77 - NECK CIRCUMFERENCE AND RISK FACTORS FOR CARDIOVASCULAR DISEASEIN THE ELDERLY

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INTRODUCCION

Increased body fat and thus overweight and obesity is causes mainly by changes in lifestyle, such as physical inactivity and increased intake . Obesity is the accumulation offat tissue localized or generalized, caused by nutritional imbalance, associated or not withgenetic orendocrine-metabolic disorders . one of the largestpublic health problemsis a chronic disease thatis being treated as a global epidemic responsible for substantial increased morbidity and mortality, which makes ita serious public health problem in rise the latest World Alert (WHO) World Health Organization world populationis increasing significantlyas your body mass, in developedand developing countries. The datado not differ inBrazil, so it ispossible to observea clear geometric progressionin the prevalenceof obesityin recent decades and thereforeonechronic non-communicable diseases such as, diabetes, hypertension, dyslipidemiaand cardiovasculardiseasesrepresenting72% of deaths in Brazil3.

Obesity isdue to several factors such asfunctional disability, poor quality of life, serious illness, reduced life expectancy andhigher mortality . One of the mainrisk factorsfor chronicdiseasesis obesity, and even moredamaging consequencesinelderly, pathconcernthegovernment .

Population studies show that theagingof the population is due, in particular,the substantialdecline in mortalityandfertility in Brazil, as thishas causednot onlya reduction in the amount of the Brazilian population, but also a significant changein the age structurewith respectto agingand increasedlongevity.According toprojectionsby the Brazilian Instituteof Geographyand Statistics-IBGE averagelifeof Brazilianachievein 2050, 81.29 years .

This processis exciting, but at the sametimeworrying, because agingis amultifactorialprocess thatinvolvesa sequence ofphysiological changessuch as celllossand declineof theorgan. Begins theprocess ofsarcopeniaand hencemuscle strengthdecreases.Replacingthe musclesthere is aproportional increase infat, especially in the pelvic girdle andthistends to becentralized, making it more visceral , bringingnumerousdiseases such asmetabolicsyndrome andthusheart disease.

For the associationbetweenchronic diseasesandobesityanthropometricindicators are used: BMI(body mass index), WC (waist circumference), WHR(waist / hip ratio) , . It has also been suggestedin the literatureCN(neck circumference) a simple measure, which enables the identificationof overweightand obesitybeingusedandto bepositively correlatedwith changes incertain factorsof metabolic syndrome . Increased CPleads to an accumulation of fat moleculesin the wallof the carotid arteries, favoringthe development of CD(cardiovascular disease) .

Although the literature indicates important association of CP with increased cardiovascular disease, further studies are needed, especially in the elderly population, asup . Thisstudy aimed todetermine the prevalenceof obesityfrom theCNandthe risk factorsfor CDin the elderly.

MÉTHODS

Cross-sectional study, including 85 seniors between 60 and 93 years, residents of greater Vitória-ES.Were invited to participate in the study. As inclusion criteria the volunteers should be men above 60 years and exclusion were the ones who were unable to be measured and weighed. The volunteers who agreed to participate in the study were informed and understood the risks of the study and asked to sign the consent form Free Clarified in as ethical standards required by the resolution nº 196 of October 10, 1996 (National Health Council). The research project was submitted and approved by the Ethics Committee of Brazil Platform (CAAE in 16586913.7.0000.5060). All volunteers responded to anamnesis: gender, ethnicity, age, use of medications and diseases. In anthropometric assessment were measured: body weight, height, waist circumference, hip circumference and circumference of the neck.

