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JOURNAL OF
Novel Physiotherapy and Physical Rehabilitation

ISSN: 2455-5487 DOI: https://dx.doi.org/10.17352/jnppr

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Received: 03 September, 2018
Accepted: 30 September, 2019
Published: 01 October, 2019

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Research Article

Sexual dysfunction in multiple sclerosis: A prospective monocentric Moroccan study

Abstract

Background: Sexuals dysfunctions in multiple sclerosis have been widely described. Their prevalence is estimated at 45%-74% in the female population and 61%-91% in the male population.

Objective: To determine the prevalence of sexual dysfunctions in a multiple sclerosis and associates parameters in Casablanca.

Method of study: It was a mono-centric, prospective, descriptive and analytical study on patients suffering from multiple sclerosis followed in neurology of the CHU Ibn Rochd of Casablanca. The evaluation of sexual dysfunctions was carried out using validated scales, namely the International Index of Erectile Function (IIEF-5) for men and the Female Sexual Function Index (FSFI-6) for women.

Results: The mean age was 37.9±11.7 years with an average duration of MS evolution 6.7±5 years. Clinical forms were remittent 58.2%, progressive remittent 16.4% and progressive form 25.4%. The prevalence of sexual dysfunctions estimated with the total of IIEF-5 was 100% for sexually active men, with FSFI-6 of 53.8% for women and for both sexes 61.1%. The marital status was strongly related to the occurrence of sexual dysfunctions.

Conclusion: Sexuals dysfunctions in multiple sclerosis were common in the sexually active population in Morocco. These dysfunctions were three more likely to occur in men than in women.

Introduction

Multiple Sclerosis (MS) is a demyelinating disease of the central nervous system that results in the formation of multiple sclerosis plaques. It is a very disabling condition, which generates sensory-motor deficits, disorders of coordination, cognitive disorders as well as urinary disorders, bowel and sexual dysfunctions [1-3]. Sexual disorders in multiple sclerosis have been widely described. Their prevalence is estimated at 45%-74% in the female population and 61%-91% in the male population [3-5]. The characteristics of these sexual dysfunctions were decreased desire, excitement, lubrication, orgasm disorders, sexual satisfaction and dyspareunia in women; Erectile dysfunction, sexual desire, dysejaculation, orgasm and sexual satisfaction in men with multiple sclerosis [6-9]. The causes of these sexual disorders are: first the central lesion itself, second motor disability, muscle contractions and spasticity, third urinary disorders, fatigue and finally depression [7-10]. These disorders are associated with impaired quality of life of patients [7]. The objective of this study was to determine the prevalence of sexual disorders in a population of MS in Casablanca and to identify the parameters associated with sexual disorders.

Method of Study

Methods

Type of study: This was a mono-centric, prospective, descriptive and analytical study of all the patients suffering from multiple sclerosis followed in neurology by the CHU Ibn Rochd of Casablanca and whose addresses were communicated for a follow-up and taking care. These patients were called and seen at the Department of Physical Medicine and Functional Rehabilitation of the Ibn Rochd University Hospital of Casablanca, in consultation of neuro-urology from December 2015 to December 2016.

Inclusion criteria: All patients with MS, followed in neurology by the Ibn Rochd University Hospital of Casablanca, were included in this study for their follow-up and neuro-urology management in the Department of Physical Medicine and Functional Rehabilitation.

Citation: Azanmasso H, Kyal N, Moigny Y, Alagnidé E, Obondzo K, et al. (2019) Sexual dysfunction in multiple sclerosis: A prospective monocentric Moroccan study. J Nov Physiother Phys Rehabil 6(2): 020-024. DOI: https://dx.doi.org/10.17352/2455-5487.000065

Non-inclusion criteria: All MS patients who have suffered or have a neurological disorder (stroke, cerebral abscess, brain and, or medullary tumors, peripheral neuropathy) or uro-gynecological (prolapse, prostatic hypertrophy, pelvic tumors) that can cause sexual dysfunctions were excluded from this analysis.

