

Original Research Article

Determine the Clinical Patterns of Non- Venereal Genital Dermatoses**B Kiran Kumar¹, Nippa Devi A Patel², N.M Prasad Naik³, Shankar Kunti^{4*}**¹*Assistant Professor, Department of Dermatology, STD and Leprosy, Osmania General Hospital/ Osmania Medical College, Hyderabad, Telangana, India*²*Assistant Professor, Department of Dermatology, STD and Leprosy, Osmania General Hospital/ Osmania Medical College, Hyderabad, Telangana, India*³*Designated Associate Professor, Department of Dermatology, STD and Leprosy, Osmania General Hospital/ Osmania Medical College, Hyderabad, Telangana, India*⁴*Assistant Professor, Department of Dermatology, STD and Leprosy, Osmania General Hospital/ Osmania Medical College, Hyderabad, Telangana, India***Received: 09-06-2021 / Revised: 04-07-2021 / Accepted: 31-07-2021****Abstract**

Background: Nonvenereal disorders are the cause of considerable concern to patients causing mental distress and guilt feeling in them. Nonvenerealdermatoses are quiet often a diagnostic dilemma to the treating physician. **Aim:** To determine the various etiologies and clinical patterns of non-venereal genital dermatoses. **Material and methods:** This is an observational study conducted over a period of 18 months. All the patients with non-venereal lesions over genitalia alone and/or associated extra genital areas presenting to dermatology O.P.D, included in this study. **Results:** In this study, out of 100 cases, 82 (82%) were males, 18 (18%) were females. Male to female ratio being 4.5:1. The age of study population ranged from 6 years-72 years with the mean age of 34.1 years. Majority of the patients (39%) were in the age group of 21-30 years. Involvement of genitalia alone was found to be significantly higher than other groups. In our study, a total of 33 different conditions (etioloical types) of non-venereal genital dermatoses were observed in both sexes. In our study, among various categories of non-venereal genital dermatoses, inflammatory group was the commonest. Among benign category, pearly penile papules (68.4%) was the most common condition. Among inflammatory category, scrotal dermatitis (27%) was the most common condition in males and lichen sclerosus et atrophicus (36.3%) was most common in females. Venereophobia is most commonly associated with pearly penile papules. **Conclusion:** This study highlights the importance of diagnosing common nonvenereal genital dermatoses. It also helps in avoiding the general misconception that all genital lesions are sexually transmitted.

Keywords: Nonsexually transmitted diseases, nonvenereal dermatoses, nonvenereal genital dermatoses..

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Introduction

Genitalia of both male and female can be involved by sexually and non-sexually transmissible diseases. The genital disorders, which are not sexually transmitted, are referred as non-venereal genital dermatoses. Non-venereal genital dermatoses include a wide array of diseases with varied etiology[1]. They can either effect genitalia alone or may affect other body parts also. They may be confused with venereal diseases (STI's) because of their similar presentation causing a diagnostic dilemma to the treating physician as well as considerable concern to the patients. Prompt recognition of the cause or causes of visible genital lesions or uncomfortable sensations not only minimizes the duration of symptoms but also helps to avoid damage to self-esteem and sexual relationships. Improper diagnosis may lead to disease induced complications and social issues like marital conflicts. In various studies, the prevalence of non-venereal genital lesions ranged 1.4 to 6.1 per 1000 patients[2]. The age group ranged from 1 month to 85 years[3]. Few studies were reported in india (Madhya Pradesh, Punjab, Karnataka, Pondicherry). As per world health organization

report, nearly half a billion new STI's cases occur throughout the world every year. Hence the present study was undertaken to determine the clinical patterns of non- venereal genital dermatoses which are likely to be confused with STI's.

Materials & Methods

This is an observational study conducted over a period of 18 months, from January 2014 to June 2015 in Department of DVL of Gandhi hospital, Secunderabad, Telangana, India

Inclusion criteria

All the patients with non-venereal lesions over genitalia alone and/or associated extra genital areas presenting to dermatology O.P.D, included in this study.