Procedures

Body weight was measured in kilograms in Welmy brand mechanical scale with a capacity of 150 kgand100gsplit into and the height in meters, for the balance coupled with capacity of 2m, divided in to inches stadiometer. The guy kept his body erect, with arms along the body pending and heels together, wearing light clothing and barefoot. From the valuesofheight andhip circumference, we calculated the BodyAdiposityIndexby the equation:BAI(%) =HC(cm) / heightxsquare root of theheight (m) -18. Waist circumferencewasaferiawithan anthropometrictape measurewith 2min length, measured midwaybetween the iliaccrest andthe last rib, withoutclothingin the area ofmeasurement.Classificationof waist circumferenceoccurredfrom the followingvalues: <94 cm, 94-101.9cm ≥ 102cm for menHip circumference(HC) asthe mostposteriorbuttock circumferencecircumferencehomens . Hip circumference(HC) asthe mostposteriorbuttock circumference circumference .neck was measuredat the baseof the neckat the timeof thecricothyroidcartilage.In men withprominence, the CNwas measuredbelow theprominence . Regarding the classificationofneck circumference, we used thevalues<37 cm and>37 cm for menaccording to a studyby Ben-Noun et al. .

Analysis of data

Were calculated the average and standard deviation of the quantitative variables. The data was stored in the Excel software for Windows and the statistical analyses performed using the SPSS program, version 20.0. The information was analyzed at a significance level of $p \geq 0.05$, with BAI numbers versus the other variables. Being held still the correlation of Pearson, to determine the possible correlations.

RESULTS AND DISCUSSION

Three methods ofanthropometric measurements wereused to analyze theprevalence of obesityamong the elderly: BAI, CHandCN, since the combination of thesemeasurescanhelp solvesomedilemmasof the BMI. Thereis extreme difficultyin theuse of BMIin the elderly, mainly due to thefact that there isan appropriateagecutoff(The difficulty existsbecause theelderlyhavea decreasein stature, fat accumulation, body mass reductionleanas well asreducing the amount ofwater in the

body , so theBAIcomes asa greatopportunity tostudy.

The initialphysical characteristicswere 69,55±5,89 years, withbody mass 77,32±13,35kg and height 1,66±0,06m , However data can be explained according to the aging process in which body mass tends to decrease, along with stature, among other biological capabilities. However, it is not known how this process occurs .

Suriah et al.founda significantdecrease in heightof the elderlywithmoreadvanced ageas found in thestudywith a rangefrom 60 to 93yearsa trendcanbe seenin the declineingstatureamong olderseniors . Sincethe factors that contributeanswerstothisare: adecrease in thearch, flatteningof the intervertebral discsand increasedcurvature of the spine .

Table 1 presents the descriptive characteristics of elderly men in relation to age, body mass, stature, hip circumference, CW, CN and BAI and all the correlations between anthropometric variables (CW, CN, BAI) were significant ($p \leq 0.05$) as shown in the table. According to the data presented in table 1, the sample is: about CW sample is a risk factor for developing diseases such as diabetes, chronic high and cardiovascular diseases .

As forCW, there was alsoaveryhighrelationship betweenCWandCNincreased, confirming the findingsof Ben-Noun andLaor and Yang et al. . Dagenais et al. and Yusuf et al. , comparing the useof WC withcardiovascular disease, identified itas beingthe highestassociation withcardiovascular events. Thus, changes ofCWreflect themale patternof fat distributionandchanges in riskfactors for CD .

TheCWbetter reflects thecontentof visceral fatworthmentioning that, according to the studyInternational Day for theEvaluation of Abdominal Obesity – IDEA adipose tissuein this regionis anexcellent indicatorforrisk of chronicdiseases, includinghypertensionanddiabetesmellitusandmost aggravatingespeciallyin the elderly populationdue tothereduced lean bodymass, themetabolic rate, reduced physical activityand thethermogeniceffect of food . Thesedata in thisstudyare sufficiently importantforprevention,despite not havingdatapresentedin connection withthesepathologies .

RegardingtheCNsampleisobeseand frequencyof risk factorsfor cardiovascular disease. Similar findingswere foundin the studyofTibana et al. , who found an associationofCPincreasedwith hypertension, Ben-Noun andLaor com as dyslipidemias, Vasques et al. with diabetes andPreis et al. withresistanceinsulin,high blood pressure anddyslipidemia..