Conduct of the study: The patient list obtained from the CHU Neurology department allowed us to contact a total of 83 patients. Seventeen patients lived far from Casablanca, very handicapped by the pathology, did not have the capacity to move easily. Four patients had died and 7 patients had never answered to our calls or were not at the many appointments. At the neuro-urological consultation, an interrogation and a physical examination made it possible to establish a medical file for the follow-up of each patient. Ages, sex, marital status, occupation, history, duration of development, mode of commencement, type of deficit were collected. The evaluation of sexual dysfunctions was carried out using validated scales, namely the International Index of Erectile Function (IIEF-5) for men and the Female Sexual Function Index (FSFI-6) for women, Expanded Disability Status Scale (EDSS), the Urinary Symptom Symptom (USP) and the Neurogenic Bowel Disorder Scale were systematically administered to all patients. For each parameter of the FSFI-6 and IIEF-5 questionnaires, a rating of greater than or equal to 4 was considered to be an absence of dysfunction. Thus, for the prevalence of sexual disorders was determined as follows: IIEF-5 <20 assert the existence of sexual dysfunction similarly for FSFI-6 <24.

Bowel dysfunction (constipation) and urinary disorders (incontinence, owerbladder activity) were asked.

Statistical analysis of data

The data were collected and analyzed using the Epi Info 2007 software. The comparison between qualitative and quantitative variables was with the ANOVA parametric test. The threshold of statistical significance was below 5%.

Ethical considerations

This analysis had obtained the oral informed consent of the patients. Respect for confidentiality, anonymity and medical confidentiality had been strict during this study. Ethical committee approval was obtained.

Results

Socio-epidemiological, clinical and therapeutic characteristics

The mean age was 37.9±11.7 years with an average duration of MS evolution 6.7±5 years. In terms of marital status, patients were distributed as follows: 47.3% married, 41.8% single, 4 divorced and 2 widowed.

The medical history was fund in 14.5% with high blood pressure (5.4%) and others (9.1%). The surgical history was fund in 18.2% with Caesarean sections (7.3%), digestive surgery (5.4%) and others (5.4%).

The initial mode was a hemiparesia 27.7%, paraparesia 17%, monoparesia 25.5%, retrobulbar optic neuritis 23.4 %. Sociodemographic and clinical data are presented in Table 1.

The quality of patient sexuality was characterized by normal sexual activity 12.7%, sexual inactivity 65.5% and sexual dysfunction 21.8% (Table 1). Data on the distribution of patients by type of sexual dysfunction in the multiple sclerosis

Table 1: Patient Distribution by Sociodemographic and Clinical Patient Data.

	N	%	Average and Median
Age (year)	55		37.9±11.7 36
Sex (ratio)	0.49 1H/2F		
• Male	18	32.7	
• Female	37	67.3	
Profession			
• Housewife	28	50.9	
• Student	3	5.5	
• Artisans	3	5.5	
• Trading	2	3.6	
• Official	3	5.5	
• Without work	16	29.1	
Marital status			
• Single	23	41.8	
• Divorced	4	7.2	
• Widow	2	3.6	
• Married	26	47.3	
Clinical forms			
• MS-PP	14	25.4	
• MS-RP	9	16.4	
• MS-RR	32	58.2	
Duration of evolution (year)			6.7±5 5
[0 ; 5]	26	47.3	
[5 ; 10]	17	30.9	
[10 ; 26]	12	21.8	
EDSS			4.8±2.3 6
[0 ; 3]	16	29.1	
]3 ; 6]	25	45.5	
]6 ; 8.5]	14	25.5	
Clinical data			
• Moteur deficit	41	74.5	
• Sensory deficit	29	52.7	
• Cognitive impairment	33	60	
Sexual disorders			
• Sexual dysfunction	12	21.8	
• Sexual inactivity	36	65.5	
• Normal sexual activity	7	12.7	

