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Assessment of Quality of Sexual Life in Male Patients with Psoriasis

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Abstract

Introduction: ***Psoriasis is a global burden of disease characterized by the presence of well circumscribed erythematous papule & plaque of various size & shape, covered by silvery scales. It not only hampers the quality of life but also hampers the sexual function. Men who have psoriasis may be more likely to have sexual problems, such as sexual apathy, orgasmic dysfunction, erectile dysfunction (ED), etc. Stress tends to be a triggering or aggravating factor in psoriasis. In addition, the disease itself can generate emotional stress because of its lesions. It is thought that chronic inflammation results in metabolic diseases and proinflammatory cytokines give rise to the development of atherogenesis. Pelvic arterial atherosclerosis is another cause of sexual dysfunction. This study was designed to determine the impact of moderate to severe psoriasis on quality of life and sexual dysfunction in male patients.***

Methods: ***This case control study was conducted in Department of Dermatology and Venereology, Dhaka Medical College Hospital, among the 100 patients. Group-A was cases (male married patients age between 24 years and 60 years with history of moderate to severe psoriasis) and group-B were control (male married patients age between 24 years and 60 years without psoriasis). Then variables were analyzed and compared. Data was processed and analyzed with the help of computer program SPSS and Microsoft excel. Quantitative data expressed as mean and standard deviation and qualitative data as frequency and percentage. Comparison was done by tabulation and graphical presentation in the form of tables, pie chart, graphs, bar diagrams, histogram & charts etc.***

Results: ***It was found that majority of the patients i.e. 46% were between 34-43 years, mean age was found to 41.7±11.3 years. No significant difference in age and other demographic profile was observed between groups. Prevalence of IHD (8.0%), stroke (14.0%), dyslipidaemia (54.0%), neuropathy (26.0%) and PVD (8.0%) were higher in case or psoriatic patients. On evaluation of Dermatology Life Quality Index (DLQI), majority of patients (54%) score was 6-10, followed by 24.0% had score 2-5 and 22.0% of patients had score 11-20 or very large effect on patient's life. Prevalence of erectile dysfunction was 36.0%, prevalence of orgasmic dysfunction was 24.0%. On multivariate analysis which was done by ordinal logistic regression procedure. The attributes found to be positively associated with sexual dysfunction severity in the multivariate model were patient's age, disable status, sedentary work, duration of illness, etc.***

Conclusion: ***Erectile dysfunction and orgasmic dysfunction are common in psoriatic male patients. There is association with other comorbidities.***

Key words: ***Psoriasis, sexual dysfunction.***

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Introduction

Psoriasis is a chronic inflammatory skin disease with multisystemic involvement. The development of this autoimmune disorder depends on a complex interplay of genetic and environmental factors. It is associated with psychosis, stress related complication, hormonal imbalance[1]. Psoriasis affects about 0.1-3% of world's population and causes significant morbidity[2]. The clinical presentation can be variable and often makes clinical diagnosis difficult.

In the immunological mediated process involved, the epidermal keratinocytes and mononuclear leukocytes lead to the formation of the psoriatic lesion[3]. The peripheral HTA axis of the skin modulates inflammatory mediators in response to stress and stress-related hormones that influence the disease development and the response to treatment. Besides stress, other endogenous factors with impact upon psoriasis are allergies and hormones[4]. Sex hormones and prolactin seem to have a major role in psoriasis pathogenicity,

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while glucocorticoids, epinephrine, thyroid hormones and insulin may influence psoriasis clinical manifestations[5]. Several comorbid conditions, like cardiovascular disease (hypertension, prothrombotic state, and atherogenic dyslipidemia), metabolic syndrome (in which the main pathogenic factor is obesity with risk of developing insulin-resistance), nonalcoholic fatty liver disease and diabetes mellitus also common in psoriasis[6]. Sexual dysfunction is an important complication of psoriasis.

According to the WHO, sexual health is not merely the absence of disease. Sexual dysfunction may be present in 40.8% of psoriasis patients. The moderate prevalence of psoriatic lesions in the genital area (35%–42%) does not explain the alarming prevalence of sexual dysfunction. Other factors, such as anxiety, depression, and also psoriasis treatment may contribute to its development. Likewise, atherosclerosis of the pelvic vasculature is involved in the pathogenesis of erectile dysfunction. Risk factors for erectile dysfunction tend to be confused with the comorbidities seen in psoriasis patients[4].

