Federal University of Rio de Janeiro State

Journal of Research Fundamental Care Online

UNIRIO PPgEnfBio PPGENF

ISSN 2175-5361
DOI: 10.9789/2175-5361

RESEARCH

Medidas pressóricas, glicemia capilar, comorbidades e medicamentos autorreferidos por idosos

Pressure measures, capillary glycaemia, comorbidity and medications self-referred for elderly

Medidas pressóricas, glucemia capilar, comorbilidades y medicinas autorreferidas para personas mayores

Anna Cláudia Freire de Araújo Patrício[1] , Karoline de Lima Alves [2] , Sônia Mara Gusmão Costa [3] , Marcella Costa Souto Duarte [4] , Tatyanni Peixoto Rodrigues [5] , Michelle Salles Barros de Aguiar [6]

ABSTRACT

Objective: Investigating in elderly frequenters of a club for elderly people of João Pessoa/Paraíba, prevalence of comorbidity and use of self-referred medicines, blood pressure and capillary glycaemia, as risk factors those contribute to the appearance of cardiovascular diseases. **Method:** Study with 84 elderly, using a questionnaire composed of two parts: open-ended questions on socio-demographic variables, co-morbidities and medicines self-referred; and verification of the capillary glycaemia and blood pressure. The analysis was performed by the program SPSS 19.0. **Results**: It was observed a high prevalence of elderly with hypertension and diabetes self-referred and that the greater number of medications used are those related to the cardiovascular system. It is highlighted the portion of the study group with rates of glycaemia and high blood pressure, but are unaware of it. **Conclusion:** The data reinforce the necessity of supervision and control, rationalization, humanization and awareness by the managers and professionals working with elderly. **Descriptors:** Elderly, Medicines, Comorbidity.

RESUMO

Objetivo: Investigar em idosos frequentadores de um clube para a pessoa idosa de João Pessoa/PB, a prevalência de comorbidade e uso de medicamentos autorreferidos, pressão arterial e glicemia capilar, como fatores de risco que contribuem para o aparecimento de doenças cardiovasculares. **Método:** Estudo realizado com 84 idosos, utilizando um questionário composto de duas partes: perguntas abertas sobre variáveis sociodemográficas, comorbidades e medicamentos autorreferidos; e verificação da pressão arterial e glicemia capilar. A análise foi realizada pelo programa SPSS 19.0. **Resultados:** Observou-se alta prevalência de idosos com hipertensão e diabetes autorreferida e que o maior número de medicamentos utilizados são aqueles voltados para o sistema cardiovascular. Destaca-se parcela do grupo estudado com taxas de glicemia e pressão arterial elevada, mas desconhecem-na. **Conclusão:** Os dados reforçam a necessidade de fiscalização e controle, racionalização, conscientização e humanização por parte de gestores e profissionais que atuam com idosos. **Descritores**: Idoso, Medicamentos, Comorbidade.

RESUMEN

Objetivo: Investigar en los mayores de un club para la persona mayor de John Pessoa-Paraíba, la prevalencia de comorbilidad y el uso de medicamentos autorreferidos, la presión arterial y glucemia capilar, como factores de riesgo para el aparecimiento de enfermedades cardiovasculares. **Método:** Estudio con 84 ancianos, usando un cuestionario compuesto de dos partes: preguntas abiertas sobre las variables socio-demográficas, comorbilidades y medicamentos autorreferidos; y verificación de la glucemia capilar y la presión arterial. El análisis fue realizado por el programa SPSS 19.0. **Resultados:** Se observó una alta prevalencia de ancianos con hipertensión y diabetes autorreferida y que el alto uso de medicamentos utilizados son aquellos para el sistema cardiovascular. Se destaca una parte notable del grupo estudiado con tasas de glucosa y presión arterial elevada, pero la desconocen. **Conclusión**: Los datos refuerzan la necesidad de supervisión y control, racionalización, humanización y sensibilización por parte de directivos y profesionales que trabajan con los ancianos. **Descriptores**: Ancianos, Medicaciones, Comorbilidad.

