52 - ANALYSIS OF RISK FACTORS FOR DEVELOPMENT OF CARDIOVASCULAR DISEASES OF MEN GOER OF BEIRA MAR AVENUE OF FORTALEZA

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INTRODUCTION

The Brazilian Society of Cardiology emphasizes that the life expectancy of Brazilians has grown over the past ten years, however, is seen much more focus on the emergence of cardiovascular disease (CVD) (II DIRETRIZ BRASILEIRA DE CARDIOPATIA GRAVE, 2006). Among the most common can highlight the coronary heart disease, cerebrovascular disease, hypertension, heart failure and rheumatic heart disease (ORGANIZAÇÃO PAN-AMERICANA DE SAÚDE, 2003). Despite the slight downward trend in deaths, dysfunctions associated with the cardiovascular system are a major cause of morbidity and mortality in industrialized countries (GUEDES et al, 2006).

In Brazil, CVD accounts for 33% of deaths with known causes. Furthermore, these diseases were the leading cause of hospitalization in the public sector, between 1996 and 1999 and accounted for 17% of admissions of people aged between 40 and 59 years and 29% of those with 60 or more years (PASSOS et al, 2006). This situation represents a major problem for public health and has a considerable economic spending in the treatment of CVD. Azambuja et al (2008) estimate that in 2004, cases of severe CVD cost an expense of R $ 11.2 billion for the health system and from $ 2.57 billion for social security, creating a potential impact on the Brazilian economy.

The characteristics of risk factors for CVD are traditionally identified as biological, such as age, sex and family history, body fat, lipid and lipoprotein levels and blood pressure. But there are other factors of great importance, but are behavioral, such as diet, physical inactivity and smoking (GUEDES e GUEDES, 2006; MCARDLE, KATCH e KATCH, 2007).

The growing incidence of CVD has increased the interest on strategies for prevention and treatment of CVD, this requires knowledge and consequent softening of the risk factors mentioned above. As a simultaneous approach of nutrition and physical activity is important, as it covers most of the changes in lifestyle necessary for the prevention and control of cardiovascular disease (RIQUE, 2002).

Because it is a pleasant and conducive to physical activity, the pavement of Beira Mar Avenue in Fortaleza is frequented by fortalezenses and individuals from all over Brazil and the world, where many go walking, jogging, cycling or just to stroll. Thus this study aims to analyze the risk factors for cardiovascular disease in men attending the sidewalk of Beira Mar Avenue in Fortaleza.

MATERIAL AND METHODS

This study was approved by the Ethics Committee of the University of Fortaleza - UNIFOR and construed in accordance with the rules of the law 196/96 that regulates research involving human subjects. It is characterized as a descriptive and exploratory cross-sectional.

The sample consisted of 144 men aged 16 to 82 years who attend the sidewalk of Beira Mar Avenue in Fortaleza, either for physical activity and leisure travelers.

The instrument used was a structured interview that included a history of exercise and health history and family life. Also measurements were made (WC in cm) with a cloth tape measure, body mass (kg) and height (cm) through a balance scale label, following standardization (McARDLE, KATCH, KATCH, 2007). Data were collected by the researchers of this study.

For data analysis of risk factors were recorded: age (> 45 years), body mass index (BMI> 25 kg / m²) and waist circumference, moderate risk (CC 94-102 cm) and high risk (WC> 102 cm) (WORLD HEALTH ORGANIZATION, 1998). Risk factors such as sedentary lifestyle, smoking, hypertension, high total cholesterol and a history of hypertension and cardiovascular diseases were rated by a structured interview. We only considered physically active individuals who engaged in physical activity three or more times per week for at least six months. The ethnic factor has not been verified. We used descriptive statistics to determine the arithmetic mean, standard deviation, minimum (lowest value), maximum (highest value) and percentage (relative frequency).

RESULTS AND DISCUSSION

The characteristics of men who attended the sidewalk of Beira Mar Avenue in Fortaleza, according with age (years), body mass (kg) and height (cm) is described in Table I, where we observed the results using descriptive statistics (average, lower value and higher standard deviation).

