

A Clinical Study of Non-venereal Genital Dermatoses in Women in a Rural Setup

Anupama Manohar Prasad, Aneeha Ramesh Babu*, Shivakumar V

ABSTRACT

Introduction: Genital dermatoses which can be venereal or non-venereal in nature are common in a significant number of women. The female non-venereal genital dermatoses can be classified into congenital anomalies, infections and infestations, inflammatory conditions, benign and malignant neoplasms. Local factors such as moisture, warmth, friction and irritants may alter the morphology of lesions involving the genital area thereby causing a diagnostic dilemma to the treating physician. Till date, few studies are published on the genital dermatoses of non-venereal origin in females. Hence, the present study was undertaken to determine the various female non-venereal genital dermatoses for their appropriate understanding and management.

Materials and Methods: A prospective observation study was carried out on women above 18 years of age attending the outpatient department of PESIMSR, Kuppam from September 2018 to June 2019 with complaints of genital lesions. A detailed clinical history, examination and basic investigations were performed on recruited women to rule out sexually transmitted infections. Women with only non-venereal dermatoses were included in the study. **Results:** A total of 97 women were included in the study. The most common dermatoses observed were vitiligo (15.4%), candidal intertrigo (13.4%), lichen sclerosus (11.3%), lichen simplex chronicus (10.3%) and irritant contact dermatitis (10.3%). Other dermatoses included were folliculitis, lichen planus, pemphigus vulgaris, drug eruptions, tinea cruris, herpes zoster, bartholin cyst, psoriasis and behcet's disease. **Conclusion:** This study concludes that all dermatoses involving the genital area are not sexually transmitted and the need for health education regarding the non-venereal skin conditions is necessary.

Key words: Candidiasis, Female, Genitalia, Non-venereal dermatoses, Vitiligo.

INTRODUCTION

The dermatoses involving the genitalia can be venereal or non-venereal.¹ Female non-venereal genital dermatoses are conditions involving the female genital area that are not sexually transmitted. Various dermatoses present over the genital region which is warm, moist and frequently exposed to irritating substances such as fecal matter and urine which can alter the morphology of lesions presenting here.²⁻⁴ People often neglect this part of the body failing to keep it clean while on the other hand, some women often resort to the usage of vigorous cleaning techniques.⁵ Owing to the site of involvement, these conditions are often misconstrued as sexually transmitted infections which can cause a sense of fear and anxiety in patients.⁶ They can be classified into congenital anomalies and normal variants, infections and infestations, inflammatory dermatoses, multisystem diseases like Behcet syndrome, Reiter syndrome, Crohn disease, benign and malignant conditions.⁷ These conditions can either exclusively involve genitalia or involve other areas as well.⁸⁻¹⁰ A thorough medical history, clinical examination and necessary investigations may aid in the diagnosis of these dermatoses.¹¹ There are very few comprehensive studies on female genital derma-

tos of non-venereal origin.^{1,12} The present study was undertaken to describe the clinical profile of female non-venereal genital dermatoses and the risk factors associated with the same.

MATERIALS AND METHODS

A prospective observation study was carried out on female patients with genital lesions above 18 years of age who attended the outpatient department of PESIMSR, Kuppam from September 2018 to June 2019. A detailed clinical history including the demographic profile, onset and duration of lesions, symptoms of lesions, menstrual, obstetric and contraception history, sexual history and treatment history were taken. After taking informed/written consent, the external genitalia were examined using the necessary equipments such as cuscus bivalved self-retaining speculum and clinical photographs were taken. HIV test, VDRL, KOH mount, gram stain, tzanck smear and biopsy were done as and when necessary as per the protocol to rule out sexually transmitted infections. Out of 130 women with genital lesions, 97 women were diagnosed with non-venereal genital dermatoses and recruited into our study. The data

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was entered into MS excel 2007 version and further analyzed using SPSS version 21.