[1] Nurse. Masters' Student of PPGENF, Federal University of Paraíba. Member of the International Group for Studies and Research in Aging and Social Representations – GIEPERS/UFPB, João Pessoa, PB, Brazil. Email: anna.freirearaujo@gmail.com [2] Karoline de Lima Alves. Nurse. Member of the International Group for Studies and Research in Aging and Social Representations – GIEPERS/UFPB, João Pessoa, PB, Brazil. Email: krol_lima_17@hotmail.com [3] Sônia Mara Gusmão Costa. Masters from PPGENF, Federal University of Paraíba. Member of the International Group for Studies and Research in Aging and Social Representations – GIEPERS/UFPB, João Pessoa, PB, Brasil. Email: soninhagusmao@gmail.com [4] Marcella Costa Souto Duarte. Nurse. Master in Nursing. Doctorship Student from PPGENF, Federal University of Paraíba, João Pessoa, PB, Brazil. Email: marcellasouto@hotmail.com [5] Tatyanni Peixoto Rodrigues. Nurse. Masters from PPGENF, Federal University of Paraíba. Member of the International Group for Studies and Research in Aging and Social Representations – GIEPERS/UFPB, João Pessoa, PB, Brazil. Email: tatchy.rodrigues@hotmail.com [6] Michelle Salles Barros de Aguiar. Industrial Chemist. Master in production engineering, Federal University of Paraíba. Statistical Coordinator of Municipal and State Development Institute – IDEME – PB. João Pessoa, PB, Brazil. Email: michelleestatistica@gmail.com.

INTRODUCTION

The aging of the population causes increasing health services challenges those currently direct to the prevention of diseases, in order to promote old age with higher quality of life and reduction of morbidities activities. Studies in Brazil indicate increased drug consumption associated with morbidities, making this practice as a method of control and decreased risk for chronic diseases.[1]

Among the most frequent diseases in the aging process are Chronic Non-communicable Diseases (NCDS)[2], cardiovascular diseases, chronic respiratory diseases, diabetes, cancer and others, including renal diseases, which together, form a set of morbidities often associated with each other, forming in serious public health problems.[3] Studies show that caring for elderly absorbs much of the resources of the NHS, especially for chronic diseases.[4]

It is known that the presence of a chronic health problem is its knowledge by the individual resulting from a previous perception or derived from medical diagnosis, is one of the strongest determinants proximal to the demand and utilization of health services. The investigations which involve the presence of self-reported diseases are recommended by the World Health Organization as a method for assessing population health.[5]

The self-reported morbidities have been used in several studies as a way to identify the prevalence of a disease, in order to draw a profile of the population with a view to prevent, promote or restore health, ie, it is a way to calculate and provide for event, influencing in determining prognosis and planning of health.[6]

Among the diseases listed by the World Health Organization (WHO) in Brazil (2007) it appears that about 72% of deaths were caused by DCNT.[7] The identification of chronic morbidity and perceived enable new means for monitoring the health state, this feature being used to create other measures, producing estimates of healthy life expectancy and quality of life.[8]

Regarding the use of medicines, a study shows that there is a specific set of these for each type of disease, and its use is responsible for the increased life expectancy of older people; however, provide the emergence of new problems due to improper or unreasonable use these medicines.[9]

The elderly tend to use more pharmaceuticals and present pharmacokinetic and pharmacodynamic characteristics that make them vulnerable to adverse effects. Knowledge of the use of drugs by geriatric population profile is fundamental for the design of strategies for rational prescription of drugs for this age group.[10]

Research to evaluate the use of medications in the elderly found that therapeutic drug classes used are those related to the cardiovascular system, as these are the leading cause of morbidity and mortality in the elderly population. The drugs for the central nervous system, analgesics and anti-inflammatories are also widely used by elderly people.[5]

Through this perspective, this study aims to investigate in elderlies frequenters of a club for elderlies in João Pessoa/Paraíba, the prevalence of comorbidity and self-reported use of medicines, blood pressure and capillary blood glucose, as risk factors those contribute to the appearance of cardiovascular diseases.

METHOD

This is a field research, descriptive, of hypothetical-deductive method approach, quantitative and cross-sectional nature. The study population comprised of 168 elderlies; thus, employed a sample calculation confidence level of 95% and an error of 8% to a sample of 84 subjects. It was calculated with the aid of Statdisk version 11.1.0 USA.

