

NOCTURIA IS NOT A URINARY SYMPTOM ASSOCIATED WITH FALLS IN OLDER PEOPLE – RESULTS FROM A 2143 GERIATRIC POPULATION STUDYHypothesis / aims of study

Data from Instituto Brasileiro de Geografia e Estatística (IBGE) presents that the number of Brazilian people aged 60 years old or more increased from 4.8 million to 11.2 million between 1980 and 2005 (4.01% and 6.10% of the total population)¹. This rapid and accentuated aging of the population will have a significant impact on social, economic and health demands. Prominent among the health demands will be those relating to chronic diseases and their incapacitating sequel and other complaints such as nocturia, falls and their consequences. Nocturia is a high prevalent symptom in the elderly, observed in 42% of sexagenarians and more than 80% in people older than 80 years, and it can be associated with impairment of quality of life, sleep disorders and increased risk of falls². Falls are also high prevalent occurrences in the elderly, and it is estimated that 30-40% of people older than 65 fall at least once a year. This study was undertaken to evaluate the relation between falls and nocturnal micturition habits in elderly men and women living in a specific municipality of Brazil.

Study design, materials and methods

The Pan-American Health Organization and World Health Organization (PAHO/WHO) coordinated a multicenter study named Health, Wellbeing and Aging (the SABE study), to outline the living conditions and health of elderly people living in seven countries of Latin America and the Caribbean. The study population was composed of elderly people (over 60 years old), living in a specific municipality of Brazil in the year 2000. The total sample of 2,143 elderly people was made up of two segments. Data were collected simultaneously, by means of home interviews using a standardized instrument consisting of eleven thematic sections: personal data, cognitive assessment, health status, functional status, medications, use of and access to services, family and social support networks and work history. A detailed description of the methodology used is available at PAHO website. To develop the present study, sections A (personal data) and C (health status) were used. The presence of nocturia was taken to be a dependent dichotomous variable, and this was ascertained as the response "yes" to the question "Do you need to void three times or more at night?" The presence of falls was also taken to be a dependent dichotomous variable, and this was ascertained as the response "yes" to the question "Did you have any fall during the last 12 months?" For both questions, the categories "Does not know" and "No response" were disregarded and were then considered to be missing values. The individuals were divided in three groups, according to their age (60-69 years old; 70-79 years old; 80 years old or more). The intragroup statistical analysis was done using the chi-square test, and the intergroup analysis was performed with the ANOVA test, with Bonferroni post-test.

Results

A questionnaire survey was undertaken among 2,143 elderly subjects (887 men and 1276 women). The mean age was 68 years in both genders. It was observed a high prevalence of falls as well as nocturia in all groups of patients, mainly in persons older than 80 years ($p < 0.001$). However, when the association between nocturia and falls prevalence was checked, it was not significant in all groups ($p = 0.45$) (table).

Table: Prevalence of falls and nocturia as well as the association of both in 2,143 elderly people living in a specific municipality of Brazil

	Falls (%)	Nocturia (%)	Falls associated with nocturia (%)
60-69 years	20.3	31.4	7.8 $p > 0.05$
70-79 years	21.5	42.0	7.1 $p > 0.05$
80 years or +	39.4	54.0	23.7 $p > 0.05$

Interpretation of results

This is the first study in this specific population, which points out that falls do not have a significant association with nocturia. However, it was also observed a high prevalence of falls as well as nocturia in all groups of patients, mainly in persons older than 80 years. Thus, we can suggest that nocturia is a common symptom in the elderly but nocturnal micturition does not increase the prevalence of falls in older people.

Concluding message

Nocturia as well as fall injuries are high prevalent symptoms in elderly populations. However, based on our results, we can conclude that in these elderly subjects there may be a significant interactive effect of the many causal factors that are different from nocturia and should be addressed when the purpose of the study is to verify the relation between falls injuries and urinary symptoms.

References

¹ <http://www.ibge.gov.br>

² Drugs Aging (2007);24(4):325-43

Specify source of funding or grant	None
Is this a clinical trial?	Yes
Is this study registered in a public clinical trials registry?	Yes
Specify Name of Public Registry, Registration Number	SABE
What were the subjects in the study?	HUMAN
Was this study approved by an ethics committee?	Yes
Specify Name of Ethics Committee	ETHICAL COMMITTEE OF SÃO PAULO UNIVERSITY
Was the Declaration of Helsinki followed?	Yes
Was informed consent obtained from the patients?	Yes