RESULTS

A total of 97 females presenting with genital lesions of non-venereal origin were included in our study. The youngest patient was 19 years, the oldest was 80 years and the mean age was 38.8 years. Majority of patients (52 women i.e 53.6%) belonged to age group 20-40 years and 65(67%) women were married. The most common condition noted was vitiligo which was seen in 15 patients (15.4%). On the whole, 16 types of dermatoses were noted in the present study [Table 1, Chart 1]. 28 (28.86%) out of 97 females presented with dermatoses of infectious origin of which

candidiasis was the most common infection (46.4%) [Figure 1, 6] followed by folliculitis (28.5%) [Figure 4], tinea cruris (14.2%) and herpes zoster (10.7%) [Table 2, Chart 2]. 45 (46.39%) out of 97 women presented with inflammatory dermatoses of which lichen sclerosus et atrophicus (24.4%) was the most commonly encountered condition followed by lichen simplex chronicus (22.2%), irritant contact dermatitis (22.2%), lichen planus (15.5%) [Figure 7, 8], pemphigus vulgaris (11.1%) [Figure 9, 10, 11] and inverse psoriasis (4.4%) [Table 3, Chart 3, Figure 2, 3]. The other dermatoses observed were drug reactions (4.1%), bartholin's cyst (3%), behcet's disease (1%), fordyce spots (1%) and pellagra (1%) [Table 4, Chart 4, Figure 5]. The common presenting complaints noted were itching over genitalia.



Figure 1: Vaginal candidiasis–Curdy white discharge in the vagina.



Figure 4: Furuncle – Few erythematous nodules over labia majora.



Figure 2: Inverse psoriasis – Macerated erythematous plaques over groins, vulva.



Figure 5: Fordyce spots – Multiple yellow white bumps over labia minora.

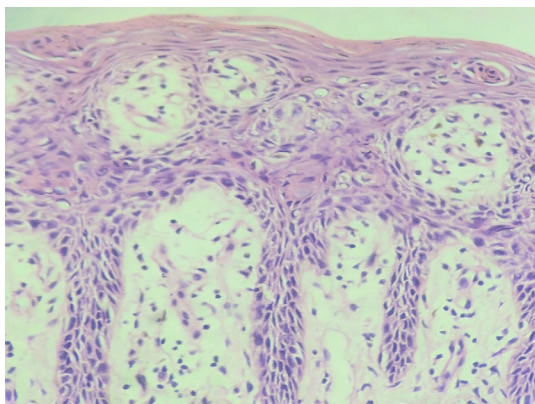


Figure 3: Histopathology of psoriasis: shows epidermal parakeratotic mounds with neutrophilic migration, diminished granular cell layer, elongated rete ridges and dilated blood vessels in papillary dermis.

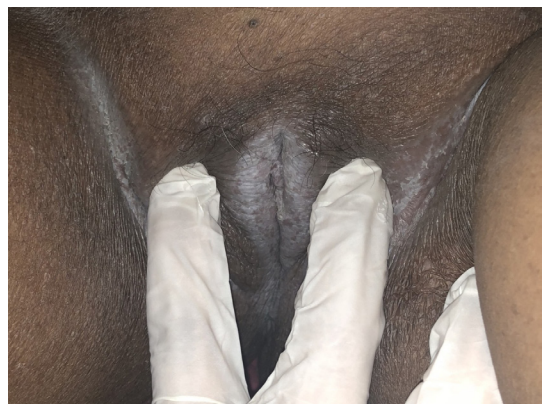


Figure 6: Intertrigo – Macerated hyperpigmented patch over labia minora, labia majora, groins.