A sample of 84 elderly frequenters of a club of the Elderly in João Pessoa / Paraíba, participated in this study. The subjects were chosen at random, were aged less than 60 years old and preserved cognitive ability.

Data were obtained in two stages, the first by means of a questionnaire consisting of open-ended questions that inquired socio-demographic variables, self-reported morbidities and medications used by medical prescription or not being, and in the second step to measure the blood pressure was checked and capillary blood glucose. Data collection was conducted from January to March 2012.

The drugs cited by the study subjects were transcribed, analyzed and classified according to the Anatomical Therapeutic Chemical Classification System (ATC), recommended by the Drug Utilization Research Group (DURG) of the World Health Organization.[11]

The subjects had their blood pressure checked with an aneroid sphygmomanometer (Missouri®, Embu, São Paulo - Brazil) after remaining seated for 10 minutes. It was adopted the proposed protocol in the Brazilian Society of Cardiology, Brazilian Society of Hypertension and the Brazilian Society of Nephrology.[12]

The level of blood glucose was checked by the use of test strips in venous blood capillary (finger tip), using disposable stylets with instrumental reading glucometer Optium Xceed Medi Sense®. It was performed after eight hours of fasting. [13]

With regard to data analysis, the data were exported to the Statistical Package for Social Sciences - SPSS - version 19.0, for effect the quantitative analysis of all variables using descriptive statistics. The data are presented as mean, standard deviation, frequency and percentage. In the stage of confirmatory analysis, contingency tables were constructed for qualitative variables and applied the Chi-square test (x^2) test to identify possible association between nominal variables, using a significance level of 5%.

The research project was approved by the Ethics Committee in Research of the University Center of João Pessoa, on December 29th, 2012. All participants signed an informed consent form (ICF) as recommended in Resolution 196/96 of the National Health Council.[14]

RESULTS AND DISCUSSION

SOCIO-DEMOGRAPHIC CHARACTERIZATION OF STUDY PARTICIPANTS

The study included 84 older adults with a mean age of 68,1±7,8 years old, 86,9% (73) were female and mostly married (39,3%).

CHARACTERISTICS OF BLOOD PRESSURE, CAPILLARY BLOOD GLUCOSE, PREVALENCE OF SELF-REPORTED MORBIDITIES AND USE OF MEDICINES

Capillary glycaemia detected 123 ± 32, 7mg/dL, being classified as above the standard established 27.4% (23), while the number of diabetes self-referred corresponds to 23.8% (20); and may be associated with diabetes controlled or no prior knowledge of the disease.

Corroborating with our results, a study conducted with elderly people in Anapolis, Goiás (2010), showed that 41,3% of patients had hyperglycemia. Of these, only 31,58% had prior knowledge of hyperglycemia, while 68,42% were unaware of their blood glucose levels.[15]

It is known that there is a high prevalence of diabetes among the elderly in Brazil, and that some factors may be related to the appearance of age and increased blood glucose levels; as insufficient diet, physical inactivity, decreased lean body mass, altered secretion of insulin and resistance to glucose.[16]

Among the self-reported comorbidities as risk factors for cardiovascular diseases in Table 1 highlight them.

Table 1 - Prevalence of self-referred comorbidities in the studied elderly. João Pessoa, PB .2012 (n = 84).

SELF-REFERRED COMORBIDITY	N	%	P
Hypertension			0,383
Yes	38	45,2%	
No	46	54,8%	
TOTAL	**84**	**100%**	
Diabetes Mellitus			0,000*
Yes	20	23,8%	
No	64	76,2%	
TOTAL	**84**	**100%**	
Acute myocardial infarction			0,000*
Yes	3	3,6%	
No	81	96,4%	
TOTAL	**84**	**100%**	

Source: Of the research carried out. Values are frequencies and percentages. Chi-square test. * Indicates statistical difference between the diseases.

The most prevalent comorbidities were self-reported hypertension and diabetes. To correlate them with the age of the study subjects, we obtained p<0,05. By correlating comorbidities with the marital status of the subjects, all showed p <0,00, except hypertension.

