

DETERMINANTS OF SEXUAL IMPAIRMENT IN MULTIPLE SCLEROSIS MALE AND FEMALE PATIENTS WITH LOWER URINARY TRACT DYSFUNCTION: RESULTS FROM AN ITALIAN CROSS-SECTIONAL STUDY.

Hypothesis / aims of study

Sexual dysfunction (SD) is prevalent in Multiple Sclerosis (MS) patients and affect quality of life. Furthermore, Lower urinary tract dysfunction (LUTD) is common in patients with MS.

To evaluate the relationship between SD, neurological disability, depression, anxiety and urodynamic alterations in patients with MS and LUTD.

Study design, materials and methods

A prospective cross-sectional study has been performed from January 2011 to September 2013, 135 consecutive patients with MS in remission phase and LUTD underwent first urodynamic examination, according to the ICS criteria. Depression and anxiety were evaluated with the Hamilton Depression Scale (HAM-D) and the Hamilton Anxiety Scale (HAM-A), neurological impairment was assessed using the Expanded Disability Status Scale (EDSS). SD was assessed with the Female Sexual Function Index (FSFI) or the International Index of Erectile Function (IIEF-15).

Multivariate logistic regression analyses were carried out to identify variables for predicting female sexual dysfunction (FSFI < 26.55), male sexual dysfunction (IIEF-15 < 60) or moderate-severe erectile dysfunction (IIEF-EF ≤ 16), after adjusting for confounding factors.

Results

Total IIEF-15 and all sub-domains (all $p < 0.01$), total FSFI, FSFI-arousal, FSFI-lubrication and FSFI-orgasm (all $p < 0.05$) were lower in subjects with EDSS ≥ 4.5. We found inverse relationship between IIEF-15 and relative subdomains with EDSS (all $p < 0.01$) and between FSFI and relative sub-domains with EDSS (all $p < 0.01$), HAM-D (all $p < 0.01$) and HAM-A (all $p < 0.01$). Continuous EDSS (OR= 1.54; $p = 0.03$) and categorical EDSS (≥ 4.5) (OR= 6.0; $p = 0.03$), HAM-D (OR= 4.74; $p = 0.03$) and HAM-A (OR= 4.10; $p = 0.02$) were significantly associated with female sexual dysfunction (FSD) (FSFI < 26.55). Detrusorial Overactivity (DO) was an independent predictor of moderate-severe ED (IIEF-EF ≤ 16) (OR= 2.03; $p < 0.01$) and of FSD (OR= 9.73; $p = 0.04$).

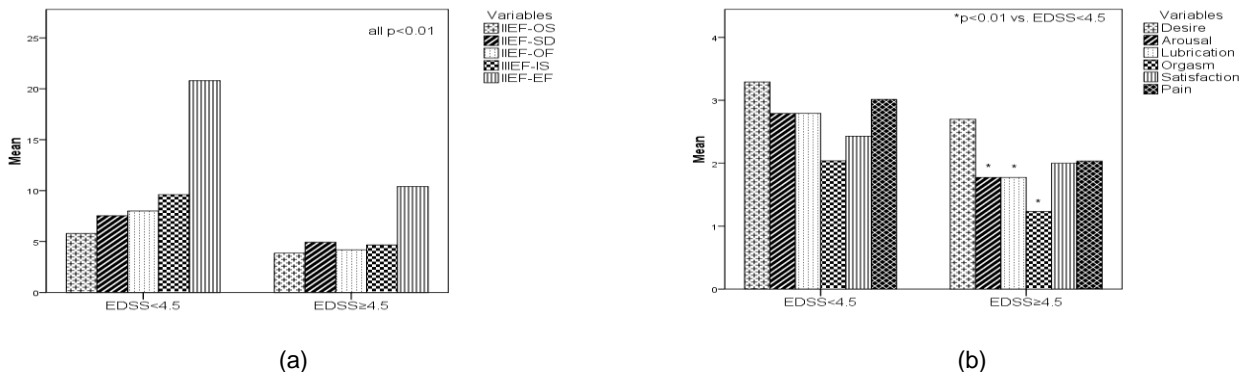


Figure 1. Comparison of the scores of the IIEF-15 (a) and FSFI (b) domains according to the presence of EDSS ≥ 4.5.

Interpretation of results

Patients with neurological disability, depression and DO should be questioned about the presence of sexual or erectile dysfunction. The level of disability should be considered as an important marker of an underlined SD, both in male and female. Further clinical study may better investigate the role of therapy in improving sexual function in male and female MS patients.