DISCUSSION

A total of 97 out of 130 women aged above 18 years with genital lesions were included in our study among whom the youngest patient was 19 years old, the oldest was aged 80 years and the mean age was 38.81 years. Majority 52 (53.6%) of women belonged to the age group 20-40 years, 65 (67%) women were married and 32(33%) were unmarried. A similar study was conducted by Sivayadevi P *et al.*¹³ in which 100 sexually active female patients with genital lesions were included after excluding venereal diseases. The age group of patients studied ranged from 18-55 years and most of the patients (64%) belonged to 26-40 years with 72% being married. Babu *et al.*¹⁴ conducted a descriptive study in 150 adults with non-venereal genital dermatoses in which 36 were females who were aged between 12 and 72 years and their mean age was 40.74 years. Geeta Shinde and Sanjay Popere¹⁵ in their study on 100 adult patients with non-venereal genital dermatoses observed that majority of patients (79%) were in age group of 21-50 years and the age of the patients ranged from 13 to 80 years. Of the total 100 patients, 70 patients were males and 30 were females. In the present study, a total of 16 types of dermatoses were noted of which vitiligo was the commonest seen in 15 patients (15.4%) followed by candidiasis (13.4%), lichen sclerosus et atrophicus (11.3%), lichen simplex chronicus (10.3%), irritant contact dermatitis (10.3%), folliculitis (8.2%), lichen planus (7.2%), pemphigus vulgaris (5.1%), tinea cruris (4.1%), drug eruptions (4.1%), herpes zoster (3%), bartholin cyst (2%), inverse psoriasis (2%), fordyce spots (1%), behcet's disease (1%) and pellagra (1%) in decreasing order of frequency.

Another similar study conducted by Dipali Rathod *et al.*¹⁶ noted vitiligo in 32% women and was the commonest female non-venereal genital dermatoses. Singh *et al.*¹⁷ in their study on 120 female patients with non-venereal dermatoses of external genitalia observed that the most common non-venereal dermatoses was lichen sclerosus (26 cases or 21.7%), followed by vitiligo (19 cases or 15.8%), lichen simplex chronicus (16 cases or 13.3%) and vulval candidiasis (11 or 9.2%). Other dermatoses included were lymphedema, invasive squamous cell carcinoma, tinea cruris, psoriasis, furuncle, folliculitis, lichen planus, epidermal inclusion



Figure 7: Lichen planus - Multiple hyperpigmented papules over labia majora and minora.

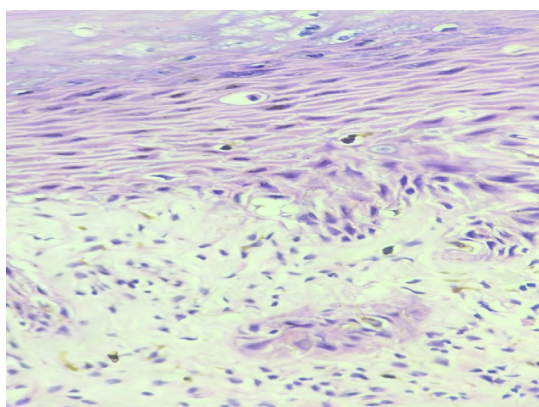


Figure 8: Histopathology of Lichen planus: shows epidermal hyperkeratosis, hypergranulosis, basal cell vacuolar degeneration, Civatte bodies and sawtooth appearance of rete ridges.



Figure 9: Pemphigus vulgaris – Multiple eroded hyperpigmented papules over pubis, groins, labia majora.

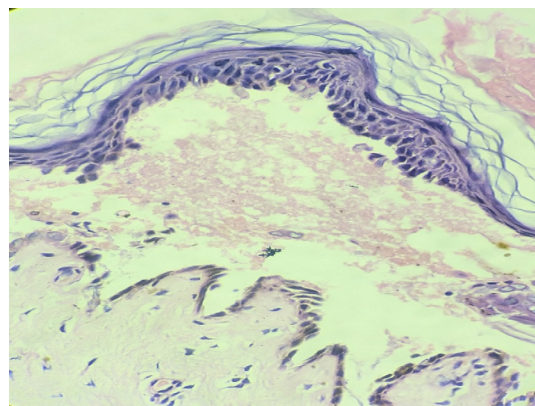


Figure 10: Histopathology of Pemphigus vulgaris: showing tombstone pattern of pigmented basal cells, suprabasal cleft with few acantholytic cells in blister cavity and dermis shows mild perivascular inflammatory cell infiltrate.



Figure 11: Tzanck smear taken from the erosion, shows few acantholytic cells consistent with pemphigus vulgaris.

Table 1: Original: Female non-venereal genital dermatoses.