Table 1 - Sample characteristics by age, body mass, height and BMI

N=144	Age (years)	BM (Kg)	Height (cm)	BMI (kg/m^2)
Mean	44,2	74,4	170,1	25,7
SD	16,2	11,8	7,1	3,9
Minimum	16,0	49,0	147,0	18,7
Maximum	82,0	117,4	186,0	39,2

Roveda et al (2003), indicates that one of the outcomes of cardiovascular disease is heart failure, which consists of a reduction in pumping capacity and maximum heart rate reduced, where physical exercise is an important tool used in both prevention and the rehabilitation of these individuals.

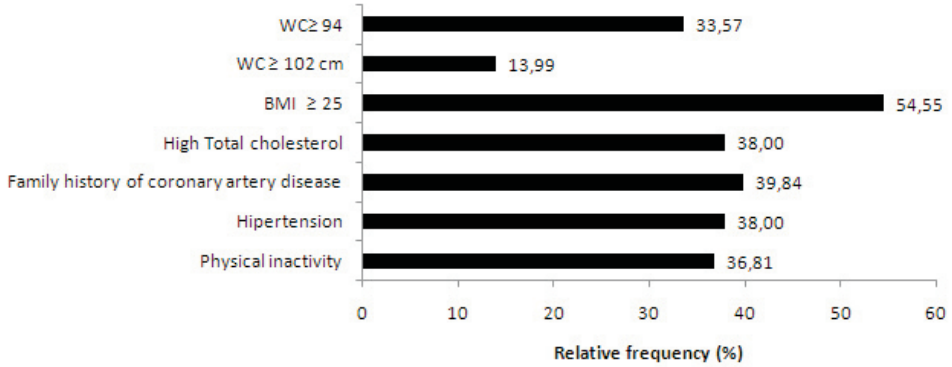
The determination and knowledge of risk factors in a given community are essential to the planning of strategies that

suit the action of an intervention in which targets a real decrease in the incidence and prevalence of CVD.

Studies have been consistent in reporting the circumference of waist circumference (WC), named one of the best anthropometric measure that correlates to the amount of fat, particularly visceral fat (Olinto et al, 2006).

The prevalence of cardiovascular risk factors is described in Figure 1. The World Health Organization (1998) provides some level of waist circumference to determine abdominal fat in men, abdominal obesity was separated into DC 94 and 102 cm as level 1 and WC> 102 cm as level 2. As can be seen, 33.57% of the sample can be classified as level 1 in cardiovascular risk and about 14% in the second level of risk.

Figure 1 - Prevalence of risk factors for CVD in the sidewalk goers Beira Mar Av. in Fortaleza



The determination of overweight and obesity in general populations is one of the impact factors related diseases and chronic degenerative diseases. Body mass index (BMI) can be correlated with these diseases and one of the main risk factors for cardiovascular disease (PITANGA, 2001; FERNANDES FILHO, 2002). The World Health Organization (WHO) considered the value of BMI = 25 kg / m² and maximum parameters for a healthy individual. (PITANGA, 2001).

However, most men in this study (54.55%) the body mass index is above normal. Ortiz and Zanetti (2001) also observed a prevalence of 51.5% of body mass index above the desirable level in men of a higher education institution.

We can see that 38% of the sample said they would be with high total cholesterol. Changes in lipid profile are an important risk factor for developing cardiovascular diseases such as Acute Myocardial Infarction (LERARIO et al, 2005, Coelho et al, 2005; POLANCZYK, 2005). Another alarming fact is that over a third of the sample (38%) had hypertension. According Bortolotto (2007), hypertension is a major risk in the prevalence of cardiovascular diseases, especially in the involvement of stroke, coronary events and peripheral arterial disease.

Family history, primarily related to genetic characteristics, gives a greater chance of occurrence of CVD, according to studies conducted in São Paulo and abroad (INTERHEART), where cardiovascular risk was increased by 2.33 and 1.5 times, respectively (POLANCZYK, 2005). Thus justifying the importance of considering the genetic factor as something of relevance. In this sample, 30.89% had family history of CVD.

A sedentary lifestyle is closely linked to the onset of CVD, since direct influence on most risk factors for CVD. Sampling is then the need for physical exercise in prevention and control of CVD (RIQUE, 2002). However we see in Figure 1 that 36.81% of the sample were considered sedentary according to the parameters set. According to Rique (2002), exercise with aerobic feature regulates the lipid profile of long-acting in front of cholesterol concentrations of high and low density, as well as triglycerides, which are directly related to the development of coronary artery disease.

