142 - RISK FACTORS FOR THE DEVELOPMENT OF HYPERTENSION IN MALE ADOLESCENTS

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INTRODUCTION

The transformations during adolescence collaborate so that the adolescent becomes more vulnerable to health risks (VIEIRA et al., 2008). Exposure to these risks, as they relate to the development of inappropriate lifestyle, makes the teen develop Chronic Noncommunicable Diseases (CND) (SOUSA et al., 2012). Cardiovascular diseases correspond to most of NCDs, with systemic arterial hypertension (SAH) the most prevalent of them (BRAZIL, 2012B).

Although hypertension has higher prevalence in adults and elderly, its manifestation at early ages is around 3% to 11% (Freitas et al., 2011). The increased incidence of hypertension in children increase reinforces the idea that it is the direct cause in adults is a direct cause in adults (CHAVES et al., 2010). To its control is necessary to combat the risk factors through the regular practice of physical activity and healthy eating, which when developed in childhood are more likely to remain throughout life (Freitas et al., 2011).

Whereas the degree of exposure of adolescents to different factors that lead to hypertension, has the general objective of this study: to investigate the risk factors for the development of hypertension in male adolescents from a public school in the city of the hinterland Paraiba. Specifically, we seek to build the socio-demographic profile of adolescent males; identify the physical activity and salt intake by adolescent males.

METHODOLOGY

This is an exploratory and descriptive, cross-sectional quantitative approach carried out in a city in the hinterland of Paraiba, developed in the State School Monsignor Constantine Vieira.

The population and the study sample are made up of male student in middle and high school, the afternoon shift, aged 12 to 17 years old complete, with a total of 47 students. After approval by the Ethics and Research School Santa Maria-PB (CAAE nº 20805713.5.0000.5180, seem nº 415.388). Were collecting data at the school, where students were approached in their classrooms. After authorization by the pairs (parent or guardian) with the signing of the consent form (ICF), the research was carried out following the ethical considerations of Resolution 466/2012 of the National Health Council involving human research.

As an instrument of data collection , we used a structured questionnaire , consisting of objective questions , which were answered by the participants themselves . Besides recording blood pressure (BP), weight , height . BP was checked whenever the right arm twice with one minute intervals between each scan and calculated the arithmetic mean , which is the value used for the analysis , based on the VI Brazilian Guidelines on Hypertension . Weight was measured on a single occasion , without fasting , through digital scale , with the participant barefoot as little clothing as possible and without the presence of accessories , like purse, wallet , among others . For height , was used a tape measure nondistensible 150 cm , wall-mounted flat surface without footer. The data were organized and tabulated in a spreadsheet program in the Microsoft Office Excell 2007 analyzed by simple descriptive measures (frequency / percentage) and measures of central tendency (mean / median).

RESULTS AND DISCUSSION

The socio-demographic profile (Table 1) showed that the 47 participants, the majority, 57.4 % (n = 27) , are aged between 16-17 years and 40.4 % (n = 19) attend the 1st year of high school. At this age, teens are more vulnerable to health risks, because they have more vigor and lust for life, with a proper schooling in relation to age , which facilitates a better understanding about health issues and preventative measures . Nascente et al. (2010) show that the prevalence of hypertension is inversely proportional to the education of the population and that this influences the state of health, especially in the cardiovascular system.

As for the performance of any work, 83% (n = 39) did not exert any work. The practice of professional activities for adolescents can interfere with health thereof since the necessity of combining the study and reduces the working time for health care illness and increases the development of the physical activity. Chehuen et al. (2011) corroborate stating that teenagers who work greatly reduce their physical activity, and as the age increases, the prevalence of inactive adolescents increases due to the need to have an income of their own.

Table 1 - Sociodemographic profile of the participants.

variable	Distribution of variables				
age	12-13 years	14-15 years	16-17 years	-	Total
F	03	17	27	-	47
%	6,4	36,2	57,4	-	100
Serie	9° year	1° year	2° year	3° year	Total
F	08	19	11	09	47
%	17,1	40,4	23,4	19,1	100
works	Yes	No	-	-	Total
F	08	39	-	-	47
%	17	83	-	-	100
race	white	Brown	black	-	Total
f	22	23	02	-	47
%	46,8	48,9	4,3	-	100

Source: Own Vision Research/2013

With regard to race, it is considered most brown, 48.9 % (n = 23). The breed is an important risk factor and non-whites deserve special attention. This assertion is supported by the III Brazilian Congress of Hypertension that highlighted a higher

prevalence of hypertension among blacks, despite settling earlier in white people and keep these pressure levels higher (VERAS ; OLIVEIRA, 2009).

