

Old Dominion University

ODU Digital Commons

---

Engineering Management & Systems  
Engineering Faculty Publications

Engineering Management & Systems  
Engineering

---

2022

## A Clinical Study of Venereal and Non Venereal Genital Dermatoses in Women

Lakkireddygari Sujana

Savitha L. Beergouder

Alekhya Rallapalli

Prasanthi Chidipudi

Sujatha Alla  
*Old Dominion University*

Follow this and additional works at: [https://digitalcommons.odu.edu/emse\\_fac\\_pubs](https://digitalcommons.odu.edu/emse_fac_pubs)



Part of the [Dermatology Commons](#), [Diagnosis Commons](#), [Skin and Connective Tissue Diseases Commons](#), and the [Urogenital System Commons](#)

---

### Original Publication Citation

Sujana, L., Beergouder, S. L., Rallapalli, A., Chidipudi, P., & Alla, S. (2022). A clinical study of venereal and non venereal genital dermatoses in women. *European Journal of Molecular & Clinical Medicine*, 9(4), 2663-2676. [https://ejmcm.com/article\\_19123.html](https://ejmcm.com/article_19123.html)

This Article is brought to you for free and open access by the Engineering Management & Systems Engineering at ODU Digital Commons. It has been accepted for inclusion in Engineering Management & Systems Engineering Faculty Publications by an authorized administrator of ODU Digital Commons. For more information, please contact [digitalcommons@odu.edu](mailto:digitalcommons@odu.edu).

ORIGINAL RESEARCH

## A CLINICAL STUDY OF VENEREAL AND NON VENEREAL GENITAL DERMATOSES IN WOMEN

Lakkireddygaru Sujana<sup>1</sup>, Savitha L Beergouder<sup>2</sup>, Alekhya Rallapalli<sup>3</sup>, Prasanthi Chidipudi<sup>4</sup>, Sujatha Alla<sup>5</sup>

<sup>1</sup>Assistant Professor, Department of Dermatology, Venerology & Leprosy, Prathima Institute of Medical Sciences, Karimnagar, Telangana, India

<sup>2</sup>Senior Resident, Department of Dermatology, Venerology & Leprosy, S.Nijalingappa Medical College & Hospital, Navanagar, Bagalkot, Karnataka, India

<sup>3</sup>Consultant Dermatologist, Labelle Skin & Hair Clinic, Hyderabad, Telangana, India

<sup>4</sup>Consultant Pathologist, Viryon Labs, Tirupati, AP, India

<sup>5</sup>Research Assistant, Old Dominion University, Norfolk, Virginia, USA

### Corresponding Author:

Dr. Lakkireddygaru Sujana, Assistant Professor, Department of Dermatology, Venerology & Leprosy, Prathima Institute of Medical Sciences, Karimnagar, Telangana, India

### ABSTRACT

**Background:** Any genital lesion or related symptoms are erroneously considered to be sexually transmitted as it is the most covered regions of the body and seems truly to be a forgotten pelvic organ it is the significant and important group of dermatological conditions may be associated with considerable morbidity, discomfort, and embarrassment. The most common conditions seen in a Dermatology Clinic are vulvar dermatoses, which comprise of lichen sclerosis, lichen planus, vulvar eczema, and psoriasis. Other conditions such as vulvar pain syndromes, vulvar disorders associated with systemic diseases, and blistering diseases are also seen.

**Materials and Methods:** This was a descriptive study of 102 patients aged > 18 years attending outpatient department of Dermatology and Venerology, Santosh Medical College & Hospital, NCR, Delhi, India presenting with symptoms and signs of vulvar dermatoses were included after detailed history & examination, results were tabulated and analyzed by SPSS software.

**Results:** At present study population the prevalent type of dermatoses was found to be Lichen sclerosus et atrophicus (LSEA) with the incidence of 26.47% (27 cases). MC symptom was the white discharge per vagina (WDPV) with the prevalence of 92.15% (94 cases) followed by 84.31% (86 cases) of vulvar itching with the age of patients ranged from 19 to 65 years with mean of 49.22 years. The total subjects were with disease span of 3 months to 7 years with mean DLQI of 8.62.