Exclusion criteria

All patients with suspected and established cases of Sexually transmitted diseases were excluded. All the patients with non- venereal lesions presenting to DVL OPD were included in the study with prior informed consent. Name, age, sex, occupation, marital status and detailed demographic data of the patient were recorded. A detailed history was noted. History of atopy, thyroid disorders, diabetes, connective tissue disorders and any history suggestive of other autoimmune disorders was taken.

A detailed general and systemic examination was carried out and findings were noted. Complete genital and cutaneous examination was done. Routine investigations like, complete blood picture, absolute eosinophil count, blood sugar, blood urea, serum creatinine, liver function tests and thyroid profile were carried out in all patients. Investigations like

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HIV, VDRL, KOH mount, Gram's stain, histopathological examination and Direct immunofluorescence were done wherever it was required to establish the diagnosis. Data was tabulated and analysed using ratios and percentages.

Results

The present study comprised of 100 patients with various non-venereal genital dermatoses. Out of 100 cases, 82 (82%) were males, 18 (18%) were females. Male to female ratio being 4.5 : 1 .

The age of the patients in this study group ranged from 6 years - 72 years with the mean age of 34.1 years. Out of 100 patients, one (1%) was in 0-10 years age group, 11 (11%) were in 11-20 years age group, 39 (39%) were in 21-30 years age group, 21 (21%) were in 31-40 years age group, 15 (15%) were in 41-50 years age group, six (6%) were in 51-60 years age group, seven (7%) were in 61-72 years age group. Majority of the patients (39%) were in the age group of 21-30 years followed by (21%) in the age group of 31-40 years.

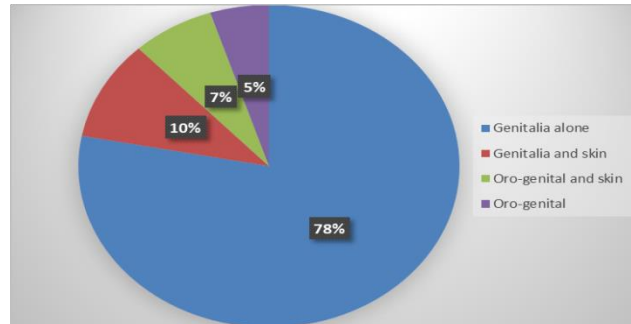


Fig 1: Distribution of non-venereal genital dermatoses involving various sites

The non-venereal genital lesions were grouped into four groups according to the involvement of sites affected as genital alone, genital and oral, genital and skin, concurrent oro-genital and skin lesions. In this study, genital alone comprised of 78 (78%) followed by genitalia and skin in 10

(10%), concurrent oro-genital and skin in seven (7%), oro-genital in five (5%). Involvement of genitalia alone was found to be significantly higher than other groups.

Table 1: Non-venereal genital dermatoses involving males and females genitalia

Genital dermatoses	No. of patients (%)
Non-venereal genital dermatoses involving male genitalia	
Pearly penile papules	13 (19.4%)
Fordyce's spots	3 (4.4%)
Angiokeratoma of Fordyce	2 (2.9%)
Acrochordon	1 (1.4%)
Lichen sclerosus et atrophicus	2 (2.9%)
BXO	1 (1.4%)
Scrotal dermatitis	10 (14.9%)
Irritant contact dermatitis	4 (5.9%)
Fixed drug eruption	2 (2.9%)
Lichen simplex chronicus	1 (1.4%)
Lichen nitidus	2 (2.9%)
Lichen spinulosus	1 (1.4%)
Zoon's balanitis	1 (1.4%)
Tinea cruris	3 (4.4%)
Folliculitis	1 (1.4%)
Sebaceous cyst	8 (11.9%)
Steatocystoma multiplex	2 (2.9%)
Vitiligo	4 (5.9%)
Traumatic ulcer	3 (4.4%)
Lymphangectasia	2 (2.9%)
Carcinoma penis(SCC)	1(1.4%)
Total	67 (100%)
Non-venereal dermatoses involving female genitalia	
Lichen sclerosus et atrophicus	4 (36.3%)
Acrochordon	1 (9%)
Bartholin's cyst	1 (9%)
Zoon's vulvitis	1 (9%)
Seborrheic keratosis	1 (9%)
Tinea	1 (9%)
Vitiligo	1 (9%)
Lipoma	1 (9%)
Total	11 (100%)

