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Original Article

SEXUAL DYSFUNCTION AMONG FEMALE PATIENTS OF RHEUMATOID ARTHRITIS: AN UNDER ADDRESSED PHENOMENON

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ABSTRACT

Objective: To determine the sexual dysfunction among the patients of rheumatoid arthritis and assess the relationship of various factors with presence of sexual dysfunction among the target population.

Study Design: Cross sectional study.

Place and Duration of Study: Rheumatology department, Pak Emirates Military Hospital Rawalpindi Pakistan, from Aug 2019 to Apr 2020.

Methodology: The sample population comprised of 350 married female patients of rheumatoid arthritis between the age of 18 and 45 years, reporting for the routine follow-up at rheumatology department a tertiary care hospital. Sexual function was assessed using the female sexual function index (FSFI). Relationship of age, duration of rheumatoid arthritis, presence of comorbidities and polypharmacy was assessed with the sexual dysfunction among the target population.

Results: Mean age of the study participants was 31.15 ± 4.22 years. Out of 350 women suffering from rheumatoid arthritis screened through female sexual function index, 172 (49.1%) had normal sexual function while 178 (50.9%) had sexual dysfunction. After applying the chi-square test, we found that polypharmacy and long duration of illness had significant association with the sexual dysfunction.

Conclusion: High reporting of sexual dysfunction among the women suffering from rheumatoid arthritis indicates that this has been a neglected phenomenon by the physicians and researchers and may be added in routine screening. Women with long duration of illness and those managed with more than one drugs should be focused more while screening for sexual problems.

Keywords: Female sexual function index, Rheumatoid arthritis, Sexual function.

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INTRODUCTION

Sexual dysfunction may be defined as the inability of a person to experience the sexual arousal or to achieve sexual satisfaction under appropriate circumstances. It may be due to medical or psychological problems[1]. This condition has been seen commonly among women of all ethicnicites[2]. Female Sexual dysfunction (FSD) may occur in any chronic medical condition or physiological disturbance at any phase of life of individual[3,4].

Rheumatoid arthritis has been one of the most commonly diagnosed immunological disorders and involves almost all systems of the body contrary to the mis-understanding that it is merely a joint disease[5]. Due to lack of expert rheumatology services in our country, general physicians or other specialty doctors usually focus on the joint and pain symptoms and patients usually don't receive the holistic care which is necessary for good overall quality of life[6]. Adequate knowledge for all the aspects of disease may equip the physicians better to help the patients and reduce their suffering.

Relationship of chronic diseases with sexual problems have not been a new thing but immune based disorders have usually been discussed less from this point of view. ABDA *et al* in 2016 published an interesting paper with the findings that most of the patients suffering from rheumatoid arthritis (RA) have variety of mental health and sexual problems. Depression, anxiety and adjustment disorder were the common conditions found among RA patients. They found that all domains of sexual function were grossly affected among these patients and disease duration and severity were the main predictors of sexual dysfunction among these patiants[7]. Chancey *et al* in 2019 discussed the types of pain among the women suffering from RA and the psychosocial impact of pain as well. They revealed that majority of the women suffered from a lot of psycho-somatic, psychiatric and sexual problems which made the condition worse and difficult to manage for the treating physician[8]. Study of Puchner *et al* added to the topic in same year by concluding that female sexual problems usually get overlooked in the clinical practice and have a high burden. These underreported sexual problems may

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lead to poor quality of life and holistic approach by the physician may be helpful in managing these problems in addition to underlying RA symptamayology[9].

Rheumatoid arthritis has not been an uncommon disease in our setup. Every year a lot of patients get diagnosed and put on medications for this chronic multisystem disease. A lot of work has been done on clinical and laboratory aspects of this disorder, but we lack holistic approach towards it both from clinical and research point of view. A recent study done on women with arthritis in Lahore concluded that significant correlation exists between depression, anxiety and sexual dysfunction among women with arthritis. They also highlighted the importance of psychological treatment along with the medical treatment for the women with arthritis[10]. We therefore planned and conducted this study with the rationale to determine the sexual dysfunction among the patients of rheumatoid arthritis and assess the relationship of various factors with presence of sexual dysfunction.