Clinical diagnosis	Number of cases	Percentage (%)
Vitiligo	15	15.4
Candidiasis	13	13.4
Lichen sclerosus et atrophicus (LSEA)	11	11.3
Lichen simplex chronicus (LSC)	10	10.3
Irritant contact dermatitis (ICD)	10	10.3
Folliculitis	8	8.2
Lichen planus (LP)	7	7.2
Pemphigus vulgaris (PV)	5	5.1
Tinea cruris	4	4.1
Drug reactions	4	4.1
Herpes zoster	3	3
Benign lesions and normal variants		
1. Bartholin cyst	2	2
2. Fordyce spots	1	1
Inverse psoriasis (IP)	2	2
Behcet's disease	1	1
Pellagra	1	1
Total	97	100

Table 2: Original: Infections and infestations.

Clinical diagnosis	Number of cases	Percentage (%)
Candidiasis	13	46.4
Folliculitis	8	28.5
Tinea cruris	4	14.2
Herpes zoster	3	10.7
Total	28	100

cyst, herpes zoster, irritant contact dermatitis, acrochordon, bartholin cyst, fibroepithelial stromal polyp, molluscum contagiosum (autoinoculated) and streptococcal vulvitis. Babu *et al.*¹⁴ in their study found that scabies was found in 19 (12.6%) patients which was found to be the commonest non-venereal genital dermatosis among 150 cases, followed by vitiligo (17 cases) and candidiasis (12 cases). Sivayadevi P *et al.*¹³ found a total of 23 types of non-venereal dermatoses in their study. In our study, 28 (28.86%) out of 97 females presented with dermatoses of infectious origin of which candidiasis was the most common infection (46.4%) followed by folliculitis (28.5%), tinea cruris (14.2%) and herpes zoster (10.7%) when compared to study by Sivayadevi P *et al.*¹³ where the most common disorders noted were infections seen in 39% patients of which vulval candidiasis was the most common disorder (16%). The study conducted by Singh *et al.*⁶ showed 71.42% women with infections and infestations of which the most common disease observed was vulval candidiasis (14%). In the study performed by Neerja Puri *et al.*¹⁷ vulval candidiasis was found in 15% women. Pathak *et al.*¹⁸ in their study encountered vulval candidiasis in 11.4% of the cases. 45 (46.39%) out of 97 women in our study presented with inflammatory dermatoses of which lichen sclerosus et atrophic us (24.4%) was the most commonly encountered condition followed by lichen simplex chronicus (22.2%), irritant contact dermatitis (22.2%), lichen planus (15.5%), pemphigus vulgaris (11.1%) and inverse psoriasis (4.4%) which was in concordance to the

Table 3: Original: Inflammatory dermatoses.

Clinical diagnosis	Number of cases	Percentage (%)
Lichen sclerosus et atrophicus (LSEA)	11	24.4
Lichen simplex chronicus (LSC)	10	22.2
Irritant contact dermatitis (ICD)	10	22.2
Lichen planus (LP)	7	15.5
Pemphigus vulgaris (PV)	5	11.1
Inverse psoriasis (IP)	2	4.4
Total	45	100

Table 4: Original: Miscellaneous conditions.

Clinical diagnosis	Number of cases
Drug reactions	
Fixed drug eruption	3
Acute generalized exanthematous pustulosis	1
Behcet's disease	1
Pellagra	1
Total	6

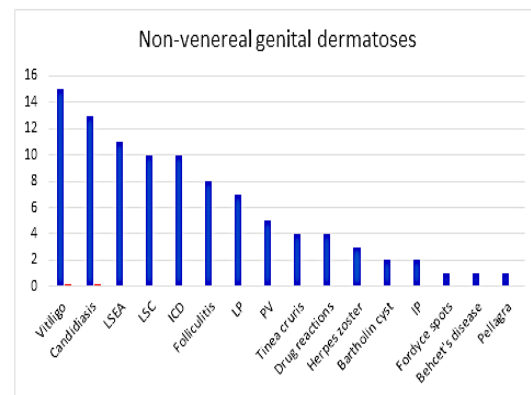


Chart 1: Original: Clinical diagnosis.