Out of 67 male patients, 13 (19.4%) patients had pearly penile papules, followed by scrotal dermatitis in 10 (14.9%), sebaceous cyst in eight (11.9%) and Irritant contact dermatitis and vitiligo in four (5.9%) patients

each, Fordyce's spots, traumatic ulcer and tinea in three (4.4%) patients each, steatocystoma multiplex, lymphangectasia, lichen nitidus, LSA, angiokeratoma of fordyce and FDE in two (2.9%) patients each,

acrochordon, balanitis xerotica obliterans (BXO), LSC, lichen spinulosus, zoon's balanitis, folliculitis and squamous cell carcinoma(SCC) of penis in one (1.4%) patient each were seen. Pearly penile papules (19.4%), followed by scrotal dermatitis (14.9%) and sebaceous cyst (11.9%) were the most frequently observed non-venereal

genital dermatoses involving male genitalia alone. Out of 11 female patients, four (36.3%) patients had lichen sclerosus/atrophicus, followed by acrochordon, bartholin's cyst, zoon's vulvitis, seborrheic keratosis, tinea, vitiligo and vulvulipoma in one (9%) patient each.

Table 2: Non-venereal dermatoses involving genitalia and skin

Genital dermatoses	No. of patients (%)
Male genitalia and skin	
Vitiligo	1 (12.5%)
Psoriasis	1 (12.5%)
Lichen planus	1 (12.5%)
Bullous pemphigoid	1 (12.5%)
Scabies	2 (25%)
Tinea	2 (25%)
Total	8 (100%)
Female genitalia and skin	
Scabies	1 (50%)
Psoriasis	1 (50%)
Non-venereal genital dermatoses	
male oro-genital and skin	
Vitiligo	1 (25%)
Fixed drug eruption	1 (25%)
Behcet's disease	1 (25%)
Pemphigus vulgaris	1 (25%)
Total	4 (100%)
Female oro-genital and skin	
Vitiligo	1 (33.3%)
TEN	1 (33.3%)
Pemphigus vegetans	1 (33.8%)
Total	3 (100%)

Out of eight male patients, scabies and tinea were found in two (25%) patients each, followed by vitiligo, psoriasis, bullous pemphigoid and lichen planus in one (12.5%) patient each. Scabies and psoriasis were seen in one (50%) patient each involving female genitalia and skin. Out of four male patients, vitiligo, FDE, behcet's disease and pemphigus vulgaris were found to be in one (25%) patient each.

Out of three female patients, vitiligo, toxic epidermal necrolysis (TEN) and pemphigus vegetans were seen in one (33.3%) patient each. Behcet's disease was seen in two (100%) patients involving female oro-genital area.

In our study, a total of 33 different conditions (etiological types) of non-venereal genital dermatoses were observed in both sexes. In our study, 27 different conditions of non-venereal genital dermatoses were documented.