METHODOLOGY

This cross-sectional was conducted at rheumatology department of Pak Emirates Military Hospital (PEMH) Rawalpindi, from August 2019 and April 2020. Sample size was calculated by using the WHO sample size calculator and keeping the population prevalence proportion at 66.8%[11]. Screening was performed on rheumatology outpatient department of PEMH Rawalpindi who fulfilled the American College of rheumatology classification criteria of RA12 with age between 18-45 years were included in this study. Non probability consecutive sampling technique was used to gather the required sample size for this study. Patients who had unclear diagnosis or those with RA as part of other broad immunological condition were excluded from the study. Patients with psychological or sexual problems prior to onset of RA (checked by detailed history taking) were also excluded from the study. Patients with recent surgeries of any kind or suffering from any sort of gynecological infections were also excluded from the study. Presence of polycystic ovarian disease or any other endocrine problem was also part of the exclusion criteria. Patients with mastectomy or colostomy were also excluded from the study.

Female sexual function index (FSFI) was the validated tool used to study the sexual function among females in our study. For then on - English understanding patients validated Urdu translation was used[13]. A global sum of "26" or less indicates the sexual dysfunction[14].

Patients were provided with a detailed description of the study and were inducted into the study after written informed consent. Ethics approval with IREB letter no A/124 was obtained before the start of the study. Confounding variables like presence of chronic physical or mental illness or gynecological infectionsor sexual problems prior to the diagnosis of RA were identified by detailed history taking and excluded from the study. The FSFI questionnaire was administered to the women and were asked to answer the questions according to their condition in last two weeks. Socio demographic variables were also collected. Variables in the study included age, duration of RA, Use of polypharmacy (use of more than one drugs to control RA) and medical comorbidities other than exclusion criteria (DM, HTN, Asthma, IHD).

Statistical analysis for this study was performed using Statistics Package for Social Sciences version 24. Characteristics of participants and the distribution of the FSFI score were described by using the descriptive statistics. Participants were resulted by categorical compared by normal sexual function v/s sexual dysfunction. Chi-square test was done to evaluate factors related to sexual dysfunction and extent of the relationship in the target population. Differences between groups were considered significant if *p*-values were less than or equal to 0.05.

RESULTS

A total of 350 married women with RA were included in the study after the application of inclusion /exclusion criteria. Mean age of the study participants was 31.15 ± 4.22 years. Mean duration of illness was 3.58 ± 1.297 years. Out of these 350 women suffering

Table-I: Characteristics of patients included in the study.

Factors	
Age (years)	
Mean ± SD	31.15 ± 4.217
Range (min-max)	19 - 44 years
Mean duration of illness	3.58 ± 1.297 years
Presence of Sexual Dysfunction	
Yes	178 (50.9%)
No	172 (49.1%)
Polypharmacy	
Yes	123 (35.2%)
No	227 (64.8%)
Presence of Comorbidities	
No	280 (80%)
Yes	70 (20%)

from rheumatoid arthritis screened through FSFI, 172 (49.1%) had normal sexual function while 178 (50.9%) had sexual dysfunction. Table-I shows general characteristics of study participants. Table-II shows that after applying the chi-square test, polypharmacy and long duration of illness held this strong association with sexual dysfunction (p-value <0.05) while age and presence of comorbidities had no statistically significant relationship with the dependent variable in the study.

Table-II: Pearson chi-square analysis: Factors related to sexual dysfunction among the women suffering from rheumatoid arthritis.

