

STUDYING THE SOCIODEMOGRAPHIC AND CLINICAL PATTERN OF VULVAL DERMATOSES AND ITS IMPACT ON QUALITY OF LIFE

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ABSTRACT

Background: Vulval dermatoses can have various presentations from being asymptomatic to showing a chronic associated disability. It is difficult to evaluate and manage the genital dermatoses owing to the physical disease expression and its multifactorial nature which severely affects the quality of life in affected subjects.

Aim: The present clinical study was aimed to study the sociodemographic and clinical pattern in vulval dermatoses and its impact on quality of life with DLQI (dermatology life quality index).

Methods: The study assessed female subjects from all age groups having vulval lesions. Depending on the site assessed, lesions were categorized as oro-genital and skin lesions, oro-genital lesions, genital and skin lesions, and genital lesions alone. DLQI questionnaire was used to assess DLQI scores and quality of life.

Results: Among 260 subjects, the majority of the participants were in the age range of 31-40 years with 33.8% (n=88) subjects, were illiterate 49.61% (n=129), housewives 82.69% (n=215), and married with 91.92% (n=239) study subjects respectively. In the majority of study subjects, the chief complaint reported was itching in 43.07% (n=112) of study subjects. The vulval dermatoses were most commonly diagnosed as infections followed by inflammatory and immunobullous disease in 76.92% (n=200), 15% (n=39), and 1.53% (n=4) study subjects respectively. Significantly higher DLQI scores were seen in subjects with oral. Skin and genital involvement with $p < 0.05$ and the highest mean DLQI scores were seen in subjects with immunobullous disorders.

Conclusion: The study concludes that subjects with oral, skin, and genital lesions have the highest DLQI scores having a high impact on their quality of life. It is vital to assess the impact

of disease on their quality of life as it helps in better disease management and decreases the disease duration.

Keywords: dermatoses, Dermatology life quality index, orogenital lesions, vulval dermatoses.

INTRODUCTION

The vulva and external genitalia in a female comprise of the Bartholin glands, vestibule, clitoris, mons pubis, labia minora, and labia majora.¹ Vulval dermatoses are a highly prevalent medical condition affecting females of all age groups globally including Indian females. Vulval dermatoses present as a difficult entity as they have varied manifestations from being completely asymptomatic to presenting as a chronic disability condition.²

The classical features of dermatoses presenting commonly are different from the dermatoses in the genitals owing to the frictional, moist, and warm environment in the vulva. Also, the vulva is frequently exposed to irritating elements including vaginal secretions, feces, and urine. The vulva is usually not assessed by self as it is a difficult examination site.³ Also; affected subjects usually have hesitation to get medical treatment with genital lesions that can lead to fear and anxiety, which in turn, affects the quality of life concerning the disturbed sexual functions and increase morbidity.⁴

The DLQI (dermatology life quality index) is a questionnaire to assess the quality of life. DLQI is a reliable, fast, and validated tool that accurately measures the impact of dermatological diseases on the quality of life in affected subjects. Concerning its scoring, a DLQI score of >10 depicts a severe impact on the quality of life of subjects being assessed using the DLQI questionnaire.⁵

The presence of vulval diseases in Indian females is not an uncommon finding. However, the importance of these diseases, their reporting, and their frequency are underestimated. The physical expression of the disease on the vulva and the multifactorial nature of the symptoms further complicates the assessment and management of the dermatoses on the genitals.⁶

The literature data on vulval dermatoses are scarce globally with further very limited data on females in the Indian scenario affected with vulval dermatoses and its impact on the quality of life in affected females.⁷ Hence, the present study aimed to study the sociodemographic and clinical pattern in vulval dermatoses and its impact on quality of life with DLQI (dermatology life quality index).

MATERIALS AND METHODS

The present cross-sectional clinical study aimed to study the sociodemographic and clinical pattern in vulval dermatoses and its impact on quality of life with DLQI (dermatology life quality index). The study was done at Department of Dermatology, Venereology and Leprosy after the clearance was given by the concerned institutional ethical committee. The study population was recruited from the female subjects reporting to the Department of Dermatology of the Institute with vulval dermatoses. The study assessed females from all age groups after taking informed consent in both written and verbal format.

After the inclusion of the study females, detailed history was recorded for all the subjects followed by socio-demographic data. This was followed by a detailed clinical examination of the external genitalia in the affected subjects. The examination was performed under appropriate privacy along with per speculum and vaginal examination. All the findings were recorded. The examination of the perianal, perineal, nail, hair, scalp, and oral mucosa was also done.

Any other site if involved with the dermatoses was further assessed. After a comprehensive assessment of all the affected sites, the lesions were classified into various categories as skin lesions, oro-genital and skin lesions, oro-genital lesions, genital and skin lesions, and genital lesions alone.