A pioneering study conducted in 1997 showed sexual dysfunction to be present in 40.8% of psoriasis patients, even after controlling for potential confounders such as alcohol consumption and depression. Although other studies followed[7], and despite the fact that a fourth of all psoriasis sufferers, both men and women, report a reduction in their sexual activity after developing the disease, the effect of psoriasis on sexual health remains to be fully clarified[8]. Other skin disorders such as lichen simplex chronicus, chronic hand eczema, vitiligo, and chronic urticaria have also been associated with a greater risk of sexual dysfunction. The Dermatology Life Quality Index includes a question that evaluates the extent to which an individual's skin disorder has caused him or her sexual difficulties in the preceding week. Psoriasis and hidradenitis suppurativa have been shown to be among the five skin disorders for which the highest scores are obtained for that specific question[9].

The effect of psoriasis on sexual health may be linked to several factors, including the detrimental effect of the condition on the individual's physical appearance, decreased libido, and the inconvenience caused both by skin desquamation and by topical treatment[10]. In men with psoriasis and erectile dysfunction, these risk factors may be overlooked due to the presence of a sedentary lifestyle and associated comorbidities such as dyslipidemia, hypertension, diabetes, obesity, metabolic syndrome, and depression[11].

The treatment of psoriasis and its comorbidities can have a negative effect on sexual health. Although there are few studies on the subject, topic and systemic treatment for psoriasis can be considered a trigger of male and female sexual dysfunction. As topical medications used in psoriasis vulgaris can also be used in genital psoriasis, attention should be paid to minimize the risks of irritation and toxicity[4]. Early detection and proper evaluation can reduce the burden of sexual dysfunction in psoriasis. Therefore, aim of this study was to determine the impact of moderate to severe psoriasis on quality of life and sexual dysfunction in male patients

Methods

This case control study was conducted in Department of Dermatology and Venereology, Dhaka Medical College Hospital, Dhaka. The study involving a series of 100 patients, 50 case and 50 control. Inclusion criteria for patients are age more than 18 years, disease duration of at least six months. An informed consent was taken from all patients and patient characteristics recorded on a standard proforma. Information sheets for the patients included age, weight, height, body mass index (BMI), residence, occupation, history of any chronic disease, smoking habits, drug history, blood pressure, age of onset and duration of the disease. Then clinical feature and frequency of sexual function was evaluated by International Index of Erectile Function (IIEF). Common predisposing factors, etiology was assessed meticulously. Statistical analysis of the data was done using statistical processing software (SPSS) and Microsoft Excel. Quantitative data expressed as mean and standard deviation and qualitative data as frequency and percentage. Comparison was done by tabulation and graphical presentation in the form of tables, pie chart, graphs, bar diagrams, histogram & charts etc.

Results

Total of 100 patients fulfilling inclusion/exclusion criteria were studied. Results and observations are given below:

Table I

Age distribution of patients (n=100)

Age (years)	Number of patients Group A (n=50)	Group B (n=50)	Total	P-value
24-33	19(38%)	20(40%)	39.0	
34-43	25(50%)	21(42%)	46.0	
44-53	5(10%)	8(16%)	13.0	0.974
54-60	1(2%)	1(2%)	2.0	
Mean ±S.D.	41.7±11.3			

Table-II

Evaluation of co-morbidity (n=100)

Co-morbidity	Number of patients Group A (n=50)	Group B (n=50)	P-value
Hypertension	32 (64.0)	12 (24.0)	<0.001
IHD	4 (8.0)	0 (0.0)	<0.001
Nephropathy	0	0 (0,0)	0.000
Stroke/ TIA	7 (14.0)	0 (0.0)	<0.001
Dyslipidaemia	27 (54.0)	12 (24.0)	0.003
Neuropathy	13 (26.0)	0 (0.0)	<0.001
PVD	4 (8.0)	0 (0.0)	0.086
Smoking	19 (38.0)	32 (64.0)	0.001

Table-III

Clinical parameters by patient category (n=100)

Variables	Patient category	Mean±SD	P-value
Duration of	Group A	11.44±6.38	<0.001
illness (yrs)	Group B	2.78±0.31	
Body Mass	Group A	23.71±3.43	0.326
Index	Group B	24.20±2.15	
IIEF scoring	Group A	13.77±6.19	<0.001
	Group B	28.26±1.41	
Waist circum-	Group A	85.6±9.80	0.454
ference (cm)	Group B	86.2±5.54	

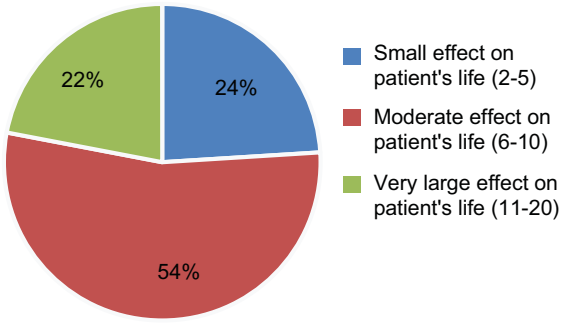

Fig.-1: *Assessment of Dermatology Life Quality Index (n=50)*

Table-IV

Assessment of sexual function according to IIEF index (n=50)

