was shown that 13.34% (4) of the patients presented themselves eutrophic, 23.33% (7) overweight, and 63.33% (19) were obese, which agrees with the study made by Rezend et al. (2006) which was found a prevalence of overweight and obesity of 42.5% and 24.5% respectively.

GRAPHIC-3: Prevalence of non-pharmacological treatment (physical exercise) from patients with metabolic syndrome.

According to graphic 3, 53.34% of patients diagnosed with metabolic syndrome were physically active. The physical activities reported were: walking 15 minutes a day and weight training 2 times a week. Doro et al. (2006) demonstrated in their study that the majority of participants reported practicing activities mild or moderate (81.2% men and 86.6% women). Relating to the nutritional status, it was found that the percentage of practitioners of exercise in the study (53.34%) represented: all eutrophics (13.34%), 4 (13.34%) from the patients with overweight and 8 (26.66%) obese. Rezende et al. (2006) confirmed that physical inactivity as a risk factor for obesity, which was observed about 60% of obese patients with metabolic syndrome were sedentary.

GRAPHIC-4: Profile of Food Metabolic syndrome according to the recommendations of the DRIS (2010).

As Graphic 4 shows, analyzing the nutritional profile of patients with metabolic syndrome study according to the recommendations of the Dietary Reference Intakes for Macronutrients (FOOD AND NUTRITION, 2010) from the 24-hour recall and food frequency questionnaire, it was found that 60% (18) presented an unbalanced diet, dominated the consumption of foods rich in carbohydrates and total fats, especially saturated. Cury et al. (2008) in their study verifying the association between dietary intake and metabolic syndrome showed a predominance of foods high in fat, cholesterol and simple carbohydrates for patients with this pathology.

4 CONCLUSION

The prevalence of metabolic syndrome in this present study was higher in females. As for non-pharmacological treatment, the vast majority of patients used a balanced diet and the remaining diet combined with physical exercise.

The body mass index above the recommended in most patients, even with the change in lifestyle may be due to the time for changes in eating habits and physical practice.

Thus, it becomes necessary guidance and intensive monitoring on the importance of continued non-pharmacological treatment, since over time the human body goes through several anatomical and functional changes that may exacerbate existing pathologies in these patients.

Today is practically a consensus among health professionals that the adoption of healthy lifestyles is a determinant factor in the success of the aging process, reducing the prevalence of chronic diseases noncommunicable like hypertension, diabetes mellitus, metabolic syndrome, and assist in maintaining the functional capacity during this phase of life.

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RELATIONSHIP BETWEEN THE PREVALENCE OF METABOLIC SYNDROME AND NON-PHARMACOLOGICAL TREATMENT: PHYSICAL EXERCISE AND FOOD PROFILE

ABSTRACT

The metabolic syndrome (MS) is a clustering of cardiovascular risk factors including diabetes, obesity, dyslipidemia and hypertension. The present study aimed to relate the prevalence of metabolic syndrome with non-pharmacological treatment in patients in the Outpatient Nutrition of the University Hospital Lauro Wanderley from Federal University of Paraíba-João Pessoa / PB. This is a cross-sectional study and descriptive. As a result, from the 62 patients treated between November-December 2009 (average age 39.58 ± 12.57 years), 30 of them had metabolic syndrome representing an overall prevalence of 48.39%. Regarding nutritional status, 13.34% (4) shown to be eutrophic, 23.33% (7) overweight, and 63.33% (19) were obese. As for non-pharmacological treatment (physical exercise and dietary profile) was found that 53.34% (16) of the patients practiced physical exercise. And when it comes to food profile of macronutrients, 60% (18) of the patients had unbalanced diet, predominating consumption of foods rich in simple carbohydrates and fats, especially saturated ones.

KEYWORDS: metabolic syndrome, diet and physical exercise.