Table 3: Number of conditions in each category among males

Category	No. of conditions (82) patients
Benign conditions	
Pearly penile papules	13 (68.4%)
Fordyce's spots	3 (15.7%)
Angiokeratoma of Fordyce	2 (10.5%)
Acrochordon	1 (5.2%)
Total	19 patients
Inflammatory conditions	
Scrotal dermatitis	10 (27%)
Vitiligo	7 (18.9%)
Irritant contact dermatitis	4 (10.8%)
Fixed drug eruption	4 (10.8%)
Lichen planus	2 (5.4%)
Lichen sclerosus	2 (5.4%)
Lichen nitidus	2 (5.4%)
BXO	1 (2.7%)
Psoriasis	1 (2.7%)
Lichen simplex chronicus	1 (2.7%)
Lichen spinulosus	1 (2.7%)
Zoon's balanitis	1 (2.7%)
Behcet's disease	1 (2.7%)
Infections and Infestations	
Tinea	5 (62.5%)
Scabies	2 (25%)
Folliculitis	1 (12.5%)
Total	8 patients
Miscellaneous conditions	
Sebaceous cyst	8 (47%)
Traumatic ulcer	3 (17.6%)

Steatocystoma multiplex	2 (11.7%)
Lymphangectasia	2 (11.7%)
Pemphigus vulgaris	1 (5.8%)
Bullous pemphigoid	1 (5.8%)
Total	17 patients

In our study, four different conditions of benign category were documented. Among these conditions pearly penile papules (68.4%) was the most common condition seen. In our study, 13 different conditions of inflammatory category were seen in males. Among them scrotal dermatitis (27%) was found to be the most common inflammatory

condition. Scabies (25%) and folliculitis (12.5%) were other conditions observed. In our study, carcinoma penis (SCC) was seen in one patient. In our study, among the miscellaneous conditions in males sebaceous cyst (47%) was found to be most common condition.

Table 4: Number of conditions in each category among females

Category	No.of conditions (18 patients)
Benign	
Acrochordon	1 (50%)
Seborrheic keratosis	1 (50%)
Total	2 patients
Inflammatory conditions	
Lichen sclerosus et artrophicus	4 (36.3%)
Vitiligo	2 (18.2%)
Behcet's disease	2 (18.2%)
Zoon's vulvitis	1 (9%)
Psoriasis	1 (9%)
TEN	1 (9%)
Total	11 patients
Infections and Infestations	
Tinea	1 (50%)
Scabies	1 (50%)
Total	2 patients
Miscellaneous conditions	
Vulvallipoma	1 (33.3%)
Bartholin's cyst	1 (33.3%)
Pemphigus vegetans	1 (33.3%)
Total	3 patients

Non venereal genital dermatoses in females based on etiology. In our study, 2 benign conditions were noted in females. Acrochordon and seborrheic keratosis (5.5%) each were documented. In our study, 6 inflammatory conditions were documented in females. Among them most common inflammatory condition was found to be LSA (36.3%). Other inflammatory conditions documented were vitiligo and behcet's disease (18.2%) each, zoon's vulvitis, psoriasis and TEN (9%) each. In our study, among infections and infestations in females tinea and scabies (50%) each were documented.

In our study, vulvallipoma, bartholin's cyst and pemphigus vegetans (33.3%) each were documented among miscellaneous conditions. In our study, 41 patients gave history of sexual exposure, all were males. Among them 12 patients had venereophobia and thought that they developed STD's because of their high risk behavior. Venereophobia was most commonly encountered in patients with pearly penile papules (33.3%) followed by vitiligo (16.6%) and traumatic ulcer (16.6%) patients.

Table 5: Venereophobia in study

Genital conditions	No. of patients (%)
Pearly penile papule	4 (33.3%)
Vitiligo	2 (16.6%)
Traumatic ulcer	2 (16.6%)
Fixed drug eruption	1 (8.3%)
Irritant contact dermatitis	1 (8.3%)
Lichen planus	1 (8.3%)
Lichen nitidus	1 (8.3%)
Total	12 (100%)

In our study, Pearly penile papule was the most common non-venereal dermatoses seen. It comprised of 13 (13%) patients of all non-venereal genital dermatoses of our study. In all the 13 patients coronal sulcus was the site of involvement and all of them were in the age group of 21 – 30 years. Out of 13 patients four patients had venereophobia. In our study,

scrotal dermatitis was seen in 10 (10%) patients and is the second most common non-venereal genital dermatoses. All the patients were between 30–50 years of age. Riboflavin deficiency was found to be the common cause in 50% of the patients.

