

Urinary Incontinence is An Independent Predictor of Sexual Dysfunction in Women With Spinal Cord Injury



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Introduction

Diseases affecting the spinal cord may have significant physical, psychological, social and economic consequences. Most patients with SCI (spinal cord injury) have neurogenic lower urinary tract dysfunction (N-LUTD) and bowel dysfunction. Urinary incontinence is highly prevalent in women with N-LUTD and may have a significant impact on their sexual life. In this study we evaluated the lower urinary tract symptoms and the sexual function of women with diseases that affect the spinal cord, and analyzed the predictors of sexual activity and sexual dysfunction, with a special attention to the interrelationships between sexual and lower urinary tract dysfunctions.

Methods

- Observational study
- 98 adult women with traumatic (T) or non-traumatic (NT) diseases affecting the spinal cord, from an academic referral specialty hospital. Patients were invited to participate when they presented for a routine medical visit with a physiatrist, neurologist or urologist. They agreed to participate after full disclosure of the study purposes and written consent was obtained from all participants.
- All subjects were older than 18 years of age and had a neurological condition diagnosed for more than one year that was considered stable for at least 6 months. The only exclusion criterion was the presence of cognitive impairment.
- This study was approved by the Institutional Review Board of our hospital. We assessed clinical and epidemiological data such as age, marital status, menopausal status, etiology of the spinal cord disease, duration of neurological disease and neurological impairment based on the need of a wheelchair for mobility.
- We used a structured questionnaire specifically developed for this study
- The Neurogenic Bladder Symptom Score short form (NBSS-SF) to evaluate the method of bladder management and urinary incontinence which was defined when the patient reported she had urinary leakage a few times a week or more in the NBSS-SF.
- The Female Sexual Function Index (FSFI) was used to evaluate the sexual function and women and FSFI score ≤26.55 were considered as having sexual dysfunction.
- Whoqol-bref to determine sexual satisfaction. Women were considered to be satisfied with the sexual life when they reported being satisfied or very satisfied in the question 21 of the WHO-QoL -bref questionnaire which has a Likert scale varying from very unsatisfied to very satisfied.

TABLE 1 VARIABLES ACCORDING TO SEXUAL ACTIVITY

	Sexually Active (48/98)	Sexually Inactive (51/98)	P Value
Age	38.0+/-10.0	46.9+/-12.6	<0.001
Married or stable union	34 (70.8%)	8 (16.0%)	<0.001
Menopause	6 (12.5%)	22 (44.0%)	0.002
Wheelchair bound	7 (14.6%)	14 (28.0%)	0.004
Voids spontaneously	37 (77.1%)	28 (54.9%)	0.020
Urinary incontinence	14 (29.2%)	37 (74.0%)	<0.001
NBSS-SF *	9+/-6	11+/-8	<0.001

*NBSS-SF: Neurogenic Bladder Symptom Score short form

TABLE 2 COMPARISON OF SEXUAL FUNCTION BETWEEN CONTINENT AND INCONTINENT WOMEN

	Continent (34/48)	Incontinent (14/48)	P Value
FSFI * Total	26.9 [22.9 – 30.7]	17.8 [5.4 – 23.3]	0.010
Desire	3.6 [2.4 – 4.8]	3.0 [2.4 – 3.6]	0.186
Arousal	4.2 [3.6 – 5.0]	2.5 [0.4 – 3.9]	0.008
Lubrification	4.3 [3.3 – 5.9]	4.3 [0.3 – 4.7]	0.178
Orgasm	4.4 [2.6 – 5.5]	2.0 [0.3 – 4.3]	0.032
Satisfaction	4.8 [3.8 – 5.9]	3.0 [1.4 – 4.0]	0.006
Discomfort	5.2 [4.8 – 6]	2.8 [0.0 – 4.2]	0.007

*FSFI: Female Sexual Function Index

Results

- The median age of the 98 participants was 42.5 ± 12.1years.
- Forty-two (42.9%) were married and 28 (28.6%) were menopausal.
- Spinal cord injury was traumatic in 14 (14.3%) patients and NT in 84 (85.7%).
- The main causes of NT SCI were multiple sclerosis (47.9%), myelitis (12.2%) and myelomeningocele (14.3%).
- The mean duration of neurological disease was 10.5 ±5.0 years.
- Most patients had significant neurological deficits including 21 (21.4%) who were wheelchair bound.
- Bladder management and incontinence: A total of 65 (66.3%) women were able to void spontaneously, 25 (25.5%) performed clean intermittent catheterization and 8 (8.2%) used an indwelling catheter. Urinary incontinence was reported by 51 (52.0%) women. The mean NBSS-SF was 9.1 ± 6.4
- Sexual function: 48 (49.0%) women had been sexually active in the past 6 months. Increasing age, being single, menopause, wheelchair bound, having urinary incontinence and worse NBSS-SF scores were associated with a higher chance of being sexually inactive, but on multivariate analysis, age, marital status and urinary incontinence were the only independent factors (Table 1). The mean FSFI score was 22.0 ± 10.0 and 28 (58.3%) women were considered to have sexual dysfunction. Among the sexually active women, 29 (60.4%) were satisfied with sexual life. On a multivariate analysis, being married (13.8 CI 4.2-45.4; p< 0.001) and being continent (6.0 CI 2.0-18.2; p= 0.001) were the only independent factors associated with sexual satisfaction. The sexual domains that were most affected by urinary incontinence were satisfaction, discomfort, orgasm and arousal (Table 2)

Interpretation of Results

The sexual function of women with diseases affecting the spinal cord may be significantly affected. Increasing age, being single, menopause, wheelchair bound, having urinary incontinence and worse NBSS-SF scores were associated with a higher chance of being sexually inactive. Urinary incontinence was also an independent predictor of satisfaction with sexual life. Because urinary incontinence is a common and treatable condition in women with SCI, it is of utmost importance that healthcare professionals involved in the treatment of women with SCI be aware of these findings and prepared to offer effective treatment when needed

Concluding Message:

Urinary incontinence has a significantly impact on sexual function of women with SCI.

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