MS-PP: Progressive form MS-RP: Remittente progressive form
MS-RR: Remittente form EDSS: Expanded Disability Status Scale

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population are presented in Table 2. The prevalence of sexual dysfunction estimated with the total of IIEF-5 was 100% for sexually active men, with FSFI-6 of 53.8% for women and for both sexes 61.1%. Table 3 presents the parameters associated with sexual dysfunction in multiple sclerosis. The risk of sexual dysfunction and sexual inactivity increased three-fold for men, while marital status was strongly related to the occurrence of sexual dysfunction and sexual inactivity.

Bowel dysfunction (constipation) and urinary disorders (incontinence, owerbladder activity) were found in 76.9% and 84.6% respectively, without influencing the sexual dysfunction respectively p = 0.9 and 0.5.

Discussion

Sexual dysfunction is common in multiple sclerosis [3-9]. These disorders include decreased libido, sexual inactivity, disorders of lubrication and orgasm in women and disorders of erection and ejaculation in men [6-9,11]. One observation is unanimously reported that these dysfunctions are little sought after by the healthcare teams, even though they exist even outside of an important functional handicap [6,7,9,11]. The literature is rich in Moroccan data on the epidemiology, genetics, clinical, therapeutics and quality of life of patients suffering from MS [12-16]. No studies to day on the prevalence and management of sexual dysfunction in this population in Morocco. In Tunisia Ghroubi and al. had found a prevalence of 46.9% with 70% for men and 34% for women [17]. As noted by the authors, this prevalence remains one of the lowest in the literature [3-9,17,18]. In our series, the prevalence was 100% for men and 53.8% for women with 76.9% decline in libido in the female population Table 2. This prevalence is very high in comparison with that reported in Tunisia [17], whereas these two Muslim societies have the same socio-familial and religious realities. The proportions observed in the literature [7,19-22], are comparable to those found in our analysis in both sexes Tables 4,5. Sexual inactivity in multiple sclerosis victims is observed in nearly one-third of men and little than one-third among women [7,17,19]. Sexual inactivity is the result of physical manifestations and sensory-motor deficit [11].

In our study, the age, sex, duration of progression of multiple sclerosis, clinical form, EDSS, motor deficit, sensory or cognitive, bowel dysfunction and urinary disorders were not statistically related to the presence of sexual dysfunction Table 3. Nevertheless, marital status was strongly associated with sexual disorders p = 0.0002. Moreover, the male sex multiplies by 3 the risk of sexual dysfunction [17,19]. Physical, psychosocial, cultural and emotional parameters were reported to be important in the development of sexual dysfunction [7-11]. Similarly, significant hormonal alteration was associated with sexually unrelated disorders [22].

This study allowed us to take stock of the importance of these disorders in order to allow the caregivers to systematically search for them in order to improve the quality of life of patients [11,17,19,22]. The limit of this analysis is the size of

Table 2: Distribution of Patients by Sexual dysfunction types in the Multiple Sclerosis Population.

	N	%	Average Median
	Women		
Desire	10	76.9	2±1 3
Sexual excitation	7	53.8	2.9±1.2 3
Lubrification	3	23.1	3.9±1.7 5
Orgasm	5	38.5	3.5±1.8 4
Sexual satisfaction	6	46.2	3.2±1.5 4
Dyspareunia	7	53.8	2.8±2 3
Sexual inactivity	5	27.8	
	Men		
Erection dysfunction	4	80	3±0.7 3
Penile stiffness disorder	6	100	3.4±0.5 4
dysejaculation	4	80	3±0.7 3
Desire	4	80	3.2±0.4 3
Sexual satisfaction	2	40	3.6±0.5 4
Sexual inactivity	3	37.5	

Table 3: Distribution of Patients by Parameters Associated with Sexual Disorders.