This was followed by adequate blood investigations and recording of the associated comorbidities. To establish the final diagnosis, Grams stain, Tzanck smear, dark ground microscopy, wet mount, and KOH (potassium hydroxide) mount staining were performed as and when required. In cases, where indicated, a biopsy was performed. In all the study subjects, the DLQI questionnaire was used to assess the quality of life, and scoring was done. The DLQI scores ranged from 0 to 30 and their correlation was done with socio-demographic and clinical data.

The data gathered were analyzed statistically using SPSS software version 20 (IBM SPSS, IBM, Armonk, NY, USA. 2018). The statistical tests used to analyze the data were t-tests, Spearman's correlation test, and one-way analysis of variance (ANOVA). The level of significance was kept at a p-value of <0.05.

RESULTS

The present cross-sectional clinical study aimed to study the sociodemographic and clinical pattern in vulval dermatoses and its impact on quality of life with DLQI (dermatology life quality index). The study assessed 260 female subjects with vulval dermatoses. The majority of the participants were in the age range of 31-40 years with 33.8% (n=88) subjects followed by 28.84% (n=75) subjects in the age of 21-30 years, 22.69% (n=59) subjects in 41-50 years of age range, 8.07% (n=21) subjects from age of more than 50 years, and least 6.53% study females were of age less than 20 years. Most of the study females were housewives with 82.69% (n=215) study subjects followed by working females with 8.84% (n=23) study females and the least, 8.46% (n=22) females were students in the present study. Concerning education, the majority of the study females were illiterate with 49.61% (n=129), followed by 20.38% (n=53) females that had school level education, graduation in 11.53% (n=30) study subjects, postgraduation in 10% (n=26) study subjects, and primary schooling in 8.46% (n=22) study subjects respectively. Most, 91.92% (n=239) study females were married, whereas, 8.07% (n=21) females were unmarried as shown in Table 1.

On assessing the frequency of distribution for vulval dermatoses in the present study, it was seen that the majority of the dermatoses were infectious in 77.30% (n=201) study subjects followed by inflammation in 15% (n=39) study subjects, others in 3.07% (n=8) study subjects, skin tags in 2.69% (n=7), immunobullous in 1.53% (n=4) study subjects, and pigmentation in 0.76% (n=2)

study subjects respectively. Among infections, the most common infection was fungal followed by viral, and bacterial in 51.15% (n=133), 18.07% (n=47), and 8.07% (n=21) study subjects respectively. Among inflammatory dermatoses, the most common was lichen sclerosus in 8.46% (n=22) subjects followed by lichen simplex chronicus in 5% (n=13), eczema in 0.76% (n=2) subjects, and lichen planus and Crohn's disease in 0.38% (n=1) study subjects each. Immunobullous dermatoses were Hailey-Hailey disease, lichen planus pemphigoides, bullous pemphigoides, and pemphigus vulgaris in 0.38% (n=1) study subjects each. In other dermatoses, foreign body-induced vaginal discharge and vulvodynia were seen in 1.15% (n=3) females each, and Lymphangiectasia and acute vulval edema in 0.38% (n=1) study subject each (Table 2).

For the sites involved, genital alone was involved in 78.84% (n=205) study subjects which was the most commonly involved site followed by genital and skin involvement in 18.07% (n=47) study subjects, genital, skin, and oral involvement in 2.30% (n=6) study subjects, and genital and oral involvement in 0.76% (n=2) study subjects which were the least commonly involved site as depicted in Table 3.

The mean DLQI was highest in subjects with genital, skin, and oral involvement at 17.85 followed by 13.22 in subjects with genital and skin involvement, 13.14 in subjects with genital involvement alone, and least in subjects with genital and oral involvement at 12.98. The difference was statistically significant with $p < 0.001$ as shown in Table 3.

DISCUSSION

The present clinical study assessed 260 female subjects with vulval dermatoses. The majority of the participants were in the age range of 31-40 years with 33.8% (n=88) subjects followed by 28.84% (n=75) subjects in the age of 21-30 years, 22.69% (n=59) subjects in 41-50 years of age range, 8.07% (n=21) subjects from age of more than 50 years, and least 6.53% study females were of age less than 20 years. Most of the study females were housewives with 82.69% (n=215) study subjects followed by working females with 8.84% (n=23) study females and the least, 8.46% (n=22) females were students in the present study. Concerning education, the majority of the study females were illiterate with 49.61% (n=129) females followed by 20.38% (n=53) females that had school level education, graduation in 11.53% (n=30) study subjects, postgraduation in 10% (n=26) study subjects, and primary schooling in 8.46% (n=22) study subjects respectively. Most, 91.92% (n=239) study females were married, whereas, 8.07% (n=21) females were unmarried. These characteristics were similar to the studies of Shinde G⁸ in 2017 and Singh G et al⁹ in 2016 where authors assessed subjects with demographic data comparable to the present study.