Exercise also reduces the effect of hypertension by reducing serum catecholamine levels, peripheral vascular resistance and heart rate, controls diabetes mellitus by increasing glucose uptake during submaximal aerobic exercise (60% to 70% of Vo2max), help to control obesity along with improved eating habits, and improve the psychosocial aspects, such as stress. Body composition can be used as a factor in identification, comparison and development of a possible CVD, since most of these bodily changes is given by the elimination of intra-abdominal fat and subcutaneous (JESUS, 2008; RIQUE, 2002).

According to the Guidelines for Cardiac Rehabilitation proposed by the Brazilian Society of Cardiology, physical exercises accompanied by educational initiatives for change in lifestyle should be emphasized in cardiac rehabilitation, for both aerobic and resistance exercises cause several physiological adaptations that reduce cardiovascular risks (SBC, 2005).

There is consensus in the American college of Sports Medicine that exercise performed frequently at least 3 times a week, intensity of 40-85% of VO2 max and 55-90% of HRmax (can be varied according to the degree of supervision and the perceived level of risk patients) and duration of 30-40 minutes per training session, many benefits in patients with coronary artery disease, improving functional capacity and reducing them presented clinical symptoms (ACSM, 1994).

In addition to exercise, proper diet also contributes to the treatment and prevention of cardiovascular risks. In a study conducted at the Federal University of São Paulo, there was a 2% loss of weight in patients undergoing specific diet, where they observed a reduction in blood pressure, triglycerides, total cholesterol and low density, indicating the importance of dietary education in combat CVD (ALVAREZ, 2009).

CONCLUSION

We conclude that men who attend the sidewalk of Beira Mar Avenue present risk factors of developing CVD (central obesity, body mass index above the desirable level, sedentary lifestyle, high cholesterol and hypertension).

It highlights the importance of undertaking a dietary education and social research on cardiovascular risks and their causes, physical exercise at least 3 times a week and low to moderate intensity (55-90% HRmax) at least thirty minutes.

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ANALYSIS OF RISK FACTORS FOR DEVELOPMENT OF CARDIOVASCULAR DISEASES OF MEN GOER OF BEIRA MAR AVENUE OF FORTALEZA

ABSTRACT

The objective of this study was to analyze the risk factors for cardiovascular disease (CVD) of men who frequent the sidewalk of Beira Mar Avenue in Fortaleza. The sample consisted of 144 men aged 16 to 82 years. The instrument used was a structured interview and measures of body mass (BM), height and waist circumference (WC). The data were analyzed using descriptive statistics (mean, standard deviation and frequency percentage). The results showed a mean age of 44.19 + 16.19 years, height (170.08 + 7.17 cm), BM (74.38 + 11.81 kg), BMI (25.73 + 3.89). Risk factors for cardiovascular diseases were WC> 94 cm (33.6%), WC> 102 (13.9%), BMI> 25 kg / m² (54.6%), high total cholesterol (38%), family history of coronary heart disease (39.9%), hypertension (38%) and physical inactivity (36.8%). It is concluded that frequent the sidewalk are at risk of CVD and require the practice of regular physical activity, preferably at least three times a week with low to moderate intensity (55-90% HRmáx) at least thirty minutes and change eating habits.

KEYWORDS: cardiovascular disease ; exercise ; risk factors

ANALYSE DES FACTEURS DE RISQUE POUR LE DÉVELOPPEMENT DE MALADIES CARDIO-VASCULAIRES DES HOMMES FREQUENTADORES L'AVENIDA BEIRA MAR FORTALEZA