In relation to the BAI the sample meets obesity denoting a warning to the population of seniors belonging to the group, given the relationship that exists between high levels of body fat with the quality of life.

Despite the gradual reduction of mortality by CD in Brazil, mortality levels are still high and are similar to those seen in the countries of Eastern Europe and China, and higher than the most found in Latin American countries .

Table 1: descriptive data of elderly men in relation to age, body mass, stature, hip circumference, waist, neck and BAI.

DATA	Mínimum	Máximum	Average	Standard Desviation
AGE (years)	60,00	93,10	69,5518	5,89993
BODY MASS (kg)	43,80	114,80	77,3200	13,35771
HEIGHT (m)	1,49	1,82	1,6616	0,06084
WAIST (cm)	70,30	127,00	95,7435*	11,11300
HIP (cm)	13,80	123,80	101,3576	12,38850
BAI (%G)	12,01	42,04	29,7182*	4,53204
NECK (cm)	32,80	49,8,00	39,9129*	3,59999

*SignificanceLevel ≤0,05

CONCLUSION

The data showed that the CN, as well as the BAI and the CW can be used as a marker for estimating anthropometric cardiovascular risk. Individuals with CN may exhibit increased higher proportion of hypertension, diabetes, dyslipidemias, obesity, and change in anthropometric markers studied.

Despite the scarcity of studies on the measurement of CN as an indicator of CD, we can conclude that the CN is a simple measure to be undertaken and can, in practice, be used as a marker for relevant anthropometric, able to estimate cardiovascular risk factors.

The results of this research have shown that anthropometric indicators were highly correlated, being suitable for population studies also showed a high percentage of fat in both the IAC, which is a worrying factor for this population. Whereas if obesity were detected in all parameters, it is important to strengthen the importance of the evaluation of data bound to this epidemic. Studies with representative samples of the Brazilian population are required to verify and identify the metabolic changes, as parameters of prevention and diagnosis of obesity. It is urgent the need to develop references for anthropometric data for the elderly, especially in Brazil, where the data are still scarce.

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NECKCIRCUMFERENCEAND RISK FACTORSFORCARDIOVASCULAR DISEASEIN THE ELDERLY

ABSTRACT

Increased body fat and thus overweight and obesity is causes mainly by changes in life style, such as physical inactivity and increased food intake. In elderly Instead muscles there is aproportional increase in fat, especially in the pelvic girdleand this tends to be centralized, making it more visceral, bringing numerous diseases such as metabolic syndrome and thus heart disease. This study aimed to determine the prevalence of obesityfrom the CPandthe risk factors for CVDin the elderly. The studyiscross-sectional,including 85elderlybetween 60 and93 years, residentsof Vitoria-ES. Neck circumference, waist,hip,body mass and heightwas used. The study populationisobeseasthebody adiposityindex, neck circumferenceandwaist. The dataobtained demonstrated that CPas well asthe CCandIAC may beused as amarker foranthropometricestimatecardiovascular risk.Individuals withincreased CP may contain higher proportionsof hypertension, diabetes, dyslipidemia, obesity andchangesin the indicatorsstudied.

