Impact of Overactive Bladder on Sexual Function in Women: A Prospective Comparison Study

Sun-Ouck Kim, Jun-Seok Kim, Dong-Deuk Kwon

From the Department of Urology, Chonnam National University Medical School, Gwangju, Korea

Purpose: Several reports have showed that female lower urinary tract symptoms affect health related quality of life and sexual function. However, there is lack of data proving the overactive bladder (OAB) on sexual function. We evaluated the impact of OAB on sexual function.

Materials and Methods: We included 82 women from 18 to 65 years old with overactive bladder symptoms including urinary frequency and urgency. A control group was recruited at the Health Care Center for health medical examination of our hospital. All patients were asked to complete the Koran version of Female Sexual Function Index (FSFI) to assess sexual function.

Results: The Mean age was 47.37±8.73 and 49.90±5.36 in OAB and Control group. Each of the dimension scores in FSFI represents worse sexual function in patients with OAB than the control group. The total scores of the FSFI were significantly decreased in the OAB group 20.10±4.10 than 24.64±3.91 (p<0.05). Among the six subdomains of FSFI, four domains of desire (4.92±1.59 vs 6.80±2.19), arousal (9.87±2.87 vs 11.50±2.44), orgasm (7.22±2.09 vs 9.52±2.96), satisfaction (6.95±2.09 vs 8.45±2.28) scores were significantly decreased in the OAB group (P<0.05) than control group. But, there was no statistically significant differences in domain of lubrication (11.12±2.80 vs 11.72±2.56) and pain (6.85±1.91 vs 6.92±1.92) between the OAB group and control group.

Conclusion: In this study, OAB syndrome was found to cause greater deterioration in sexual function. These results suggest that OAB symptoms have a significant impact on women’s sexual function. (J Korean Continence Soc 2009;13:102-7)

Key Word: Overactive bladder, Sexuality, Women
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Introduction

Lower urinary tract symptoms may have a considerable impact on the personal life style and health related quality of life. Overactive bladder (OAB) is characterized by symptoms of urgency and urgency incontinence, which are often associated with urinary frequency and nocturia, which appears without a local pathologic or metabolic explanation [1]. The prevalence of OAB in the general population has been estimated to be from 16.9% in recent epidemiologic study [2]. Previous studies have been reported the impact of OAB on health related quality of life to find out that urinary incontinence has a negative impact on physical, social wellbeing and psychological aspect in life [3,4]. Additionally, several investigators have evaluated the close relationship of voiding dysfunction to female sexual dysfunction [5,6]. It has been suggested that the patients with OAB symptoms have greater impairment of quality of life than those with stress urinary incontinence [7]. Sexual well being is an important aspect of women’s health and quality of life, sexual dysfunction would lead to a decrease of them. Although we know that the incidence of OAB syndrome increase with age, we do know little about the influence of OAB on sexual life of women. We examined the impacts of OAB on sexual function using a FSFI (Female Sexual Function Index) questionnaire.

Materials and Methods

Participants

We performed prospective evaluation of our female LUTS database at Chonnam National University Hospital for all patients presenting to our clinic between Jan 2006 and Dec 2007. Of 450 total patients, 82 female patients complete data and are included in this study. We included women from 18 to 65 years old with overactive bladder symptoms. A control group was recruited at the Health Care Center for health medical examination of our hospital (n=75). All participants were asked to complete the Koran version of FSFI to assess sexual function. The study inclusion criteria were being 18 years or older, and the ability to communicate the study requirement. Eligible participant who diagnosed with OAB with or without urinary incontinence episode, were also currently sexually active and had regular sexual partner. Urgency was defined as complaints of a sudden compelling desire to pass urine that were difficult to defer. Urgency incontinence was defined as the complaint of involuntary accompanied by or immediately preceded by urgency [8]. The exclusion criteria were the presence of urinary tract infection, the use of medications for the control of bladder condition, restricted mobility, history of bladder malignancy and psychiatric morbidity. The patients with genuine stress urinary incontinence were also excluded.