	Sexual	dysfunction	
	N	%	Statistic tests
	Sexual inactivity	Sexual dysfunction	
Single	22 95.7	1 4.3	Chi² = 26.4
Divorced	4 100	- -	Ddl = 6
Widow	2 100	- -	p = 0.0002
Married	8 30.8	11 42.3	
	Age		
Inactivity	8	30.8	49.5±10.3 p = 0.1
Normal sexuality	7	26.9	39.9±9.2
Sexual dysfunction	11	42.3	39.5±11.6
	EDSS		
Inactivity	8	30.8	5±2.9 p = 0.3
Normal sexuality	7	26.9	3.6±2.4
Sexual dysfunction	11	42.3	5.3±2
	Evolution		
Inactivity	8	30.8	7.8±5.5 p = 0.6
Normal sexuality	7	26.9	9±3
Sexual dysfunction	11	42.3	7.2±4.4
Sex	Inactivity	Sexual dysfunction	
Male	3 37.5	5 62.5	Odds ratio = 3.1
Female	5 27.8	6 33.3	95% IC [0.3 ; 28] p=0.3
Formes cliniques	Inactivity	Sexual dysfunction	
MS-PP	3 37.5	4 50	Chi² = 4.8 ddl = 4
MS-RP	- -	2 40	p = 0.3
MS-RR	5 38.5	5 38.5	
	Inactivity	Sexual dysfunction	
Moteur deficit	8 38.1	9 42.9	Chi² = 4.4 ddl = 2 p = 0.1
Sensory deficit	3 25	5 41.5	Chi² = 0.6 ddl = 2 p = 0.7
Cognitive deficit	5 33.3	6 40	Chi² = 0.1 ddl = 2 p = 0.9

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Table 4: Prevalence of Sexual Dysfunction in men.

	Erection (%)	Stiffness (%)	Ejaculation (%)	Desire (%)	Satisfaction (%)	Inactivity (%)
Our study, 2016, Marocco	80	100	80	80	40	37.5
Ghroubi, 2015, Tunisia [17]	91.7	-	50	50	50	41.7
Lew-Starowicz, 2014, Poland [9]	40.5	54.6	17.9	26.8	43.1	-
Tepavcevic, 2008, Serbia [19]	74.2	32.6	77.8	54.8	-	3.2
Nortvedt, 2007, Norway [20]	85.7	-	53.8	69.2	54.5	-
Demirkiran, 2006, Turkey [21]	72.2	64.7	-	63.6	52.9	-

Table 5: Prevalence of Sexual Dysfunction in Women.

	Desire (%)	Excitation (%)	Lubrification (%)	Orgasm (%)	Satisfaction (%)	Pain (%)	Inactivity (%)
Our study, 2016, Marocco	76.9	53.8	23.1	38.5	46.2	53.8	27.8
Ghroubi, 2015 Tunisia [17]	54.5	-	27.3	73	-	27.3	27.3
Lew-Starowicz, 2013, Poland [7]	57.7	45.2	48.4	39.8	43.1	-	29.9
Lombardi, 2011, Italy [22]	38.7	29	29	19.4	100	3.2	-
Tepavcevic, 2008, Serbia [19]	74.4	26.9	38.5	60.3	-	-	15.5
Nortvedt, 2007, Norway [20]	55.9	50	41.2	64.7	35.3	-	-
Demirkiran, 2006, Turkey [21]	63.6	60.5	51.5	66.7	68.3	-	-

our sample. This population is constantly increasing and this will allow for more interesting analyzes later.

Conclusion

Sexual disorders in multiple sclerosis were common in the sexually active population in Morocco. These disorders were three more likely to occur in men than in women. Many factors such as age, sex, deficiency, EDSS, duration of disease, Bowel dysfunction and urinary disorders were not related to sexual disorders. It would have been interesting to do a quantified analysis of depression and anxiety and their treatment in order to assess the impact on the onset of sexual dysfunction.

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