Concluding message

The finding of this study suggest that neurological disability, depression and DO should be considered significant factors of sexual dysfunction in multiple sclerosis patients, without of regarding of gender. The presence of an EDSS ≥ 4.5 may significant predict the presence of an underlined sexual dysfunction.

References

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Disclosures

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Table 1. Comparison of demographics, sexual function, depression and anxiety according to presence of neurological impairment (EDSS ≥4.5).

	EDSS<4.5	EDSS ≥ 4.5	p-value
No. of subjects, n (%)	69 (51.1)	66 (48.9)	0.053
Male	30 (43.47)	30 (45.45)	
Female	39 (56.53)	36 (54.55)	
MS Phenotype, n (%)			<0.01
Relapsing Remittant	62 (89.9)	32 (48.5)	
Primary Progressive	2 (2.9)	13 (19.7)	
Secondary Progressive	5 (7.2)	21 (31.8)	
Age, years, median (IQR)	45.0 (40.0-51.0)	49.5 (42.0-56.0)	0.08
Duration of MS, months, median (IQR)	96.0 (36.0-216.0)	198.0 (84.0-270.0)	<0.01
HAM-A, median (IQR)	11.5 (8.0-23.0)	12.0 (9.0-16.0)	0.20
HAM-D, median (IQR)	10.0 (6.0-19.0)	14.0 (10.0-21.0)	0.04
IIEF-15, median (IQR)	52.5 (39.0-62.0)	21.5 (12.0-40.0)	<0.01
IIEF-EF, median (IQR)	21.0 (16.0-25.0)	25.0 (7.5-18.7)	<0.01
IIEF-IS, median (IQR)	9.5 (7.0-11.0)	4.5 (1.0-6.0)	<0.01
IIEF-OF, median (IQR)	9.0 (6.0-10.0)	2.0	<0.01
IIEF-SD, median (IQR)	7.5 (6.0-8.0)	4.0 (2.0-7.0)	<0.01
IIEF-OS, median (IQR)	6.0 (4.0-8.0)	2.0 (2.0-7.0)	<0.01
Male Sexual Dysfunction (IIEF-15<60), n (%)	22 (73.3)	28 (93.3)	0.03
FSFI, median (IQR)	17.2 (2.4-26.8)	11.1 (1.2-25.2)	0.03
FSFI-Desire, median (IQR)	3.0 (2.0-4.8)	2.1 (1.2-3.6)	0.11
FSFI-Arousal, median (IQR)	3.0 (1.2-4.8)	1.95 (0.0-3.9)	0.01
FSFI-Lubrication, median (IQR)	3.6 (0.0-4.8)	1.95 (0.0-3.9)	0.02
FSFI-Orgasm, median (IQR)	2.0 (0.0-3.3)	1.2 (0.0-2.4)	0.02
FSFI-Satisfaction, median (IQR)	2.4 (0.8-4.0)	1.6 (0.0-4.8)	0.12
FSFI-Pain, median (IQR)	1.6 (0.0-6.0)	1.4 (0.0-6.0)	0.06
Female Sexual Dysfunction (FSFI<26.55), n (%)	24 (72.7)	27 (90.0)	0.04
MSISQ Primary Sexual Dysfunction, median (IQR)	15.0 (13.0-16.0)	15.5 (13.0-25.0)	0.01
MSISQ Secondary Sexual Dysfunction, median (IQR)	19.5 (18.0-27.0)	25.0 (19.0-25.0)	<0.01
MSISQ Tertiary Sexual Dysfunction, median (IQR)	12.5 (11.0-15.0)	12.0 (8.0-17.0)	0.60
Detrusorial Overactivity, n (%)	30 (52.6)	42 (75.0)	0.02
Detrusorial Underactivity, n (%)	13 (22.8)	11 (19.6)	0.85
Detrusor sphincter dyssynergia, n (%)	33 (57.9)	37 (66.1)	0.37

EDSS= Expanded Disability Status Scale; HAM-A= Hamilton Depression Scale; HAM-D= Hamilton Anxiety Scale; IIEF-15= International Index of Erectile Function; IIEF-EF= International Index of Erectile Function-Erectile Function; IIEF-IS= International Index of Erectile Function-Intercourse Satisfaction; IIEF-OF= International Index of Erectile Function-Orgasmic Function; IIEF-SD= International Index of Erectile Function-Sexual Desire; IIEF-OS= International Index of Erectile Function-Overall Satisfaction; FSFI= Female Sexual Function Index; MSISQ= Multiple Sclerosis Intimacy and Sexuality Questionnaire