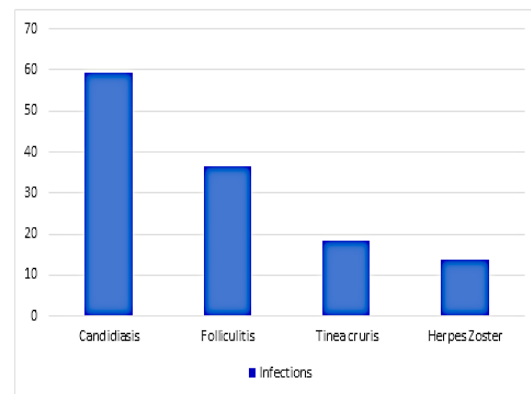


Chart 2: Infections and infestations.

study done by Singh *et al.*¹⁰ wherein lichen sclerosus et atrophicus was observed in 21.7% women. However, our findings were in contrast to the study conducted by Sivayadevi P *et al.*¹³ who noted lichen sclerosus et atrophicus in 10% women. In the study done by Geeta Shinde *et al.*¹⁵ inflammatory dermatoses constituted 20% cases among which psoriasis

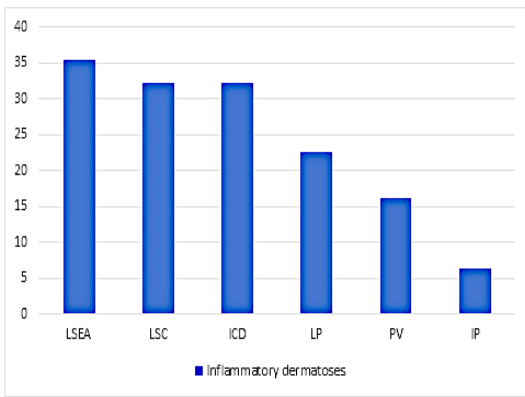


Chart 3: Inflammatory dermatoses.

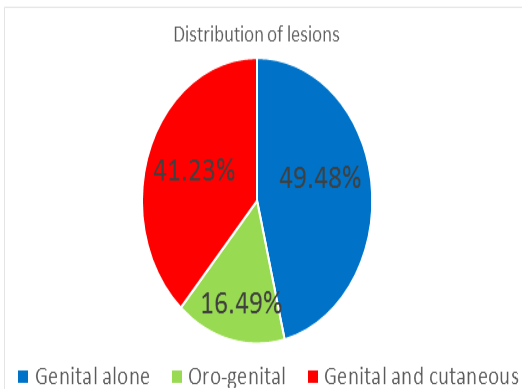


Chart 4: Distribution of lesions.

was the commonest noted in 35% of women. Another study conducted by Neerja Puri *et al.*¹⁷ noted lichen sclerosis et atrophicus in 15% of women. The findings in our study were found to be in contrast to that of the study conducted by Rajalakshmi *et al.*¹⁹ who observed lichen simplex chronicus in 2.5% of women. In the present study, the common presenting complaints noted were itching over genitalia which was similar to the study conducted by Sivayadevi P *et al.*¹³ where the common presenting complaints were itching, burning sensation, pain over genitalia, raised asymptomatic skin lesions and ulceration of the skin. In another study conducted by Singh *et al.*⁶ itching was the most common presenting complaint seen in 70% cases. The findings of our study were found to be in contrast to that of the study conducted by Harlow *et al.*²⁰ who observed vulvar pain to be the most common presenting complaint.

Limitations

The number of women presenting with genital lesions of non-venereal origin as observed in our outpatient department was found to be relatively less, resulting in a smaller sample size, the reason for which may be lack of education and awareness among the women in this part of rural area.

CONCLUSION

Out of a total of 130 women with genital lesions, 97 (74.61%) women were diagnosed with non-venereal genital dermatoses. This study con-

cludes that non-venereal genital dermatoses are not uncommon and the need for health education regarding the same is essential.

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CONFLICT OF INTEREST

The authors declare no conflict of interest.