RELATION ENTRE LA PRÉVALENCE DE SYNDROME MÉTABOLIQUE ET LE TRAITEMENT NON PHARMACOLOGIQUE: EXERCICE PHYSIQUE ET PROFIL ALIMENTAIRE

RÉSUMÉ

Le Syndrome métabolique (SM) est une agglomération de facteurs risqué cardiovasculaire qui inclut des diabètes, de l'obésité, de la dyslipidémie et de la hypertension. Cette étudea eu comme l'objectif rapporter la prévalence de syndrome métabolique avec le traitement non-pharmacologique des patients soignés dans la clinique de Nutrition de l'Hôpital Universitaire Lauro Wanderley de l'Université Fédérale de Paraíba- João Pessoa/PB. Il s'agit d'une étude de coupe transversale et descriptive. Comme des résultats, des 62 patients soignés dans la période de novembre à décembre 2009 (l'âge moyen de 39.58

± 12.57 ans), 30 ont présenté syndrome métabolique en représentant une prévalence générale de 48.39%. Par rapportl'état nutritionnel, 13,34% (4) s'est présenté des eutrophiques, 23,33% (7) avec excès de poids, et de 63,33% (19) s'est montré obèses. Par rapportau traitement non pharmacologique (exercice physique et profil alimentaire) il a été vérifié que 53,34% (16) des patients pratiquait exercice physique. Et en ce qui concerne le profil alimentaire de macronutriments, 60% (18) des patients a présenté régime déséquilibré, en prédominant la consommation d'aliments riches dans des glucides simples et les graisses, en particulier saturées.

MOTS-CLÉ: syndrome métabolique, régime et exercice physique.

RELACIÓN ENTRE LA PREVALENCIA DEL SÍNDROME METABÓLICO Y TRATAMIENTO NO FARMACOLÓGICO: EJERCICIO FÍSICO Y PERFIL DE LOS ALIMENTOS
RESUMEN

El Síndrome Metabólico (SM) es uma agrupación de factores de riesgo cardiovascular incluyendo la diabetes, la obesidad, la dislipidemia y La hipertensión. El presente estúdio fue correlacionar la prevalencia del sindome metabólico con el tratamiento no farmacológico em los pacientes en la clinica de nutrición del Hospital Universitario Lauro Wanderley de la Universidad Federal de Paraiba, João Pessoa/PB. Se trata de um estúdio transversal y descritivo. Como resultado, los 62 pacientes tratados entre noviembre y diciembre de 2009 (edad media 36,58± 12,57 años), 30 tenían síndrome metabólico que representa una prevalencia general de 48,39%. Com relación al estado nutricional, 13,34% (4) eran de peso normal, 23,33% (7), con sobrepeso y 63,33% (19) eran obesos. En cuanto al tratamiento no farmacológico (ejercicio físico y perfil de la dieta) se encontró que 53,34% (16) de los pacientes praticaban ejercicio físico. Y cuando s etrata de perfil de macronutrientes de los alimentos, el 60% (18) de los pacientes tenían una dieta desequilibrada, y el consumo predominante de alimentos ricos em hidratos de carbono simples y grasas, especialmente saturadas.

PALABRAS CLAVE: síndrome metabólico dieta y ejercicio.

RELAÇÃO ENTRE A PREVALÊNCIA DE SÍNDROME METABÓLICA E TRATAMENTO NÃO FARMACOLÓGICO: EXERCÍCIO FÍSICO E PERFIL ALIMENTAR
RESUMO

A Síndrome metabólica (SM) é uma aglomeração de fatores de risco cardiovascular que inclui diabetes, obesidade, dislipidemia e hipertensão. O presente estudo teve como objetivo relacionar a prevalência de síndrome metabólica com o tratamento não-farmacológico em pacientes atendidos no ambulatório de Nutrição do Hospital Universitário Lauro Wanderley da Universidade Federal da Paraíba- João Pessoa/PB. Trata-se de um estudo de corte transversal e descritivo. Como resultados, dos 62 pacientes atendidos no período de novembro a dezembro de 2009 (idade média de 39,58 ± 12,57 anos), 30 apresentaram síndrome metabólica representando uma prevalência geral de 48,39%. Quanto ao estado nutricional, 13,34% (4) apresentaram-se eutróficos, 23,33% (7) com excesso de peso, e 63,33% (19) mostraram-se obesos. Quanto ao tratamento não farmacológico (exercício físico e perfil alimentar) foi verificado que 53,34% (16) dos pacientes praticavam exercício físico. E no que se refere ao perfil alimentar de macronutrientes, 60% (18) dos pacientes apresentaram dieta desequilibrada, predominando o consumo de alimentos ricos em carboidratos simples e gorduras, em especial as saturadas.

PALAVRAS-CHAVE: síndrome metabólica, dieta e exercício físico