**Conclusion:** This study highlights the importance of diagnosing vulvar dermatoses and established strong correlation between vulvar dermatosis in various listed clinical

**conditions and it also underlines that there is more prevalence of vulvar dermatoses than sexually transmitted diseases.**

**Keywords: Skin diseases, vulva, vulvar Dermatoses, sexually transmitted infections.**

## **INTRODUCTION**

One of the most common of dermatological conditions that may be associated with considerable morbidity, discomfort, and embarrassment were vulvar dermatoses, which comprise of lichen sclerosis, lichen planus, vulvar eczema, and psoriasis, conditions such as vulvar pain syndromes, vulvar disorders associated with systemic diseases, and blistering diseases are also seen.<sup>[1]</sup> These conditions are clinically difficult to recognize because the warm, moist, frictional environment of the vulva regularly obscures.<sup>[2,3]</sup> Vulvar dermatoses, most troublesome for both clinicians and pathologists are benign inflammatory disorders. Given the frequency of the dermatological disease, vulvar biopsy and analysis by a dermatopathologist are recommended in patients with chronic vulvar pruritus. Vulvar dermatoses have been studied and treated by clinicians of different training backgrounds; hence, it is not surprising that differences in concepts, classifications, and terminology have arisen.<sup>[4]</sup> Thirty years ago, the International Society for the Study of Vulvovaginal Disease (ISSVD) recognized that a group of benign, vulvar diseases needed to be defined and classified in order to clearly separate these benign disorders from premalignant and malignant epithelial conditions. ISSVD recommended that the classification of the benign, noninfectious vulvar disease, which has been in place, would employ the standard terminology used by dermatologists and dermatopathologists.<sup>[5]</sup> Hence our study is to determine the types of inflammatory vulvar dermatoses, to estimate the DLQI (Dermatology Life Quality Index) in women with vulvar dermatoses presenting to Department of Dermatology, Venereology & Leprosy, Santosh Medical College & Hospital, NCR Delhi, India.

## **MATERIALS & METHODS**

This was a descriptive study of patients collected from Department of DVL, Santosh Medical College & Hospital, NCR Delhi, India during the year from June 2018 to June 2022.

### **Inclusion criteria:**

- Women aged > 18 years of age presenting with symptoms and signs of vulvar dermatoses.
- Pregnant women with vulvar dermatoses
- Women with STI's (sexually transmitted infections)
- Patients with other diseases which also affect the vulva.

### **Exclusion criteria:**

- Patients not willing to consent for the study

### **Method of collection of data:**

Patients were recruited from the Dermatology patients visiting Dermatology OPD and from Department of DVL, Santosh Medical College & Hospital, NCR Delhi, India. A detailed history including diabetes, autoimmune thyroid disorders or skin disorders such as eczema, psoriasis, demographics, symptoms, their duration, use of products and the quality of patient life and external genitalia were examined along with thorough physical examination for lesions elsewhere on the body. Clinical tests like Gram stain, KOH stain and/ or Tzanck

smear, biopsy were also done where ever needed and Clinical photographs were taken after getting informed consent. Results were tabulated and analysed by SPSS software.

## RESULTS

Entire 102 sexually active women with vulvar dermatoses were included in the study. Age of patients ranged from 19 to 65 years with mean of 49.22 years. The total subjects were with disease span of 3 months to 7 years with mean DLQI of 8.62. [Table 1]

**Table 1: Mean distribution of Age, DLQI score and duration of symptoms**

Parameter	Mean (n=102)	Median (n=102)	SD (n=102)	Min (n=102)	Max (n=102)
Age	49.22	48	17.113±1.56	19	65
Duration of symptoms	35.118	7	36.165±3.18	0.25	84
DLQI score	8.62	8	5.103±2.68	0	19

Most common symptom in our study was found to be white discharge per vagina (WDPV) with the prevalence of 92.15% (94 cases) followed by 84.31% (86 cases) of vulvar itching, 80.39% (82 cases) of serous discharge, 74.52% (76 cases) of burning vulva, 67.64% (69 cases) of yellow discharge and least prevalence of bloody discharge was noted with 3.92% (4) cases. [Table 2]