FSFI

The FSFI is a validated instrument with six domains designed to address different aspects of female sexual dysfunction composed of sexual desire, arousal, lubrication, orgasm, satisfaction, and related pain symptoms [9]. Each question within six domains is scored and maximal score of each domain is 6. Total FSFI score is computed by adding the scores within each domain and produced an overall estimate of sexual function. The higher score indicated better sexual function, with maximal score of 36 indicating perfect sexual function. The total FSFI scores were compared between OAB group and control group.

Statistical analysis

SPSS (version 7.5 Windows; SPSS, Chicago, IL) software program was used for statistical analysis. The comparison of the FSFI score between two groups was performed using Student t- test. p<0.05 was considered stat-
Table 1. Patients characteristics

<table>
<thead>
<tr>
<th></th>
<th>OAB group (n=82)</th>
<th>Control group (n=75)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (years)</td>
<td>47.37±8.73</td>
<td>49.90±5.36</td>
</tr>
<tr>
<td>BMI (kg/m²)</td>
<td>23.2±1.8</td>
<td>24.19±1.7</td>
</tr>
<tr>
<td>Mean parity (n)</td>
<td>2.42±1.8</td>
<td>2.65±1.4</td>
</tr>
<tr>
<td>Menopause (n)</td>
<td>31</td>
<td>35</td>
</tr>
<tr>
<td>Hormonal treatment (n)</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>Hysterectomy (n)</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>OAB duration (Months)</td>
<td>18.71±7.8</td>
<td>-</td>
</tr>
<tr>
<td>Comorbid condition (n)††</td>
<td>13</td>
<td>20</td>
</tr>
</tbody>
</table>

††Diabetes mellitus, hypertension, cardiovascular disease, pulmonary tuberculosis, hepatitis

Table 2. Comparison of average score of each domain & total score of FSFI between groups

<table>
<thead>
<tr>
<th>Subdomain</th>
<th>OAB</th>
<th>Control</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Desire</td>
<td>4.92±1.59</td>
<td>6.80±2.19</td>
<td>p=0.015</td>
</tr>
<tr>
<td>Arousal</td>
<td>9.87±2.87</td>
<td>11.50±2.44</td>
<td>p=0.021</td>
</tr>
<tr>
<td>Lubrication</td>
<td>11.12±2.80</td>
<td>11.72±2.56</td>
<td>p=0.121</td>
</tr>
<tr>
<td>Orgasm</td>
<td>7.22±2.09</td>
<td>9.52±2.96</td>
<td>p=0.026</td>
</tr>
<tr>
<td>Satisfaction</td>
<td>6.95±2.09</td>
<td>8.45±2.28</td>
<td>p=0.047</td>
</tr>
<tr>
<td>Pain</td>
<td>6.85±1.91</td>
<td>6.92±1.92</td>
<td>p=0.135</td>
</tr>
<tr>
<td>Total</td>
<td>20.10±4.10</td>
<td>24.64±3.91</td>
<td>p=0.034</td>
</tr>
</tbody>
</table>

The patient characteristics are listed in Table 1. The mean age was 47.37±8.73 and 49.90±5.36 in OAB and Control group. Each of the dimension scores in FSFI represents worse sexual function in patients with OAB than the control group.

The total scores of the FSFI were significantly decreased in the OAB group 20.10±4.10 than 24.64±3.91 (p<0.05). Table 2 exhibits the median domain scores and total FSFI scores for each group based on patient’s reports. Among the six domains of FSFI, subdomain score of sexual desire, sexual arousal, orgasm, sexual satisfaction was significantly decreased in the OAB group (P<0.05) the total score of each domain in OAB and control was 4.92±1.59 vs 6.80±2.19 in desire, 9.87±2.87 vs 11.50±2.44 in arousal, 7.22±2.09 vs 9.52±2.96 in orgasm, 6.95±2.09 vs 8.45±2.28 in satisfaction. But, there was no statistically significant differences in domain of lubrication (11.12±2.80 vs 11.72±2.56) and pain (6.85±1.91 vs 6.92±1.92) between the OAB group and control group.
Discussion

In the present study, we evaluated the impact of OAB on sexual function in women. Women with OAB symptoms expressed the negative impact on their sexual health, especially in respect to sexual desire, arousal, orgasm, and satisfaction. Given the impact of OAB on sexual health, sexual health should be routinely assessed by urologic clinicians. As a clinician, we can easily meet those patients with complaining of restricted social activity and life style change due to bothersome lower urinary symptoms. Recently, Kizilkaya Beji et al. [10] demonstrated that incontinence during intercourse adversely affected women’s sexual health. The suggested mechanism underlying of coital incontinence was urethral sphincter incompetence, but major mechanism is not known [11].