KEYWORDS: risk factors, cardiovascular disease, elderly

LA CIRCONFERENCE DU COUET FACTEURS DE RISQUEMALADIES CARDIOVASCULAIRESCHEZ LES PERSONNES AGEES

RESUME

Augmentation de la graissedu corpset doncsurpoids et l'obésitéestcauseprincipalementpar des changementsde mode de vie, comme l'inactivité physiqueet l'augmentation dela prise alimentaire.Dans les musclesâgéeslieuil ya uneaugmentation proportionnelle de lagraisse, en particulier dans laceinture pelvienneetcela tend àêtre centralisé, ce qui rend plusviscérale, apportant de nombreusesmaladies telles que lesyndromemétaboliqueetdoncla maladie de coeur. Cette étudevisait àdéterminerlaprévalence de l'obésitéde laCPetlesfacteurs derisque de maladies cardiovasculaireschez les personnes âgées. L'étudeest transversale, dont 85personnes âgéesentre60et93 années, les résidents deVitoria-ES. La circonférence du cou, taille, hanche, la masse corporelle et la hauteura été utilisé. La populationd'étudeest obèsecommel'indiced'adipositécorporelle, la circonférence du couet de la taille. Les données obtenuesont montré queCPainsi queleCCetIACpeuvent être utilisés commeunmarqueurderisque cardiovasculaireestimationanthropométrique. Les personnes ayantaugmentéCPpeuvent contenir desproportions plus élevées del'hypertension, le diabète, la dyslipidémie, l'obésité et les changementsdans lesindicateurs étudiés.

MOTS-CLÉS:facteurs de risque, les maladies cardiovasculaires, les personnes âgées

PERIMETRO DEL CUELLOY FACTORES DE RIESGOPARAENFERMEDAD CARDIOVASCULARENLAS PERSONAS MAYORES

RESUMEN

El aumento dela grasa corporaly por lo tantoel sobrepeso yla obesidadescausaprincipalmentepor los cambios enel estilo de vida, tales como la inactividad físicay el aumento dela ingesta de alimentos. En los músculosde edad avanzadaEn cambio, hayun aumento proporcional degrasa, especialmenteenla cintura pélvicay esto tiende aser centralizada, por lo que esmás visceral, con lo que numerosas enfermedadestales como el síndromemetabólicoy por lo tantola enfermedad cardíaca.Esteestudio tuvo como objetivodeterminar la prevalencia dela obesidadde laPCylosfactores de riesgo paralas enfermedades cardiovascularesen los ancianos. El estudioestransversal, incluyendo85ancianosentre 60 y93 años, residentes enVitoria-ES.La circunferencia del cuello, se utilizóla cintura, la cadera, la masa corporal y la altura. La población de estudioes obesocomo el índice deadiposidadcorporal, circunferencia decuello y la cintura. Los datos obtenidosdemostraron quePCasí como laPCyIACse pueden utilizar comoun marcador deriesgo cardiovascularestimaciónantropométrica. Los individuos conuna mayorPCpueden conteneruna mayor proporción dehipertensión,diabetes,dislipemia, la obesidady los cambiosenlosindicadores estudiados.

PALABRAS CLAVE: Factoresde riesgo, enfermedades cardiovasculares, ancianos

CIRCUNFERÊNCIA DO PESCOÇO E FATORES DE RISCO PARA DOENÇAS CARDIOVASCULARES EM IDOSOS

RESUMO

O aumento da gordura corporal e consequentemente o sobrepeso e a obesidade ocasiona-se principalmente pelas mudanças no estilo de vida, tais como: sedentarismo e aumento da ingesta. Nos idososEm substituição a musculatura há um aumento proporcional de gordura, principalmente na cintura pélvicae esta tende a ser centralizada, tornando mais visceral, trazendo inúmeras doenças como síndrome metabólica e consequentemente a doença cardíaca.O presente estudo teve por objetivo verificar a prevalência da obesidade a partir da CP e os fatores de risco para DCV em idosos. O estudo é transversal, incluindo 85 idosos entre 60 e 93 anos, residentes da Grande Vitória - ES. Foi utilizada circunferência do pescoço, cintura, quadril, massa corporal e estatura. A população estudada encontra-se obesa quanto ao índice de adiposidade corporal, circunferência do pescoço e da cintura. Os dados encontrados demonstraram que a CP, assim como o IAC e a CC, pode ser utilizada como marcador antropométrico para estimar risco cardiovascular. Indivíduos com CP aumentada podem apresentar maior proporção de hipertensão, diabetes, dislipidemias, obesidade e alteração nos marcadores antropométricos estudados.

PALAVRAS-CHAVE: Fatores de risco, doenças cardiovasculares, idosos