Table 2 - Characteristics of participants as physical activity.

variable	Distribution of variables				
physical activity	Yes	No	-	-	Total
f	44	03	-	-	47
%	93,6	6,4	-	-	100%
type	play Ball	Walk	bodybuilder	Ball and other	Total
f	24	05	04	11	44
%	54,5	11,4	9,1	25	100%
How many times a week	Every day	3 times per week	1 time per week	-	Total
f	19	19	06	-	44
%	43,2	43,2	13,6	-	100%

Source: Own Pesquisa/2013

Of survey participants 93.6 % (n = 44) practice some physical activity. Of this total 54.5 % (n = 24) play soccer, 25 % (n = 11) play ball and perform other physical activity, 11.4% (n = 05) conducted walks and 9.1 % (n = 04) practice bodybuilding. As the frequency scored 43.2 % (n = 19) for those who perform every day and three times a week. 13.6 % (n = 06) practice once a week.

The physical activity combat sedentary lifestyles, prevents obesity and promotes benefits directly and indirectly on blood pressure and cardiovascular health. It is noteworthy in this study that almost all adolescents are physically active, with appropriate frequency needs to produce health effects, agrees with the results of Freitas et al. (2011), who found similar results.

Regarding the diet 61.7 % (n = 29) reported the use of salty foods, and these 27.6% (n = 08) add addition salt of this baking. Excess sodium is a major factor for the development of hypertension. The study showed that the consumption of foods with excess salt is high and there are still those who add to this food, besides what has been placed in the preparation. Also noteworthy is the large consumption of processed foods and processed meat, high in sodium, as well as the lack of educational measures to reduce their consumption. National estimates show a daily sodium consumption of approximately 4g of people, representing more than twice the recommended (SCHMIDT et al., 2011). Costa and Machado (2010) show that youngsters who have greater salt consumption with SBP.

Table 3 - Characteristics of participants regarding sodium

variable	Distribution of variables			
Use increased salt	yes	No	-	TOTAL
f	29	18	-	47
%	61,7	38,3	-	100%

Source: Own Pesquisa/2013

Table 4 - Evaluation of the weight and height of the participants

variable	classification			
weight	underweight	Eutrophic	Overweight/obesity	Total
f	02	37	08	47
%	4,2	78,7	17	100
height	Short stature	Normal	stature	Total
f	02	41	04	47
%	4,2	87,2	8,5	100
BMI	underweight	Eutrophic	Overweight/obesity	Total
f	03	39	05	47
%	6,4	83	10,6	100

Source: Own Pesquisa/2013

Regarding the weight development 78.7 % (n = 37) are normal weight and 17 % (n = 08) overweight. To height 87.2 % (n = 41) is normal. The body mass index - BMI 10.6% (n = 08) of participants were overweight.

Realizes that the ponder and height percentiles of the Ministry of Health provide a more accurate classification than BMI , given that it makes a real comparison between the relative age / age and weight / height , once the teen is in constant development. In this study, we found a ratio of two teenagers overweight for every 10 normal result higher than Junior Farias and Silva (2008) who identified a ratio of 1/10 and Costa et al. (2012) found that 9.0 % of surveyed adolescents with high BMI. Beck et al. (2011) argue that excess weight causes harmful effects on blood pressure, metabolism of lipids and glucose, and thus increases the risk of developing cardiovascular disease, necessitating the intervention of preventive actions in this younger group.

Table 5 - Distribution of participants when blood pressure

variable	blood pressure				
	Normal (percentile <90)	Borderline (between percentile 90 to <95)	Stage I hypertension (between 95-99 percentile)	Stage II hypertension (percentile> 99)	Total
F	22	13	03	09	47
%	46,8	27,7	6,4	19,1	100%

Source: Own Pesquisa/2013

The prevalence of hypertension in stage I and II were, respectively, 6.4% (n = 03) and 19.1% (n = 09) and 74.5% (n = 35) remained within the normal range. The frequency of 25% (n = 12) of adolescents with hypertensive values (ratio of 4/10) is worrisome and requires the adoption of educational and preventive measures. The result of this study corroborates other studies as Silva et al. (2010) whose prevalence in adolescents was 19.7%; Gomes and Alves (2010) of 17.3% and Hoffmann et al. (2010) prevalence of 21.7%.

CONCLUSION

It is noteworthy that men - teenagers, adults or the elderly - care is less than women and therefore more subject to illness. Hypertension emerged as the main risk factor for CVD, and already assumes significant values in adolescence, which translates in adults with hypertension and complications. Hence the need to establish preventive activities with schools to combat hypertension, where the focus is on physical activity and nutrition guidelines, as fighting health issues and their risk factors, including overweight/obesity. And incorporate them within the primary health care training groups with this population group that have the purpose of facilitating the development of adolescents, adults future, normotensive.