Concerning the frequency of distribution for vulval dermatoses in the present study, it was seen that the majority of the dermatoses were infectious in 77.30% (n=201) study subjects followed by inflammation in 15% (n=39) study subjects, others in 3.07% (n=8) study subjects, skin tags in 2.69% (n=7), immunobullous in 1.53% (n=4) study subjects, and pigmentation in 0.76% (n=2) study subjects respectively. Among infections, the most common infection was fungal followed by viral, and bacterial in 51.15% (n=133), 18.07% (n=47), and 8.07% (n=21) study subjects

respectively. Among infections, the most common was lichen sclerosus in 8.46% (n=22) subjects followed by lichen simplex chronicus in 5% (n=13), eczema in 0.76% (n=2) subjects, and lichen planus and Crohn's disease in 0.38% (n=1) study subjects each. Immunobullous dermatoses were Hailey-Hailey disease, lichen planus pemphigoides, bullous pemphigoides, and pemphigus vulgaris in 0.38% (n=1) study subjects each. In other dermatoses, foreign body-induced vaginal discharge and vulvodynia were seen in 1.15% (n=3) females each, and Lymphangiectasia and acute vulval edema in 0.38% (n=1) study subject each. These results were consistent with the results of Agarwal S et al¹⁰ in 2014 and Gokdemir G et al¹¹ in 2005 where the most commonly found dermatoses were infectious and inflammatory lesions where most common infections were fungal as seen in the results of the present study.

On assessing the sites involved, genital alone was involved in 78.84% (n=205) study subjects which was the most commonly involved site followed by genital and skin involvement in 18.07% (n=47) study subjects, genital, skin, and oral involvement in 2.30% (n=6) study subjects, and genital and oral involvement in 0.76% (n=2) study subjects which were the least commonly involved site. These findings were in agreement with the previous data by Pathak D et al¹² in 2011 and Stewart KMA¹³ in 2012 where the most common site involved in vulvar dermatoses was found to be genital areas followed by skin involvement along with genitals involvement as seen in the present study.

It was seen that the mean DLQI was highest in subjects with genital, skin, and oral involvement at 17.85 followed by 13.22 in subjects with genital and skin involvement, 13.14 in subjects with genital involvement alone, and least in subjects with genital and oral involvement with 12.98. The difference was statistically significant with $p < 0.001$. These results were in line with the studies of Sivayadevi P et al¹⁴ in 2019 and Sullivan AK et al¹⁵ in 1999 where authors reported better quality of life in subjects with oro-genital involvement which was similar to the present study.

CONCLUSION

Considering its limitations, the present study concludes that subjects with oral, skin, and genital lesions have the highest DLQI scores having a high impact on their quality of life. It is vital to assess the impact of disease on their quality of life as it helps in better disease management and decreases the disease duration. However, further longitudinal studies with more sample subjects and a large duration are needed to reach a definitive conclusion.

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TABLES

Characteristics	Characteristics	Number (n)	Percentage (%)
Age range (years)	<20	17	6.53
	21-30	75	28.84
	31-40	88	33.8
	41-50	59	22.69
	>50	21	8.07
Occupation	Housewife	215	82.69
	Student	22	8.46
	Working	23	8.84
Education	Illiterate	129	49.61
	Primary schooling	22	8.46
	Intermediate	53	20.38
	Graduation	30	11.53
	Post-graduation	26	10
Marital status	Married	239	91.92
	Unmarried	21	8.07

Table 1: Socio-demographic characteristics in study subjects having vulval dermatoses

Vulval dermatoses	N=260	%
Infections	201	77.30
Bacterial	21	8.07
Vulval tuberculosis	1	0.38
Bartholin cyst	7	2.69
Folliculitis	12	4.61
Viral	47	18.07
Molluscum contagiosum	13	5
Herpes genitalis	15	5.76
Genital warts	19	7.30
Fungal	133	51.15
Candidiasis	59	22.69
Tinea curis	74	28.46
Inflammations	39	15
Crohn's disease	1	0.38
Lichen planus	1	0.38
Eczema	2	0.76
Lichen simplex chronicus	13	5
Lichen sclerosus	22	8.46
Normal variants (skin tags)	7	2.69
Pigmentation (vitiligo)	2	0.76
Immunobullous	4	1.53
Hailey-Hailey disease	1	0.38
Lichen planus pemphigoides	1	0.38
Bullous pemphigoides	1	0.38
Pemphigus vulgaris	1	0.38
Others	8	3.07
Foreign body-induced vaginal discharge	3	1.15
Vulvodynia	3	1.15
Lymphangiectasia	1	0.38
Acute vulval edema	1	0.38

Table 2: Frequency of vulval dermatoses distribution in the study subjects

Involved site	N	%	Mean DLQI	p-value
Genital, skin, and oral	6	2.30	17.85	<0.001
Genital and oral	2	0.76	12.98	
Genital and skin	47	18.07	13.22	
Genital alone	205	78.84	13.14	

Table 3: DLQI scores based on the site involved in the study subjects