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ANXIETY ASSOCIATED WITH OVERACTIVE BLADDER IN ELDERLY WOMEN

Hypothesis / aims of study
Psychological variables like anxiety and depression have been associated with urgency and urge-incontinence symptoms and with other specific incontinence symptoms. Consequently, some studies affirm that overactive bladder (OAB) constitutes of a psychosomatic disorder. Even though it's not possible to exactly conclude if anxiety is a cause or a consequence of OAB, it is believed that there is a relation between the two, which is still not very studied and remains a little un-comprehended. In this context, the objectives in the preset study were to evaluate the occurrence of OAB and investigate its relation with anxiety symptoms and with clinical and demographical characteristics in elderly women.

Study design, materials and methods
The screening for this research was done with elderly women that live in the community and attend an elderly health awareness program in the Distrito Federal - Brazil established by the fire brigade between August of 2012 and November of 2013. The criteria for eligibility were: feminine sex, age equal to or higher than 60 years, residing in Distrito Federal and without a lower urinary tract infection that were identified through a urine test (uroculture) associated to the evaluation of symptoms (beginning of the study). From the study, we excluded elderly women with a treatment history for OAB and/or anxiety in the last six months, base neurological diseases (Multiple Sclerosis, Alzheimer Disease, Stroke, Parkinson's Disease), bladder cancer (hematuria and/or account), complaint of pain in the lower part of the womb during voiding for more than six months (possible indication of interstitial cystitis), history of pelvic radiotherapy, presence of advance genital prolapse that go beyond the vaginal introitus at rest (physical exam) and incapacity to respond the questionnaire appropriately.
The sample size calculation was done to analyze the correlation between the variable OAB and anxiety, using the G-Power Program, pilot study with 41 elderly women with a 5% level of significance and with a testing power of 80%, which suggested a sample of 153 elderly women.
To scan OAB an Advanced Questionnaire of Overactive Bladder – OAB V8 (Overactive Bladder-Validated 8-question Screener), was used, an instrument created to help patients and health professionals in identifying overactive bladder symptoms and validated for the Brazilian population. To evaluate the level of anxiety, the Beck Anxiety Scale (BAS) was used, composed of 21 items that evaluate different anxiety symptoms identified through questions on self-evaluation and perception of anxiety through the patient throughout of last week.
For the continual variables, the information collected was expressed in average and standard deviation and for the categorical variables the information was expressed in percentages and frequency. For the distribution analysis of the data the Kolmogorov-Smirnov test was used, verifying anormal distribution. The sample was divided into two groups, according to the identification of a dysfunction in the lower urinary tract (overactive bladder) by the OAB-V8. The differences between the two groups for continuable variables were analyzised using the Mann-Whitney U test and for the categorical variables the Qui-Square test was used. To analyze the association between the continual variables the Spearman Correlation test was used. The tests were two-tailed with a significance level of 5%. The Statistical Package for Social Sciences Program with the 16.0 version was used.

Results
A total of 198 patients were contacted, of whom 7 had urinary tract infection identified on examination of urine culture. 191 elderly considered eligible for the study, of whom 25 were interviewed were excluded because they showed neurological disease (7 AVE, 1 Alzheimer's, Parkinson 2), history of radiotherapy (1), reports of bladder cancer (1), prolapsed bladder grade IV (2), use of anxiolytic drug (7) or did not complete the questionnaire (4). Thus, the analyzes were conducted with 166 elderly, given the sample size with surplus foreseen. The prevalence of OAB (OAB-V8 ≥ 8 points) was of 70.5% (117).
The clinical and demographic characteristics of the group study groups and the distribution of elderly women according to the number of pregnancies, vaginal births and anxiety between the study groups are shown in tables 1 and 2 respectively.

Table 1.Clinical and demographic characteristics of the study groups

	OAB-V8 ≥ 8 n=117		OAB-V8 < 8 n=49		
	Average	DP	Average	DP	p-value
Age	68.49	6.17	69.46	6.33	0,282
BMI	28.04	4.55	25.33	3.68	0,001
Pregnancies	4.96	3.41	5.83	3.09	0,090
Abortions	0.69	1.21	0.81	0.95	0,077
Vaginal Births	3.83	2.98	4.71	3.24	0,089

Mann-Whitney U Test, BMI = body mass index.

Table 2. Distribution of elderly women according to the number of pregnancies, vaginal births and anxiety between the study groups

	OAB-V8 ≥ 8		OAB-V8 < 8		p-value
	n	%	n	%	
No Anxiety (0-7)	18	15.5	21	42.9	0,001
Ansiedade leve (8-15)	39	33.6	15	30.6	
Moderate Anxiety (16-25)	36	31.0	7	14.3	
Ansiedade grave (26-63)	23	19.8	6	12.2	

qui-square test (X^2)

Interpretation of results

Both groups are homogenous for the ages they include (p=0,282), number of pregnancies (p=0,090), number of abortions (p=0,077) and number of vaginal births (p=0,089). However, elderly women with overactive bladder symptoms (OAB-V8≥8) present a BMI significantly higher than those without these symptoms (OAB-V8<8) (p=0,001). The average punctuation in the OAB-V8 between the elderly that showed signs of dysfunction was of 21.89 ± 6.69 and between those that didn't show signs of an OAB (OAB-V8 < 8) was of 2.30 ± 2.25 points. In the distribution analysis of the quantity of pregnancies between the two study groups, it was observed that the group without the overactive bladder symptoms (OAB-V8 <8) showed significantly higher prevalence of elderly primiparous and multiparous than the group without OAB, and this difference was maintained when the specific distribution of multiparous (≥3 pregnancies) and nulliparous (no pregnancies) were analyzed.

In relation to the distribution of the occurrence of different levels of anxiety (absence, light, moderate and severe) between the study groups, it was observed a higher prevalence of light, moderate and severe anxiety between women with overactive bladder symptoms. In the analysis of the correlation of the study of variables, the overactive bladder symptoms showed a low positive correlation with the anxiety symptoms (r=0,345) and with the BMI (r=0,281). It was also observed a minimal correlation between the BMI and the anxiety symptoms (r=0,164).

Concluding message

To synthesize, according to the results of this study, it was concluded that OAB showed high prevalence between elderly women and that the existence of the overactive bladder symptoms were related to the presence of anxiety symptoms in a light, moderate and high degree.

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Disclosures