Sexual function variables	Score	Group-A	Group-B
Erectile function	25-30	32	43
	19-24	3	7
	13-18	9	0
	7-12	6	0
	0-6	0	0
	Mean score	10.2	28.7
Orgasmic function	9-10	38	50
7-8	0	0	
	5-6	7	0
	3-4	5	0
	0-2	0	0
	Mean score	5.1	10.0
Sexual desire	9-10	38	50
	7-8	2	0
	5-6	6	0
	3-4	4	0
	0-2	0	0
	Mean score	5.9	10.0
Intercourse	13-15	33	45
satisfaction	10-12	3	4
	7-9	8	1
	4-6	6	0
	0-3	0	0
	Mean score	5.4	12.7
Overall	9-10	28	32
satisfaction	7-8	10	13
	5-6	7	5
	3-4	5	0
	0-2	0	0
	Mean score	4.2	8.7

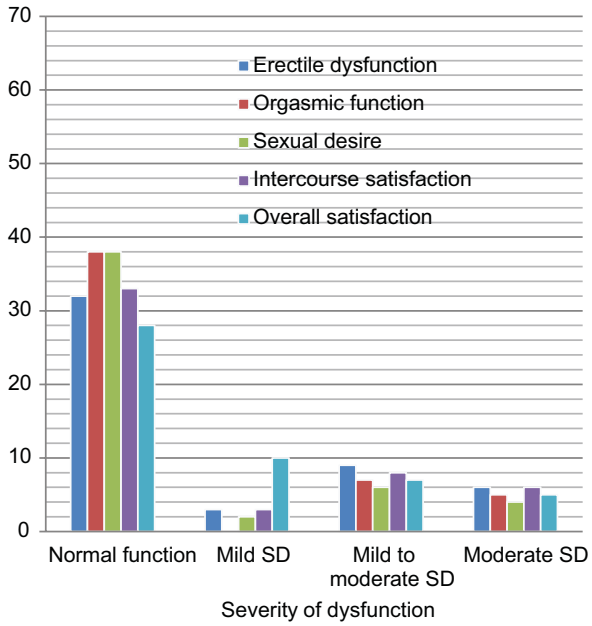

Fig.-2: *Frequency and pattern of sexual dysfunction in psoriasis patients (n=50)*

Table I demonstrated the age distribution of patients. No significant difference in age was observed between groups. Majority of the patients i.e. 46.0% were between 34-43 years, mean age was found to 41.7±11.3 years (Table I).

It was noted that about 64.0% of patients of group A were suffering from high blood pressure. This percentage in group B was about 24.0%. Prevalence of IHD (8.0%), stroke (14.0%), dyslipidaemia (54.0%), neuropathy (26.0%) and PVD (8.0%) were higher in group A. Significant association was found between smoking status and psoriasis (p=0.001). (Table II).

Table III shows that on an average patient of group A was suffering from psoriasis for 11.44 years while this value in group B was 2.78 years. BMI and waist circumference were more in group A which was not significant. Mean IIEF-15 scoring was significantly lower in group A (p value <0.001).

The DLQI was calculated by summing the score of each question resulting in a maximum of 30 and a minimum of 0 (figure-1). The higher the score, the more quality of life is impaired. In this study, majority of patients (54%) score was 6-10, followed by 24.0% had score 2-5 and 22.0% of patients had score 11-20 or very large effect on patient's life

Table IV shows the sexual function according to IIEF index. The International Index of Erectile Function (IIEF) is a widely used, multi-dimensional self-report instrument for the evaluation of male sexual function. It has been recommended as a primary endpoint for clinical trials of erectile dysfunction (ED) and for diagnostic evaluation of ED severity. This study summarizes sexual dysfunction in psoriasis patients. The IIEF meets psychometric criteria for test reliability and validity, has a high degree of sensitivity and specificity, and correlates well with other measures of treatment outcome. It has demonstrated that in this study prevalence of erectile dysfunction was 36.0%, orgasmic dysfunction was 24.0%, sexual desire in 24.0%, distorted Intercourse satisfaction in 34.0% and overall satisfaction impairment in 44.0% of patients. On conjunction & interrogation of function domain, total sexual dysfunction was 22.0% of psoriatic patients.

Figure 2 shows the frequency and pattern of sexual dysfunction in psoriasis patients. In this study 18(36.0%) patients observed erectile dysfunction, among them 3 cases had mild ED, 9 cases mild to moderate and 6 cases found moderate ED. Similarly, orgasmic dysfunction (OD) was noted in 12 cases, among them 7 cases mild to moderate and 5 cases found moderate OD. Prevalence of sexual desire lost was 12 cases, among them 2 cases had mild form, 6 cases mild to moderate and 4 cases found moderate form. In this study Prevalence of distorted Intercourse satisfaction were 17 patients, among them 3 cases had mild, 8 cases mild to moderate and 6 cases found moderate. Prevalence of overall satisfaction impairment was 22 patients, among them 10 cases had mild form, 7 cases mild to moderate and 5 cases found moderate overall satisfaction impairment.