In Brazil, NCDs are responsible for a high percentage of deaths, especially for diseases of the circulatory system, with 31,3% of deaths, neoplasms (16,3%) and diabetes (5,2%).[17]

This study showed a higher prevalence of self-reported hypertension, followed by diabetes, a study conducted in the city of Goiânia, capital city of Goiás (2005) also found similar results with a high prevalence of comorbidities above.[18]

Also corroborating with these results, a study conducted in São Paulo (2000), revealed that most of the subjects had reported hypertension associated with other diseases.[19] Also, using the same methodology, similar values were observed in a population-based cross-sectional study with older women living in the urban area of the municipality of Campinas, which found the prevalence of hypertension higher than 50%.[20]

Thus, it is clear that comorbidities identified prevail in large proportions in several regions and prevention and control of these diseases have found space, however, there is a need to conduct that is more effective in reducing high rates.

Among the reasons that may lead to non-adherence to correct treatment for hypertension, is the discrepancy between those individuals who actually have the disease from those who are suffering, but they ignore it. Research conducted in Bambuí, Minas Gerais, highlights that of the 1494 elderly participants, 919 (61,5%) were hypertensive, and 215 (23,4%) were unaware of this condition and about one third of hypertensive patients (37,1%) were not being treated for hypertension.[21]

It was observed in blood pressure measurement an average for Systolic Blood Pressure (SBP) of 128±15,6 mmHg and for Diastolic Blood Pressure (DBP) 80,7±10,6 mmHg. From these measures, 28,6 % (24) had elevated blood pressure values for SBP and 28,6 % (24) for DBP.

Considering the NCCD, the hypertension stands out with greater frequency in relation to others, and also the main risk factor for most common complications, such as stroke and myocardial infarction, constituting one of the major public health concern.[22]

Studies show the prevalence of hypertension and describe the risk factors of the disease, such as heredity, age, gender, ethnicity, education level, socio-economic status, smoking, and excessive body weight. Factors contributing to the development of cardiovascular diseases, which therefore require preventive actions and pharmacological treatments.[23]

Concerning the use of medication, 36,9% (31) of seniors reported that they do not use any medicine, 39,3% (33) use only one type of medication, 11,9% (10) and two 11,9 % (10) three drugs.

Upon statistical test Chi square correlating the presence of comorbidities using continuous drug was detected at p<0,05 for hypertension and diabetes, being interpreted as significant, while for acute myocardial infarction p=0,896.

Table 2 - Classes of medicines used by the elderly of the Club for Elderly - João Pessoa, PB, 2012. (n = 84)

Classes of medications	N	%	Age x Class of medicine (P)
Antidiabetic	6	7,1%	
Anti-hypertensive	32	38,1%	
Hypoglycemic	4	4,8%	
Analgesic	1	1,2%	*0,000
Anti-ulcers	2	2,4%	
Food Supplement	4	4,8%	
Thyroid Hormone	2	2,4%	
Hormone Replacement	2	2,4%	
TOTAL	**53**	**63,2%**	

Source: The research carried out. Values are frequencies and percentages. Chi-square test. * * Indicates significance with p < 0.05.

One aspect to be considered in this study is the higher quantity of self-reported diabetes (20) compared the use of drugs to control blood sugar (10). In addition, the capillary glucose level detected that 23 individuals be over the boundary changes. This may be associated with non-adherence to prescribed treatment, do not have a diagnosis or not present symptoms. This fact can also be linked to the high cost of drugs, difficulty in its acquisition or other means of controlling the disease.

In contrast to the data of the present study, a research done in Anapolis - GO (2010) found the prevalence of fasting hyperglycemia and diabetes prevalence reported in line with the reported use of oral hypoglycemic agents or insulin[15], unlike the present study where the quantitative diabetic recorded was higher than the percentage of seniors who used medications to control diabetes.

Among the drugs used stand out acting on the cardiovascular system, as antihypertensive and antidiabetic, just as observed in a study conducted in Porto Alegre (2005).[24] There is a statistically significant association with p=0,000 when comparing the subjects' age study with the use of drugs.