**Table 2: Prevalence of Symptoms**

Symptom	Occurrence	Frequency n=102)	Percentage%
Itching in vulva	Present	86	84.31%
	Absent	16	15.68%
Burning in vulva	Present	76	74.52%
	Absent	26	25.51%
White discharge per vagina	Present	94	92.15%
	Absent	8	19.6%
Serous discharge	Present	82	80.39%
	Absent	20	7.84%
Yellow discharge	absent	69	67.64%
	Present	33	32.35%
Bloody discharge	Absent	98	96.08%
	Present	4	3.92%

The mode of precaution varied in present study. The most common was 88.23% (90 cases) Water only to clean vulva, 74.50% (76 cases) Use of cloth, 64.70% (66 cases) natural method of contraception, 25.49% (26 cases) Use of pad, 15.68% (16 cases) tubectomy, 14.70% (15 cases) Use of condom, 13.72% (14 cases) Use of cleanser, 5.88% (6cases) Use of OCP, 3.92% (4 cases) Use of IUD. [Table 3]

**Table 3: Prevalence of Precautionary Method**

Mode of precaution	Occurrence	Frequency	Percentage%
Water only to clean	Present	90	88.23%
	Absent	12	11.76%
Use of cleanser	Absent	88	86.27%
	Present	14	13.72%
Use of cloth	Present	76	74.50%
	Absent	26	25.49%
Use of pad	Present	26	25.49%
	Absent	76	74.50%
Use of condom	Absent	87	85.29%
	Present	15	14.70%
Use of OCP	Absent	96	94.11%
	Present	6	5.88%
Use of IUD	Absent	98	96.07%
	Present	4	3.92%
Natural method of contraception	Absent	36	35.29%
	Present	66	64.70%
Tubectomy	Absent	86	84.31%
	Present	16	15.68%

Out of 102 study population 69.60% (71 cases) were with non-venereal dermatosis and 30.39% (31 cases) were shown venereal dermatosis. The prevalent type of non-venereal dermatoses was found to be LSEA with the incidence of 26.47% (27 cases) followed by 11.76% (12 cases) of lichen planus, 6.86% (7 cases) of inflammatory dermatoses, 5.88% (6 cases) of psoriasis, 3.92% (4 cases) of Irritant contact dermatitis, 3.92% (4 cases) of vitiligo, 1.96% (2 cases) of benign tumors, cysts and Acrochordon respectively. [Table 4] The clinical photographs were also presented below. [Figure 1-12]

**Table 4: Causes and Prevalence of Various Dermatoses**

Type of Dermatoses	Frequency	Percentage%
Inflammatory dermatoses	7	6.86%
Lichen sclerosus et atrophicus (LESA)	27	26.47%
Lichen planus	12	11.76%
Psoriasis	6	5.88%
Lichen simplex chronicus	1	0.98%
Pityriasis rosea	1	0.98%
Irritant contact dermatitis	4	3.92%
Pigmentary dermatoses	1	0.98%
Vitiligo	4	3.92%
Benign tumors and cysts	2	1.96%
Acrochordon	2	1.96%

Pyogenic granuloma	1	0.98%
Lymphangioma	1	0.98%
Blistering disorders	1	0.98%
Pemphigus vulgaris	1	0.98%

Mostly 69.60% of the study individuals were out of doors to venereal diseases. Absolutely 30.39% (31) subjects were with positive venereal diseases of which predominantly was syphilis with 9.80% of cases followed by Genital warts with 5.88%, candidiasis with 4.90% of cases, Molluscum contagiosum with 1.96% and gonorrhoea 3.92%. [Table 5]