Discussion

Our study design raises a number of important methodological issues, including patient selection, sample size and the prospective identification of quality of life and sexual dysfunction, all of which may exert a powerful influence on the results. A total of 100 patients fulfilling inclusion/exclusion criteria were studied. Majority of the patients i.e. 46% were between 34-43 years, mean age was found to 41.7±11.3 years. It was noted that about 64.0% of patients of were suffering from high blood pressure. Prevalence of IHD (8.0%), stroke (14.0%), dyslipidaemia (54.0%), neuropathy (26.0%) and PVD (8.0%) were higher in psoriatic patients.

Findings consistent with result of other[3] study. In a study out of 42 cases of psoriasis 24 (57.14%) were males, 18 (42.86%) were females with male to female ratio of 1.33:1. Mean age was 34.45 years. Maximum number of cases 22 (52.38%) were encountered in 3rd and 4th decade of life[3]. Another study reported that male to female ratio 1.2:1 and maximum cases were in the age group of 21-50yrs[2]. The medical history section or case history of a patient starts by noting the patients' gender and age. Psoriasis is considered equally prevalent in both sexes, even if some studies indicated that the disease is more common in men[12].

Present study demonstrated that prevalence of erectile dysfunction was 36.0%, orgasmic dysfunction was 24.0%, sexual desire in 24.0%, distorted Intercourse satisfaction in 34.0% and overall satisfaction impairment in 44.0% of patients. On conjunction &interrogation of function domain, total sexual dysfunction was 22.0% of psoriatic patients. Components of metabolic syndrome, sedentary lifestyle, prolong duration of illness, microvascular complications, IHD and dyslipidaemia and other atherosclerotic disease were found significant factors for sexual dysfunction.

Previous study reported that sexual dysfunction may be present in 40.8% of psoriasis patients[4]. Factors, such as anxiety, depression, and also psoriasis treatment may contribute to its development. Likewise, atherosclerosis of the pelvic vasculature is involved in the pathogenesis of erectile dysfunction. Risk factors for erectile dysfunction tend to be confused with the comorbidities seen in psoriasis patients[13].

The part of the body affected by psoriasis may play an important role in the development of sexual dysfunction, with skin lesions on the genital areas, thighs, abdomen, and back being significantly associated with sexual dysfunction[14]. The baseline data of a trial showed a prevalence of psoriatic lesions in the genital area of 35% and 42%[15]. Some authors have argued that genital lesions alone do not directly hamper sexual function but may rather cause sexual distress in women, who tend to feel less physically attractive because of their skin lesions[16].

The severity of psoriasis may also contribute to sexual dysfunction. Overall, sexual dysfunction was reported in 31.6% of a population of patients with psoriasis[4]. Although not statistically significant, the proportion of dysfunction was greater in those with severe psoriasis compared to those with mild or moderate forms of the disease[17]. Likewise, patients who achieved a greater improvement, as evaluated by the Psoriasis Area and Severity Index, experienced a greater reduction in the sexual difficulties caused by psoriasis[18] suggesting an association between the severity of psoriasis and sexual dysfunction.

Depression was proposed as a crucial psychological link between psoriasis and sexual dysfunction. The prevalence of anxiety and depression was found to be higher in psoriasis patients compared to the general population[19].

It can be explained by the fact that psoriasis can result in changes to the individual's perception of body image, feelings of low self-esteem, perceived stigmatization, and loss of confidence, which can lead to sexual dysfunction irrespective of depression. Early detection of predisposing factors and adequate management reduced the burden of psoriasis complication like sexual dysfunction.

Conclusions

This case control study was conducted to determine the impact of moderate to severe psoriasis on quality of life and sexual dysfunction in male patients. In this study prevalence of erectile dysfunction & overall satisfaction impairment was predominant sexual dysfunction. Middle age group commonly affected and several risk factors e.g., HTN, IHD, stroke, dyslipidaemia, neuropathy and PVD predisposed the erectile dysfunction in psoriasis patients.

Recommendation

Several hypotheses have been raised to explain the relationship between psoriasis and sexual dysfunction, both of which represent independent risk factors for cardiovascular disease, atherosclerosis and metabolic abnormalities. Therefore, a broader investigation into sexual and cardiovascular health should be incorporated as routine by clinicians and dermatologists when treating a patient with psoriasis, with the comorbidities known to be present in these patients also being taken into consideration.

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