Study in Fortaleza - Ceará (2006) with older, 58.6% were using drugs and 60 (41,4%) did not. The groups most consumed drugs acting on the cardiovascular system, also presented in this research.[25]

The Brazilian Diabetes Society (2009) states that type 2 diabetes is more common and accounts for 90% of cases of the disease that is usually associated with factors such as obesity, age, diet, sedentary lifestyle, among others. In this type of diabetes is no need for oral hypoglycemic agents. One of the important factors that hinder early diagnosis, are the symptoms that are often silent, contributing to a delayed diagnosis, favoring the onset of cardiovascular and cerebral complications.[26]

The reasons for a non-treatment and/or a discontinuation of its use included difficulties in accessing medicines, reducing the prescribed dose for economic reasons and reinterpretation of the information provided by the physician, among other factors. [27] These observations are examples of how difficult of hypertension in the elderly, in the absence of an effective public health program to prevent and control the same approach.

A study performed in João Pessoa/Paraíba (2011) with elderly patients from the Family Health Units reports that as a result of the high cost of medicines, they can become inaccessible for the majority of subjects users. May be stated that the actual price is a

predictor variable for adherence to medication across the prevailing economic reality of the population studied. [23] This embarks a fundamental discussion about the use of medicines in the study subjects.

CONCLUSION

The research in question allowed evidence that the use of drugs in the elderly, does not coincide with the presence of self-reported diseases, changes in blood pressure and capillary blood glucose measurements, suggesting inadequate intake of drugs, warning of not knowing the state of health.

The study found a high prevalence of older adults with self-reported hypertension and diabetes and that the greater number of medications used are those facing the cardiovascular system. Is also noted that a portion of the group shows up with blood sugar level and high blood pressure, but unaware of it, and still others with the medical diagnosis for any comorbidity but do not relate to use of prescribed medication to control it.

In view of the foregoing, it becomes urgent to implement basic troubleshooting actions to control these conditions through its classical risk factors such as obesity, physical inactivity, age, diet, among others, in various places of health promotion.

These data reinforce the need for supervision and control, rationalization, awareness, awareness and humanization in medication use by the elderly.

REFERENCES

1. Gontijo M F, et al. Uso de anti-hipertensivos e antidiabéticos por idosos: inquérito em Belo Horizonte, Minas Gerais, Brasil. Cad Saúde Pública. 2012; 28(7):1337-46.

2. Schmidt MI, Duncan BB, Azevedo SG, Menezes AM, Monteiro CA, Barreto SM, Chor D, Menezes PR. Doenças Crônicas não Transmissíveis no Brasil: Carga e Desafios Atuais. Saúde no Brasil 4. 2011; (5): 61-74.

3. Sociedade Brasileira de Cardiologia. IV Diretrizes Brasileiras sobre Dislipidemias e Prevenção da Aterosclerose do Departamento de Aterosclerose da Sociedade Brasileira de Cardiologia. Arq Bras Cardiol. 2007; 88(1): 1-9.

4. Santana JA. Envelhecimento populacional e política de saúde: contribuições para a reflexão acerca dos desafios que o processo de envelhecimento populacional traz para a definição da agenda da política de saúde pública brasileira. Vértices, Campos dos Goytacazes/RJ. 2012; 14(3):85-101.

5. Almeida MF, Barata RB, Montero CV, Silva ZP. Prevalência de doenças crônicas auto referidas e utilização de serviços de saúde. Ciênci Saúde Coletiva. 2002; 7(4):743-56.

6. Flores VB, Benvegnú LA. Perfil de utilização de medicamentos em idosos da zona urbana de Santa Rosa, Rio Grande do Sul, Brasil. Cad Saúde Pública. 2008; 24:1439-46.

7. Silva-junior JB. As doenças transmissíveis no Brasil: tendências e novos desafios para o Sistema Único de Saúde. In: Ministério da Saúde, ed. Saúde Brasil 2008: 20 anos de Sistema Único de Saúde (SUS) no Brasil. Brasília: Ministério da Saúde, 2009.

8. Theme Filha MM, Szwarcwald CL, Souza JPRB. Medidas de morbidade referida e inter-relações com dimensões de saúde. Rev Saúde Pública. 2008; 42(1):73-81.

9. Araújo CL. Conhecimento de idosos sobre o uso de medicamentos e interação medicamentosa. RBCEH, Passo Fundo. 2011; 8(2): 188-95.

