

ANXIETY AND DEPRESSION ASSOCIATED WITH INCONTINENCE IN MIDDLE AGED WOMEN

Hypothesis / aims of study

In recent years several studies have reported an association between urinary incontinence (UI) and depression. The association has been shown to be strongest for urge and mixed incontinence (1). The prevalence of depression among women with UI varies in different studies. There is less data on the relationship between anxiety and UI. It has also been shown that young women with UI had much higher rates of depression than women with other chronic conditions (2). This leads to the question whether there are biological or other factors unique to UI that increase the risk of depression. Also the fact that pharmacological research has demonstrated efficacy of serotonin-norepinephrine reuptake inhibitors for both major depression and stress urinary incontinence has contributed to increased attention of this association (3). Our aims were to determine the association, and investigate this possible association for different types and severities of UI.

Study design, materials and methods

Our study is designed as a cross-sectional survey of women in the Hordaland Health Study (1997-1999), a large population-based survey which covered many medical topics. We present questionnaire data on UI, depression and anxiety from 5321 women who had answered questions about both UI and depression and anxiety. From the section about UI on the questionnaire we defined the incontinent group. Those who answered "yes" on the entry question about experiencing involuntary loss of urine or not, were included. Those who, despite answering "no" or failing to answer the entry question, answered confirmatively regarding frequency, volume, and type of leakage, were also included. A stress component was defined if the woman answered "yes" on the question about loss of urine when coughing, laughing, sneezing or making an effort. An urge component was defined if she answered "yes" on the question about urge to void. Mixed incontinence was defined if she answered "yes" on both these questions. Sandvik severity index was used to categorize the severity of incontinence. The index is calculated by multiplying the reported frequency by the amount of leakage. We also categorized stress, urge and mixed UI. Anxiety and depression was measured by the Hospital Anxiety and Depression Scale (HADS), a self-administrated questionnaire consisting of 14 items, 7 for anxiety (HADS-A) and 7 for depression (HADS-D). Each item has four possible answers and is scored on a Likert scale from 0 to 3. The item scores are added, giving subscales from 0 to 21. Anxiety disorder is usually defined as HADS-A of 8 or more. Depression disorder is usually defined as HADS-D of 8 or more.

Results

Results are shown in tables 1,2 and 3. All results are shown as unadjusted odds ratios or simple crosstabulations.

Among the 5321 women, 1398 (26,3%) had UI, according to our definition. 744 (53,2%) of the incontinent women had stress incontinence, 129 (9,2%) had urge incontinence, 414 (29,6%) had mixed incontinence and 111 (7,9%) were grouped as other/unclassified. According to Sandvik Severity Index, 772 (58,3%) had slight incontinence, 482 (36,3%) had moderate and 71 (5,4%) severe/very severe incontinence.

1048 (19,9%) women had HADS-A score independent of HADS-D score on 8 or more. 448 (8,5%) had a HADS-D score independent of HADS-A score on 8 or more. When comparing HADS score in the incontinent group with HADS score in the continent group, there is a higher rate of all categories of anxiety and depression among the incontinent women. There was more anxiety and depression among the women with mixed UI and urge UI, and the highest rates of anxiety and depression were found among the women with severe UI.

Table 1 Anxiety and depression among the incontinent women compared with those without incontinence.

N= 5321		N=3923	N=1398	OR	CI 95%
Variable HADS	All (n)	-UI %	+UI (%)		
HAD-A≥8	5269	17,8 (n=689)	25,8 (n=359)	1,61	1,39-1,86
HAD-D≥8	5276	7,3 (n=284)	11,8 (n=164)	1,69	1,38-2,07
HAD-A≥8 and HAD-D≥8	5277	5,3 (n=205)	8,9 (n=124)	1,75	1,39-2,21

Table 2 Differences in rates of anxiety and depression between the different types of UI.

N= 1398					
Variable HADS	Stress comp %	Urge comp %	Mixed UI %	Stress UI %	Urge UI %
HAD-A≥8	26,1 (n=301)	30,9 (n=167)	31,7 (n=131)	22,9 (n=170)	28,1 (n=36)
HAD-D≥8	11,8 (n=137)	15,7 (n=85)	16,9 (n=70)	9,0 (n=67)	11,7 (n=15)

HAD-A \geq 8 and HAD-D \geq 8	9,1 (n=105)	12,0 (n=65)	13,6 (n=56)	6,6 (n=49)	7,0 (n=9)
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Table 3 Anxiety and depression in incontinent women with different severity of their UI

N= 1398				
HADS-variable	Slight %	Moderate %	Severe %	Sandvik missing
HAD-A \geq 8	23,9 (n=184)	29,4 (n=141)	28,6 (n=20)	19,2 (n=14)
HAD-D \geq 8	9,1 (n=70)	14,8 (n=71)	20,0 (n=14)	12,3 (n=9)
HAD-A \geq 8 and HAD-D \geq 8	6,7 (n=52)	11,4 (n=55)	14,3 (n=10)	9,6 (n=7)

Interpretation of results

The results show an association between both anxiety and UI and depression and UI. The association seems to be strongest for mixed and urge UI and for severe UI.

Concluding message

The association between depression and anxiety and urinary incontinence is important to be aware of when treating patients with depression and anxiety as well as patients with urinary incontinence as we know that both conditions give decrements in function and quality of life and are often not recognized by the physicians. Further investigations are necessary to know more about causality and mechanisms of action.

References

1. Obstet Gynecol 2005;106:585-92
2. Psychosomatics 2006;47:147-51
3. Int.J Clin Pract 2007;61:1349-55

<i>Specify source of funding or grant</i>	University of Bergen, Norway
<i>Is this a clinical trial?</i>	No
<i>What were the subjects in the study?</i>	HUMAN
<i>Was this study approved by an ethics committee?</i>	Yes
<i>Specify Name of Ethics Committee</i>	Regional Research Ethics Committee of Mid-Norway, Trondheim
<i>Was the Declaration of Helsinki followed?</i>	Yes
<i>Was informed consent obtained from the patients?</i>	Yes