**Table 5: venereal disease frequency**

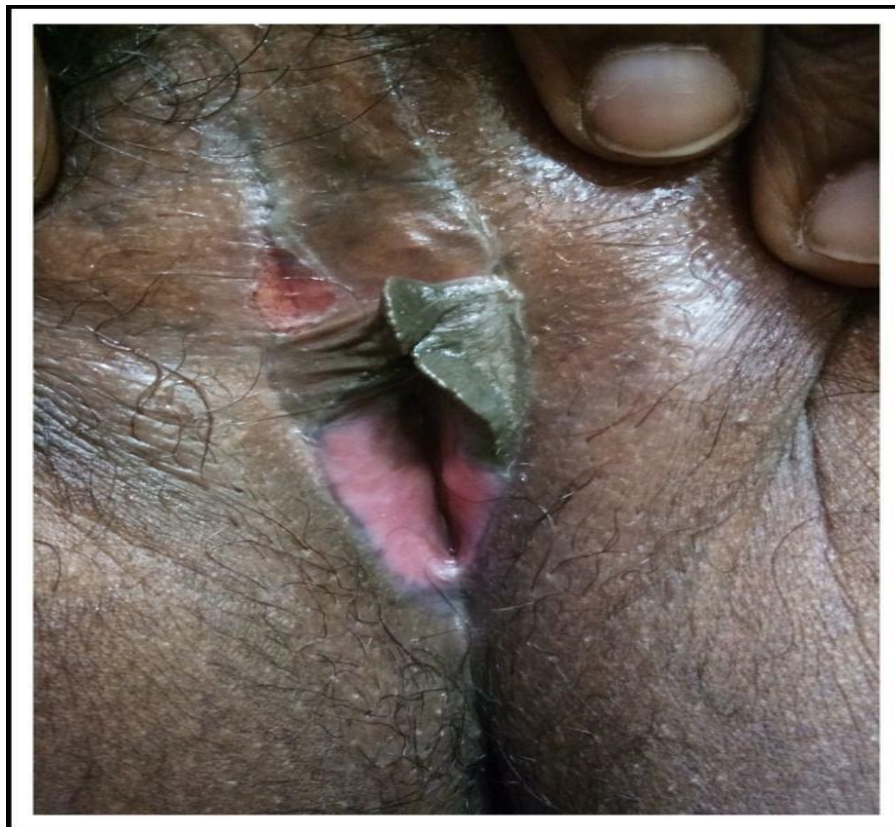
Venereal disease	Frequency	Percentage %
None	71	69.60%
Syphilis	10	9.80%
Genital warts	6	5.88%
Candidiasis	5	4.90%
Molluscum contagiosum	2	1.96%
Herpes genitalis	4	3.92%
Gonorrhoea	4	3.92%