10.   Coelho filho JM, Marcopito LF, Castelo A. Perfil de utilização de medicamentos por idosos em área urbana do Nordeste do Brasil. Rev Saúde Pública. 2004; 38(4): 557-64.

11.   World Health Organization. Collaborating Center for Drug Statistics Methodology. Anatomical Therapeutic Chemical (ATC) classification index. Oslo: World Health Organization. 2000.

12.   Sociedade Brasileira de Cardiologia, Sociedade Brasileira de Hipertensão, Sociedade Brasileira de Nefrologia. V Diretrizes Brasileiras de Hipertensão Arterial. Rev Bras Hipertens. 2006; 9 (4): 256-312.

13.   American Diabetes Association. Standards of Medical Care in Diabetes. Diabetes Care. 2011; 34; (1).

14.   BRASIL. Ministério da Saúde. Conselho Nacional de Saúde. Comissão Nacional de Ética e Pesquisa – CONEP. Resolução n° 196/96 sobre pesquisa envolvendo seres humanos. Brasília: MS, 2007.

15.   Cruz RO, Araújo PP, Batista KA. FERNANDES KF, LOPES FM. Perfil glicêmico em idosos de um asilo no município de Anápolis-GO. Ensaios e C.2011; 15(3): 83-96.

16.   Tavares DMS, Drumond FR, Pereira GA. Condições de saúde de idosos com diabetes no município de Uberaba, Minas Gerais. Texto Contexto Enferm. 2008; 17 (2): 342-9.

17.   Gama LC, Biasi LS, Ruas A. Prevalência dos Fatores de Risco Para As Doenças Cardiovasculares em Pacientes da Rede SUS da UBS Progresso da Cidade de Erechim. Perspectiva, Erechim. 2012; 133(36):63-72.

18.   Peixoto MRG, Monego ET, Alexandre VP, Souza RG,M, MOURA EC. Monitoramento por entrevistas telefônicas de fatores de risco para doenças crônicas: experiência de Goiânia, Goiás, Brasil. Cad Saúde Pública. 2008; 24(6): 1323-33.

19.   Oliveira SMJV. Hipertensão arterial referida em mulheres idosas: prevalência e fatores associados. Texto Contexto Enferm. 2008;17(2): 241-9.

20.   Zaitune MPA, Barros MBA, César CLG, Carandina L, Goldbaum M. Hipertensão arterial em idosos: prevalência, fatores associados e práticas de controle no município de Campinas, São Paulo, Brasil. Cad Saúde Pública. 2006; 22(2): 284-94.

21.   Firmo JOA, Uchoa E, Lima CMF. Projeto Bambuí: fatores associados ao conhecimento da condição de hipertensos entre idosos. Cad Saúde Pública. 2004; 20(2):512-21.

22.   Moreira WM. A Prática da caminhada como tratamento não farmacológico para idosos com hipertensão arterial sistêmica [monografia] São Paulo(SP): Faculdade do Clube Náutico Mogiano, Mogi das Cruzes, 2011.

23. Nobrega SB, Costa SM, Peixoto TR, Silva LM, Queiroga ASG, Silva AO. Sentidos atribuídos aos medicamentos genéricos por idosos. Rev pesqui cuid fundam.2011;(Ed.Supl.):37-44.

24. Flores LM, Mengue SS. Uso de medicamentos por idosos em região sul do Brasil. Rev Saúde Pública. 2005; 39(6)924-0.

25. Caetano JÁ, Costa AC, Santos ZMSA, Soares E. Descrição dos fatores de risco para alterações cardiovasculares em um grupo de idosos. Texto Contexto Enferm. 2008;17(2): 327-35.

26. Diretrizes da Sociedade Brasileira de Diabetes. 3ª ed. Itapevi, São Paulo: Araújo Silva Farmacêutica, 2009.

27. Costa MFL, Camarano AA. Demografia e Epidemiologia do Envelhecimento no Brasil. Princípios básicos de Geriatria e Gerontologia. Belo Horizonte: Coopmed, 2008.

Contact of the corresponding author:
Anna Cláudia Freire de Araújo Patrício
Rua Joana Morais Lordão, nº 76, João Pessoa, PB, Brasil, 58071-650.
Email: anna.freirearaujo@gmail.com