Sexual Dysfunction and its Relation with Depression and Bladder Dysfunction in a Hispanic Population with Multiple Sclerosis.

Eduardo Estades, MD
Carlos F. Ríos-Bedoya, MPH, ScD
Angel Chinea-Martinez, MD
Yatzka Hernández Silvestrini, MD
Ivonne Vicente, MD
Christina Rubi

Background

- Sexual Dysfunction (SD) in Multiple Sclerosis (MS) is underdiagnosed and undertreated[1,3].
- Research suggest that SD is highly prevalent in patients with MS. Prevalence estimates can be as high as 90% in men and up to 80% in women[1,3].
- However, studies on SD in Hispanic patients with MS are scarce. A population group with an estimated MS incidence of 5.0/100,000 inhabitants in Puerto Rico[2].

Most common complaints[5]	
Men	Women
Inability to achieve and maintain an erection	Decreased libido/arousal
Decreased libido	Decreased Vaginal Lubrication
Decreased or altered sensation	Sensory changes in vaginal tone
Difficulty with orgasm / ejaculation	Pain during penetration

Bladder Dysfunction

- Also known as Neurogenic Bladder (BD)
- A person lacks bladder control due to a brain, spinal cord, or nerve condition[4].
- Patient will commonly complain of either incontinence or retention.

Background

- The objectives of this study are:
  - To determine the percentage of Hispanic MS patients that experience SD. Secondary outcome is to determine the SD categories distribution in this Hispanic sample.
  - We will also examine any association between disease-modifying therapies (DMTs), BD and/or depression with experiencing sexual dysfunction.

Methods

- Our study design is a retrospective review of self-reported questionnaires from MS patients included in the Puerto Rico MS Foundation Registry (PRMSFR).
- A total of 477 questionnaires were obtained from 2002-2008.
- Questionnaires were selected if they met the following inclusion criteria: informed consent documentation, patient 18 years old or older, a diagnosis of MS by a neurologist, self-reported information on SD symptoms.
- Questionnaires were excluded from the sample if any patient had duplicate questionnaire or if the patient did not sign the informed consent attached to the questionnaire.

Methods

- SD is defined as any problem during any stage of the sexual act including desire, arousal, orgasm and/or resolution which make it difficult for a person to enjoy or to have sexual intercourse.
- SD can be classified into 3 subtypes: Primary, Secondary, Tertiary

Methods

- Primary SD: associated with only demyelinating lesions in the Central Nervous System
- Secondary SD: symptoms that may occur in patients with MS and/or medical co-morbidities.
- Tertiary SD: results from psychological, social and/or cultural issues that affect the sexual response.

- Ex: libido/erectile dysfunction and painful or uncomfortable sensation during the sexual act. Women: lack of vaginal lubrication or lack of sensation during the sexual act.
- Ex: Fatigue, spasticity, general pain, HTN, DM2, HLD.
- Ex: Anxiety, , altered marital and family roles, and changes in body image

Analysis

- We assessed data outliers, out of range values, and the need for data cleaning and editing by performing a series of frequencies, proportions, descriptive statistics (e.g., mean, median, and standard deviation) and figures (e.g., histograms and box and whisker plots).
- Frequencies and proportions were calculated to determine the percentage of our study sample experiencing SD.
- Bivariate analysis were performed to determine any associations between BD, DMT, years with MS, and depression and SD. Such analysis consisted of Fisher's exact tests and Student's t-tests.

Analysis (cont'd)

- A logistic regression analysis was done to obtain adjusted estimates for the relationship between our explanatory variables and SD.
- All analyses were done using Stata statistical software package. The usual 0.05 Type I error threshold for statistical significance was used for all analyses.

Results

- 23.2% (117) of total population reported SD.
- A statistically significant association ($p < 0.05$) between SD and gender was also found.
- There was a statistically significant association ($p < 0.05$) between sexual dysfunction and presence of comorbidities.
- A statistically significant association ($p < 0.05$) was found between sexual dysfunction and mean years with MS only.

Table 1. Relationship between Selected Characteristics and the Presence/Absence of Sexual Dysfunction				
	Total n=477 %	Absent n=366 %	Present n=111 %	p-value
Sex Male	19.9	17.2	28.8	0.010
Age (mean±SD)	40.9 ±11.5	40.0 ±11.9	43.8 ±10.0	0.002
Years of study (mean±SD)	3.8 ±1.5	3.8 ±1.5	3.7 ±1.4	0.251
Years with MS (mean±SD)	6.2 ±7.4	5.8 ±7.0	7.5 ±8.5	0.030
MS age of Onset (mean±SD)	34.7 ±10.3	34.2 ±10.6	36.3 ±9.0	0.063
Co-morbidities				
None	31.9	35.5	19.8	
Depression Only	14.7	15.3	12.6	0.001
Incontinence Only	23.1	23.0	23.4	
Depression + Incontinence	30.4	26.2	44.1	

Table 2. Unadjusted and Adjusted* Odds Ratios (ORs) and 95% Confidence Intervals (95% CI) for experiencing sexual dysfunction

	Unadjusted OR (95% CI)	p-value	Adjusted OR (95% CI)	p-value
Co-morbidities	-		-	
None (Reference)				
Depression Only	1.5 (0.7-3.1)	0.301	1.4 (0.7-3.1)	0.348
Incontinence Only	1.8 (1.0-3.4)	0.061	2.0 (1.02-3.7)	0.043
Depression + Incontinence	3.0 (1.7-5.3)	< 0.001	3.0 (1.7-5.5)	< 0.001
Sex				
Male			2.4 (1.4-4.0)	0.001
Age			1.03 (1.01-1.07)	0.019
MS age of onset			0.99 (0.96-1.02)	0.424
MS Medications			-	
Rx 0 (Reference)				
Rx 1			1.1 (0.6-1.9)	0.804
Rx 2			1.2 (0.6-2.4)	0.591

* Adjusted for all variables in the table

Results

- After adjusting for sex, age, MS age of onset, and MS medications:
1. Patients that experience both BD and depression were 3.0 times more likely (OR 95% CI 1.7, 5.5) to experience SD.
2. Patients with only BD were 2.0 times more likely (OR 95% CI 1.02, 3.7) to experience SD.

Results (cont'd)

3. Males were more likely than females to experience SD (OR 2.4; 95% CI: 1.4, 4.0) after controlling for suspected confounders.
4. Similarly, older age was related to an increase in the chances of experiencing SD (OR 1.03; 95% CI: 1.01, 1.07) after controlling for suspected confounders.

Conclusion

- SD is highly prevalent in Hispanic MS patient as seen in other MS populations.
- If BD and depression are present patients are 3 times more likely to experience SD and 2 times more likely if they only have BD.
- Clinicians and practicing neurologists should be aware that if patients complain of depression and/or BD a further assessment for SD should be done given that SD has been associated with poorer quality of life.
- Additional studies are needed to replicate our findings in this and other Hispanic populations.

References

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