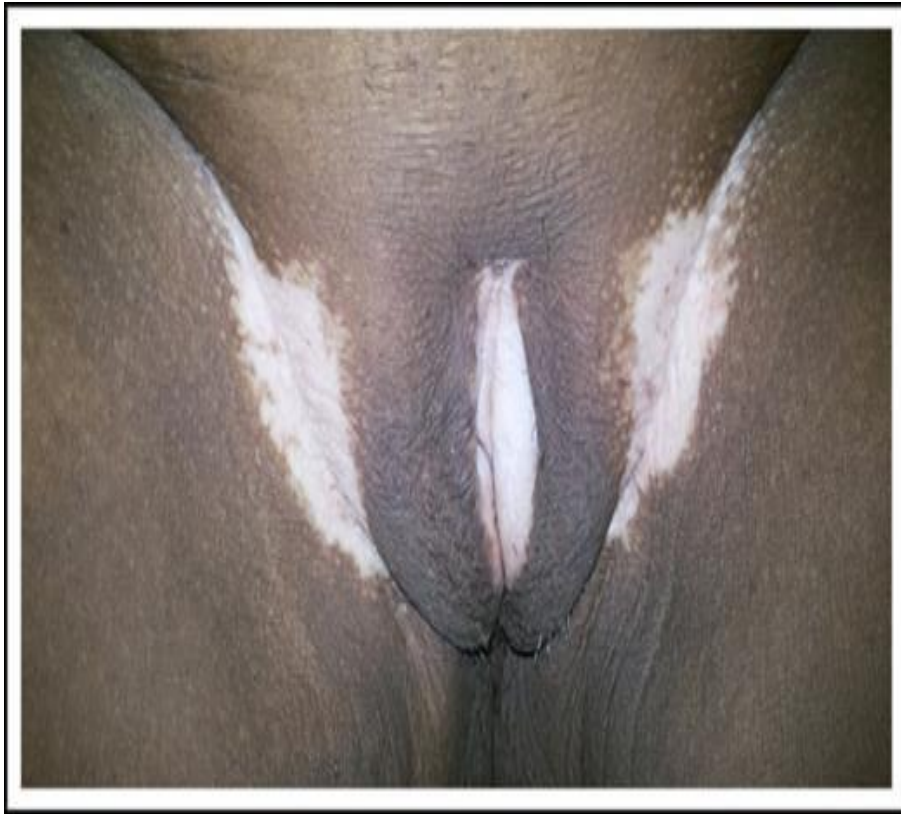
**Figure 1: Hailey Hailey disease**



**Figure 2: Lichen planus**



**Figure 3: Lichen planus with erosion**



**Figure 4: Lichen sclerosus et atrophicus (LSEA)**





**Figure 5: Lymphangioma circumscriptum**



**Figure 6: Lichen sclerosus et atrophicus (LSEA)**



**Figure 7: LSEA with erosion**



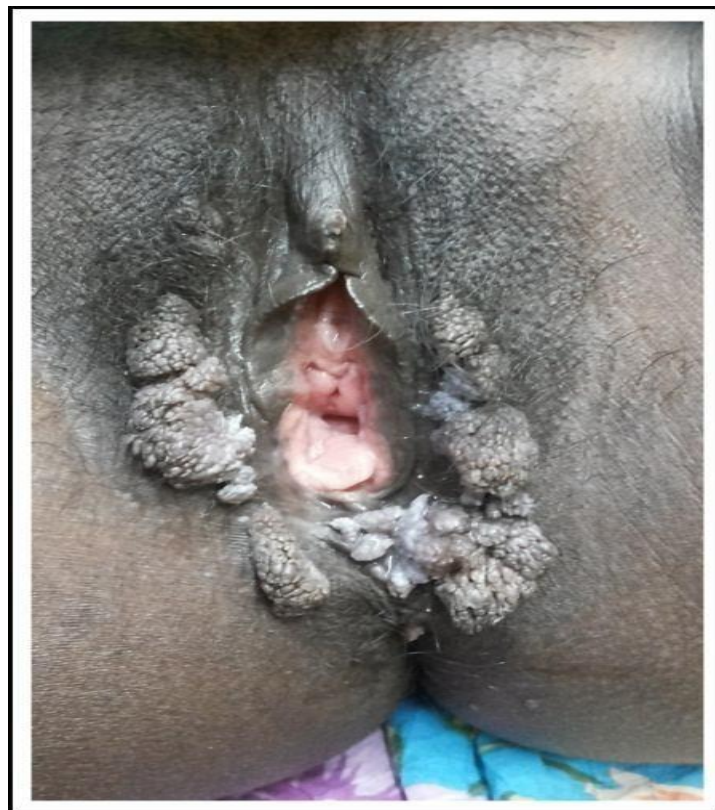
**Figure 8: Lichen simplex chronicus (LSC)**



**Figure 9: Hidradenitis suppurativa**



**Figure 10: High Grade Squamous Intraepithelial Lesion (HGSIL)**



**Figure 11: Genital warts**



**Figure 12: Folliculitis**

## **DISCUSSION**

In the Sartori GC et al,<sup>[6]</sup> study 75 women were included, age ranged from 15 to 82 years (mean age of 37 years/sd = 18.7 years) where as in our study, the ages ranged from 19 to 65 years, with a mean of 49.22 years 52.9% of the women were post-menopausal in our study, followed by 47.1% of women who had regular menstrual cycles. Regarding the marital status and schooling, there is an expressive number of single women and with low schooling (up to middle school), 43.13% (44) and 39.21% (40), respectively. Defined occupation was reported by 59 women (57.84%). LSEA was the most common vulvar Dermatoses seen in our study were with 26.477% (27) of patients. Lichen planus of vulva was seen in 12 (11.6%) of the women in our study. Our study shown statistically significant results with respect to symptoms are White discharge per vagina (94 cases, 92.15%) and itching (86 cases, 84.31%) were most common in those women with poor hygiene and used soap to wash their genitalia respectively, when compared to women who used only water. Mean age for starting sexual activity was 17.3 years (sd = 4.3), ranging from 12 to 40 years. Of the 102 patients, 67 (65.68%) were with >1 sex partners with a mean of 3 partners per woman. Prevalence of venereal diseases was 30.39% (31 cases) found in our study of which predominantly was syphilis with 9.80% of cases followed by Genital warts with 5.88%, candidiasis with 4.90% of cases, Molluscum contagiosum with 1.96% and gonorrhoea and herpes genitalis 3.92%. [Table 6]