Some reports have shown that patients with urinary symptoms of OAB experienced more sexual discomfort and dissatisfaction than the patients with incontinence alone [12,13]. There is some debates as to whether urine leak occurs more commonly in OAB or SUI, the OAB symptoms are more likely important with respect to sexual activity and satisfaction than urine leakage during coitus. Kim et al. [14] reported that women with OAB syndrome complain of repeated experiences of having to go to toilet or of needing to void during intercourse, that OAB symptoms negatively impact the sexual activity and could not focus on sexual activity. Although the impact of urinary incontinence on health related quality of life has been widely studied, the effects of OAB symptoms including urgency and frequency, have not fully evaluated. OAB is defined by urgency, with or without urgency incontinence, usually with frequency and nocturia [1]. We know that the incidence of OAB syndrome increases with age, there is a lack of data concerning the effect of OAB syndrome on sexual life yet. The prevalence of OAB is estimated to be over 16% in United States and 6% to 35% in Europe [15]. In Korean study conducted in Korean continence society, the prevalence of OAB syndrome over age of 40 was reported to be 30.5% [16]. The responders had at least one of the symptoms among urgency, frequency, which represent close correlation between OAB and quality of life.

Sexual dysfunction has a significant health impact and affects the quality of life of women. Sexual well being is an important aspect of women’s relationship and life in general. It is reported that over 40% of women with lower urinary symptoms experience a reduced frequency of sexual intercourse due to symptoms pelvic discomfort during sexual intercourse, depressive mood [17]. In general, women with OAB suffer from pelvic pain, pelvic discomfort, site not specified, from suprapubic pain or discomfort, dysuria, vulvodynia, perineal discomfort [18]. Walter et al. [18] reported that the OAB patients experience more pain during sexual intercourse and sexual behavior. Therefore, we should be concerned about the correlation between lower urinary symptoms and the quality of sexual life not only quality of life. It has been known that incontinence women have a decreased sexual desire due not only to physical factors such as aging, menopause, but also to emotional factor such as fear of bad smell or loss of self confidence. Also, incontinence women can have a feeling of a loss of sexuality, feminity that can lead to low self body image and loss of self confidence [19]. In addition, women usually think of themselves as unattractive women to their partner if they need to wear pad in bed and make an odor. Moreover, women with OAB show an increased tendency to be depressed due to their lower urinary tract symptoms [20]. There are general feelings among patients that the topic of sexual concern is avoided even in urologic clinics, sexual health in women is not frequently discussed. Indeed, one-third of the participants in the study were not comfortable raising the topic with their physician of sexual problem [19]. As such, it appears that an increased awareness among clinicians as to how to initiate proper discussions about OAB symptom related sexual discomforts including the negative impacts on sexual health so that patients can learn of how they cope with
OAB and its sexual health impact.

This study has some limitations and should be pointed out with regard to the study design. First, this study is cross-sectional study and subject to recall bias. Many important variables in this analysis, such as comorbid conditions, medications can affect bladder condition, are based on entirely on participant reports without clinical verification. Nevertheless, this descriptive analysis provides additional insight on the impact of OAB symptoms on sexual function. Given the findings of this study, OAB symptoms and its impact merit further clinical inquiry to ascertain whether treatment of OAB may be warranted or not. Furthermore, given the importance of OAB symptoms on sexual health, the impact of these symptoms should be further evaluated in a clinical setting.

**Conclusion**

In this study, OAB syndrome was found to cause greater deterioration in sexual function. These results suggest that OAB symptoms have a significant impact on the sexual health. It is suggested that clinicians should pay more attention to OAB symptoms in respect to related sexual issues when counseling OAB patients.

**References**


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