ABBREVIATIONS

LSEA: Lichen sclerosus et atrophicus; **LSC:** Lichen simplex chronicus; **ICD:** Irritant contact dermatitis; **LP:** Lichen planus; **PV:** Pemphigus vulgaris; **IP:** Inverse psoriasis.

REFERENCES

- Karthikeyan K, Jaisankar TJ, Devinder MT. Non venereal dermatoses in male genital region-prevalence and patterns in a referral center in South India. *Indian J Dermatol.* 2001;46(1):18.
- Mroczkowski TF. Common nonvenereal genital lesions. *Med Clin North Am.* 1990;74(6):1507-28.
- Pincus SH. Diseases of female genitalia, in *Dermatoses in General medicine* 3rd, Editors, eds. New York: MC Graw Hill. 1989;1244.
- Senoh K, Miyazaki T, Ichirok, Sumiyashi A, Kogha A. Angiomatous lesions of glans penis. *Urology.* 1981;17(2):194-6.
- Noller KL. Vulva: The forgotten pelvic organ. *Obstet Gynecol.* 2004;104(5-1):913-4.
- Singh G, Rathore BS, Bhardraja, Sharma C. Nonvenereal benign dermatoses of vulva in sexually active women: A clinical study. *Int J Res Dermatol.* 2016;2(2):25-9.
- Fitzpatrick JA, Gentry RM. Non venereal disease of male genitalia. *Dermatology.* 3rd edn. Philadelphia: Saunders. 1992;2:1008-15.
- Khaitan BK. Non-venereal diseases of genitalia: Sexually Transmitted Diseases and AIDS. 1st edn. New Delhi: Viva books Pvt Ltd. 2003;413-21.
- Lynch PJ, Moyal-Barrocco M, Bogliatto F, Micheletti L, Scurry J. Classification of vulvar dermatoses: Pathologic subsets and their clinical correlates. *J Reprod Med.* 2007;52:3-9.
- Sullivan AK, Straghair GJ, Marwood RP, Staughton RC, Barton SE. A multidisciplinary vulva clinic: The role of genitor-urinary medicine. *J Eur Acad Dermatol Venereol.* 1999;13(1):36-40.
- McKay M. Vulvar dermatoses: Common problems in dermatological and gynecological practice. *Br J Clin Pract Suppl.* 1990;1:5-10.
- Acharya KM, Ranpara H, Sakhia JJ, Kaur C. A study of 200 cases of genital lesions of non-venereal origin. *Indian J Dermatol Venereol Leprol.* 1998;64(2):68-70.
- Sivayadevi P, Anandan H. A study of pattern of non-venereal genital dermatoses in female patients at a tertiary care center. *Int J Res Dermatol.* 2019;5(1):134-8.
- Babu ANMM, Mathan R, Ramasamy PP. A clinical study of non-venereal genital dermatoses. *J Evolution Med Dent Sci.* 2016;5(90):6694-7.
- Geeta S, Sanjay P. A clinical study of non-venereal genital dermatoses of adult in a Tertiary Care Center. *International Journal of Biomedical and Advance Research.* 2017;8(04):168-73.
- Singh N, Thappa DM, Jaisankar TJ, Habeebullah S. Pattern of non-venereal dermatoses of female external genitalia in South India. *Dermatol Online J.* 2008;14(1):1.
- Neerja P, Asha P. A study on non-venereal genital dermatoses in north India. *Our Dermatol Online.* 2013;4(1):304-7.
- Pathak D, Agrawal S, Dhali TK. Prevalence of and risk factors for vulvar disease in Nepal: A hospital based study. *Intern J Dermatol.* 2011;50(2):117.
- Rajalakshmi R, Thappa DM, Jaisankar TJ, Nath AK. Lichen simplex chronicus of anogenital region: A clinicoetiological study. *Indian J Dermatol Venereol Leprol.* 2011;77(1):28-36.
- Harlow BL, Wise LA, Stewart EG. Prevalence and predictors of chronic lower genital tract discomfort. *Am J Obstet Gynecol.* 2001;185(3):545-50.

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