SOMMAIRE

L'objectif de cette étude était d'analyser les facteurs de risque des maladies cardiovasculaires (CVD) des hommes qui fréquentent la promenade de l'avenue Beira Mar à Fortaleza. L'échantillon se composait de 144 hommes âgés de 16 à 82

ans. L'instrument utilisé est une entrevue structurée et des mesures de masse corporelle (BM), la hauteur et le tour de taille (WC). Les données ont été analysées en utilisant les statistiques descriptives (moyenne, écart type et le pourcentage de fréquence). Les résultats ont montré un âge moyen de 44,19 + 16,19 années, la hauteur (170,08 + 7,17 cm), MC (74.38 + 11.81 kg), BMI (25,73 + 3,89). Les facteurs de risque pour les maladies cardiovasculaires étaient WC> 94 cm (33,6%), CC> 102 (13,9%), l'IMC> 25 kg / m² (54,6%), le cholestérol total élevé (38%), antécédents familiaux de maladie coronarienne (39,9%), hypertension (38%) et l'inactivité physique (36,8%). Il est conclu que fréquente la promenade sont à risque de maladies cardiovasculaires et requièrent l'exercice d'une activité physique régulière, de préférence au moins trois fois par semaine avec l'intensité faible à modérée (55-90% FCmax) au moins trente minutes et le changement les habitudes alimentaires.

MOTS-CLÉS: maladies cardio-vasculaires ; l'exercice ; des facteurs de risque.

ANÁLISIS DE LOS FACTORES DE RIESGO PARA EL DESARROLLO DE ENFERMEDADES CARDIOVASCULARES DE LOS HOMBRES FREQUENTADORES LA AVENIDA BEIRA MAR FORTALEZA

RESUMEN

El objetivo de este estudio fue analizar los factores de riesgo para enfermedad cardiovascular (ECV) de los hombres que frecuentan el paseo marítimo de la Avenida Beira Mar en Fortaleza. La muestra consistió de 144 hombres de entre 16 y 82 años. El instrumento utilizado fue una entrevista estructurada y las medidas de masa corporal (MC), la altura y la circunferencia de la cintura (CC). Los datos fueron analizados utilizando estadística descriptiva (media, desviación estándar y porcentaje de frecuencia). Los resultados mostraron una media de edad de 44,19 + 16,19 años, la altura (170,08 + 7,17 cm), MC (74,38 + 11,81 kg), IMC (25,73 + 3,89). Los factores de riesgo para enfermedades cardiovasculares fueron WC> 94 cm (33,6%), CC> 102 (13,9%), IMC> 25 kg / m² (54,6%), colesterol total alto (38%), la historia familiar de enfermedad coronaria (39,9%), hipertensión (38%) y la inactividad física (36,8%). La conclusión fue que frecuentan el paseo marítimo están en riesgo de enfermedades cardiovasculares y que necesitan de una práctica de actividad física regular, de preferentemente al menos tres veces a la semana con intensidad baja a moderada (55-90% FC máx) al menos treinta minutos y el cambio en los hábitos alimentarios.

PALABRAS CLAVE: enfermedad cardiovascular ; el ejercicio ; los factores de riesgo.

ANÁLISE DOS FATORES DE RISCO PARA O DESENVOLVIMENTO DE DOENÇAS CARDIOVASCULARES DOS HOMENS FREQUENTADORES DO CALÇADÃO DA AVENIDA BEIRA MAR DE FORTALEZA

RESUMO

O objetivo deste estudo foi analisar os fatores de risco para o desenvolvimento de doenças cardiovasculares (DCV) de homens que freqüentam o calçadão da Avenida Beira Mar da cidade de Fortaleza. A amostra foi composta de 144 homens com idades entre 16 a 82 anos. O instrumento utilizado foi uma entrevista estruturada e as medidas de massa corporal (MC), estatura e circunferência da cintura (CC). Os dados foram analisados através da estatística descritiva (média, desvio padrão e freqüência percentual). Os resultados evidenciaram uma média de idade de 44,19 + 16,19 anos, estatura (170,08 + 7,17 cm), MC (74,38 + 11,81 kg), IMC (25,73 + 3,89). Os fatores de risco de doenças cardiovasculares foram CC > 94 cm (33,6 %), CC > 102 (13,9%), IMC > 25 kg/m² (54,6%), colesterol total elevado (38%), antecedentes familiares com doença coronariana (39,9%), hipertensão (38%) e inatividade física (36,8%). Conclui-se que os freqüentadores do calçadão apresentam risco de desenvolvimento de DCV e necessitam da prática de atividade física regular de preferência no mínimo três vezes por semana com intensidade baixa à moderada (55-90% FCmáx) com duração mínima de trinta minutos e mudança nos hábitos alimentares.

PALAVRAS CHAVE: doença cardiovascular ; exercício ; fatores de risco.

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