Factors	Subjects with normal sexual function	Subjects with sexual dysfunction	*p*-value
Age			
≤35 year	149 (86.7%)	146 (82.1%)	0.236
>35 year	23 (13.3%)	32 (17.9%)	
Presence of Comorbidities			
No	133 (77.3%)	147 (82.2%)	0.219
Yes	39 (22.7%)	31 (17.8%)	
Polypharmacy			
No	122 (70.9%)	105 (58.9%)	0.019
Yes	50 (29.1%)	73 (41.1%)	
Duration of Illness			
<5 years	103 (59.8%)	71 (39.9%)	<0.001
≥5 years	69 (40.2%)	107 (60.1%)	

DISCUSSION

Physiological functions of the body like eating sleeping and sexual function may alter in any chronic medical condition either due to pathophysiology of condition or medications used or psychosocial aspects of the illness. Traditionally used biomedical model only focused on limited aspects of the disease but holistic model covers all the dimensions of illness and focus on overall quality of life of n individual. Rheumatoid arthritis has been one of the most commonly encountered immune based inflammatory conditions which almost affect all he systems of the body[15]. Sexual function has physiological, psychological and endocrine basis which may get altered either with immune based process of RA or the medication used. We planned this study with the rationale to determine the sexual dysfunction among the patients of rheumatoid arthritis and assess the relationship of various factors with presence of sexual dysfunction among the target population.

Boone *et al* in 2019 published a study with objective to look for the presence of sexual problems among female patients suffering from rheumatoid arthritis, psoriatic arthritis (PsA) and health controls. They concluded that though a high percentage of healthy controls (44%) suffered from sexual dysfunction as well but this problem was significantly found more among patients with rheumatoid and psoriatic arthritis. Disease activity in both diseases was associated with presence and severity of sexual dysfunction. Sexual dysfunction also emerged as predictor of poor health related quality of life among patients of both types of arthritis included in the study[16]. We did not include patients of psoriatic arthritis and studies health related quality of life but regarding RA our results were quite comparable with the results of Boone *et al* as a huge percentage of our study participants had sexual problems.

A study from Tunisia published in 2019 by Alia *et al* evaluated sexual problem among females suffering from RA in Tunisia in case-control design. Patients with RA had almost double the prevalence of sexual problems as compared to the healthy controls. They studied individual components of sexual cycle and female sexual function index and almost all the items were affected more in patients of RA as compared to the controls[17]. We did not analyze the domains of FSFI individually but overall sexual dysfunction was found in 50.1% of the patients comparable to 49.3% in study of Alia *et al*.

Costa *et al* in 2015 determined the sexual function rather dysfunction among women with RA. The differentiating theme of their study was that they only included new onset cases i.e. those with <1 year of diagnosis of rheumatoid arthritis. More than 75% of their patients suffered from sexual dysfunction which was really alarming as usually sexual health is not the area of focus for the treating physician and focus is mainly laid on the pain symptoms[18]. More than half of our patients had sexual dysfunction when screened on FSFI but still our results were quite less than Costa *et al*.

Khnaba *et al* in 2016 in a similar study concluded sexual problems were common among the patients suffering from RA as compared to the controls. Presence of clinical depression and inadequately managed pain were the factors related to presence of sexual dysfunction among their study participants[19]. Ours was not a case control study so comparison was not made but still high frequency of sexual dysfunction among the women suffering from RA support the results generated by Khnaba *et al*.

LIMITATION OF STUDY

One major limitation of our study has been the use of self-reported screening tool for assessing the

sexual dysfunction. Under reporting or over reporting of symptoms may occur on the self-reporting tools. Some comorbid conditions were part of exclusion criteria and some were studied as an independent variable in the final analysis. History taking was the only source to ascertain these conditions. Medical records or fresh investigations were not carried out to confirm the comorbid conditions among the study participants. Future studies may address these limitations and generate results which could be generalized to the local population.

CONCLUSION

High reporting of sexual dysfunction among the women suffering from rheumatoid arthritis indicates that this has been a neglected phenomenon by the physicians and researchers and may be added in routine screening. Women with long duration of illness and those managed with more than one drugs should be focused more while screening for sexual problems.

CONFLICT OF INTEREST

This study has no conflict of interest to be declared by any author.

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