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RISK FACTORS FOR THE DEVELOPMENT OF HYPERTENSION IN MALE ADOLESCENTS

ABSTRACT

The man health care less than women, and a thinking of invulnerability they expose themselves to more risks that favors the disease, especially chronic degenerative diseases, whose main risk factor hypertension, which already has significant values in adolescence. Exploratory, descriptive and cross-sectional quantitative approach with a sample of 47 male adolescents the afternoon shift , assessed by questionnaire , measurements of weight , height and blood pressure . Objective: To investigate the risk factors for hypertension in male adolescents in the hinterland of Paraiba . The results showed that 57.4 % of adolescents are aged between 16-17 years old, 40.4 % attend the 1st year of high school , 83 % only study , 48.9 % are brown , 93.6 % practice some physical activity , 61.7 % consume too much salt , 17 % are overweight / obese and 25 % with hypertensive values. Concludes that it is necessary to establish preventive activities with schools to combat hypertension and its risk factors in a multidisciplinary activity, which promotes the development of normotensive adolescents.

KEY - WORDS: Teens, risk factors, hypertension

RÉSUMÉ

Homme soins de santé moins que les femmes, et une pensée de l'invulnérabilité sont exposés à plus de risques qui favorise la maladie, les maladies dégénératives chroniques, notamment l'hypertension, dont le principal facteur de risque, qui a déjà des valeurs significatives à l'adolescence. Exploratoire approche quantitative , descriptive et transversale auprès d'un échantillon de 47 adolescents de sexe masculin le quart d'après-midi , évaluée par un questionnaire , les mesures de poids , la hauteur et la pression artérielle. Objectif: étudier les facteurs de risque d'hypertension chez les adolescents de sexe masculin dans l'arrière-pays de Paraiba . Les résultats ont montré que 57,4 % des adolescents sont âgés de 16-17 ans, 40,4 % fréquentent la 1ère année de lycée, 83% seulement l'étude, 48,9% sont de couleur brune , pratique 93,6 % une activité physique , 61,7 % consomment trop de sel, 17% sont en surpoids / obèses et 25% avec des valeurs hypertendus. Conclut qu'il est nécessaire de mettre en place des activités de prévention dans les écoles pour lutter contre l'hypertension et ses facteurs de risque dans une activité multidisciplinaire qui favorise le développement des adolescents normotendus.

MOTS - CLES: les adolescents, les facteurs de risque, hypertension artérielle.

RESUMEM

El hombre cuida de la salud a menos que las mujeres, y un pensamiento de invulnerabilidad se exponen a más riesgos que favorecen la enfermedad, principalmente las enfermedades degenerativas crónicas, cuyo principal factor de riesgo de hipertensión arterial, que ya tiene valores significativos en la adolescencia. Enfoque exploratorio , descriptivo y transversal cuantitativo con una muestra de 47 adolescentes varones el turno de la tarde , evaluados mediante cuestionarios, mediciones de peso, estatura y presión arterial. Objetivo: Investigar los factores de riesgo de la hipertensión en los adolescentes varones en el interior de Paraíba . Los resultados mostraron que el 57,4 % de los adolescentes tienen entre 16-17 años de edad , el 40,4 % asiste a la primera año de la escuela secundaria , sólo el estudio el 83% , el 48,9 % son de color marrón , el 93,6 % de práctica algún tipo de actividad física , el 61,7 % consume demasiada sal , el 17% tienen sobrepeso / obesidad y el 25% con los valores hipertensos. Concluye que es necesario establecer las actividades preventivas con las escuelas para combatir la hipertensión y sus factores de riesgo en una actividad multidisciplinar, que promueve el desarrollo de los adolescentes normotensos.

PALABRAS - CLAVE: Adolescentes, factores de riesgo, hipertensión arterial.

FATORES DE RISCO PARA O DESENVOLVIMENTO DA HIPERTENSÃO ARTERIAL EM ADOLESCENTES DO SEXO MASCULINO

RESUMO

O homem cuida da saúde menos que as mulheres, e por um pensar de invulnerabilidade expõem-se mais aos riscos que favorece o adoecimento, principalmente as doenças crônicas degenerativas, que tem como principal fator de risco a hipertensão arterial sistêmica, que já apresenta valores significativos na adolescência. Estudo exploratório, descritivo e transversal de abordagem quantitativa, com uma amostra de 47 adolescentes do sexo masculino do turno vespertino, avaliados por questionário, mensuração de peso, estatura e pressão arterial. Objetivo: investigar os fatores de risco para hipertensão arterial em adolescentes do sexo masculino do alto sertão paraibano. Os resultados apontaram que 57,4% dos adolescentes estão na faixa etária entre 16 a 17 anos, 40,4% cursam o 1° ano do ensino médio, 83% só estudam, 48,9% são pardos, 93,6% praticam alguma atividade física, 61,7% consomem sal em excesso, 17% estão em sobrepeso/obesidade e 25% com valores hipertensivos. Conclui-se que é necessário estabelecer junto às escolas atividades preventivas de combate a hipertensão arterial, onde o foco seja a prática de atividades físicas e orientações nutricionais,como combate ao agravo e aos seus fatores de risco. E incorporar junto aos serviços de atenção primária à saúde a formação de grupos com esse contingente populacional que tenham a finalidade de favorecer o desenvolvimento de adolescentes normotensos.

PALAVRAS – CHAVES: Adolescentes, fatores de risco, hipertensão arterial