**Table 6: Comparison of earlier works with present study**

Author	Year	Sample size	Conclusions
Muktamani G et al, <sup>[7]</sup>	2014	150	Localized genital involvement was found to be quite significant among non-venereal dermatoses. This study was quite useful in clinical diagnosis and management of non-venereal dermatoses and differentiating them from venereal dermatoses which helps in allaying the guilt and fear among patients.
Abhishek Bhardwaj et al, <sup>[8]</sup>	2016	70	This study highlights the importance of diagnosing non venereal vulvar dermatoses and refutes the general conception that all vulvar dermatoses in sexually active females are sexually transmitted. It also underlines that there is more to vulvar dermatoses than sexually transmitted diseases.
Geeta Shinde et al, <sup>[9]</sup>	2017	100	This study was quiet useful in understanding the epidemiological, clinical and etiological characteristics of various nonvenereal genital dermatoses.
Present work	2022	102	This study highlights the importance of diagnosing vulvar dermatoses and established strong correlation between vulvar dermatosis in various listed clinical conditions and It also underlines that there is more prevalence of vulvar dermatoses than sexually transmitted diseases.

## CONCLUSION

This study highlights the importance of diagnosing vulvar dermatoses and established strong correlation between vulvar dermatosis in various listed clinical conditions and It also underlines that there is more prevalence of vulvar dermatoses than sexually transmitted diseases. Lichen sclerosus et atrophicus (LSEA) was the most common vulvar Dermatoses. Our study shown statistically significant results with respect to symptoms are (WDPV) white discharge per vagina (94 cases, 92.15%) and itching (86 cases, 84.31%) were most common in those women with poor hygiene and used soap to wash their genitalia respectively, when compared to women who used only water.

**REFERENCES**

1. Salim A, Wojnarowska F. Skin diseases affecting the vulva. *Curr Obstet Gynaecol* 2005;15:97- 107.
2. Broardman LA, Kennedy MC. Diagnosis and management of vulvar skin disorders. *Obstet Gynaecol* 2008;111:1243-50.
3. Wojnarowska F, Cooper SM. Anogenital (Nonvenereal) Disaese. In: Bologna JL, Jorizza JL, Rapini RP, editors. *Dermatology*. 2nd ed. USA: Mosby; 2007. p. 1099-124.
4. Ambros RA, Malfetano JH, Carlson A, Mihm MC. Nonneoplastic epithelial alterations of the vulva: Recognition assessment and comparisons of terminologies used among the various specialties. *Mod Pathol* 1997;10:401-8.
5. Lynch PJ, Moyal- Barrocco M, Bogliatto F, Micheletti L, and Scurry J. 2006 ISSVD Classification of vulvar dermatoses. Pathologic subsets and their clinical correlates. *J Reprod Med* 2007;52:3-9.
6. Sartori GC, Wicher RT, Ferreira FR, Batista VH. Most frequent dermatoses at a vulvar pathology outpatient clinic. *A Bras Dermatol*. 2018;93(2):294-6.
7. Muktamani G, Shivakumar V, Rajendra Okade; Non-Venereal Female Genital Dermatoses – A Clinical Study; *JMSCR* Volume 2 Issue 11 Page 2864-2873 Nov-2014.
8. Abhishek Bhardwaj et al ; Non venereal benign dermatoses of vulva in sexually active women: a clinical study; *International Journal of Research in Dermatology*; July 2016.
9. Geeta Shinde and Sanjay Popere; A clinical study of non-venereal genital dermatoses of adult in a Tertiary Care Center; *Int Journal of Biomedical and Advance Research* 2017; 8(04): 168-173.