Table 6: Details of Skin lesions

Scrotal dermatitis	10
Site	Genitalia alone (scrotum)
Most common age group	31 – 50 years
Cause	Riboflavin deficiency - 50% Atopy - 10% Use of various toiletries - 20% Topical medicaments - 20%
Vitiligo	9

Genitalia alone	5 (55.5%)
Oro-genital and skin	2 (22.2%)
Genital and skin	1 (11.1%)
Oro-genital	1 (11.1%)
Over male genitalia	
Glans	1
Glans and inner prepuce	2
Inner prepuce	4
Over female genitalia	
Labia majora and clitoris	1
Labia majora, minora and clitoris	1
Most common age group	20 – 30 years
Venereophobia	2
Sebaceous cyst	8
Sites	Genitalia alone (scrotum)
Common age group	21 – 30 years
< 10	7
> 10	1
Infected	1
Tinea	6
Sites	
Genitalia alone	4 (66.6%)
Genitalia and skin	2 (33.3%)
Common age group	15 – 40 years
Lichen sclerosus et atrophicus	6
Labia majora, minora and clitoris	3
Labia majora and perianal	2
Over male genitalia	
Glans penis	1
Prepuce of penis	2
Common age group	40 – 55 years
Association	Hypothyroidism in one case and diabetes mellitus in two cases.
Fixed drug eruption	4
Genital alone	2 (50%)
Oro-genital	1 (25%)
Oro-genital and skin	1 (25%)
Most common site over genitalia	Glans penis
Age group	21 – 50
Most common drugs	Fluoroquinolones, NSAID'S

Vitiligo was the one of the common non-venereal disorder seen in our study. It comprised of nine (9%) patients of all non-venereal genital dermatoses, of which seven (77.7%) were males and two (22.2%) were females. In our study, sebaceous cyst comprised of eight (8%) patients of all non-venereal genital dermatoses. In our study, tinea comprised of six (6%) patients of all non-venereal genital dermatoses, with five (83.3%) males and one (16.6%) female. Genitalia alone was found to be involved in (66.6%) and genitalia and skin in (33.3%). Common age group was 15 – 40 years. In our study, LSA comprised of six (6%) patients of all the non-venereal genital dermatoses, of which two (33.3%) were males and four (66.6%) were females. In our study four (4%) patients had fixed drug eruption caused by fluoroquinolones and NSAID's. Out of four patients two (50%) had purely genital involvement followed by one patient (25%)



Fig 1 a:Fordyce Spots



Fig 1 b:Pearly penile papules

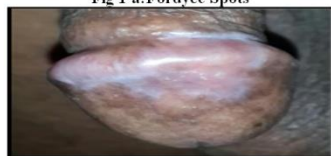
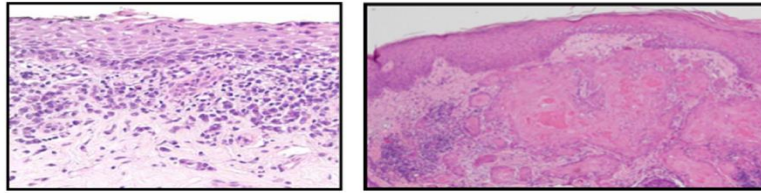


Fig 1c:Lichen planus involving genital



Zoon's balanitis - Epidermis with absent horny and granular layers with suprabasal lozenge keratinocytes. Dermis showing dense mixed infiltrate with predominance of plasma cells

SCC of penis - Atypical keratinocytes extending into the dermis with multiple keratin hom pearls. Dermis showing dense infiltrate of lymphocytes

Fig 2: Clinical photographs in study

Discussion

The present study comprised of 100 consecutive patients with various non-venereal genital dermatoses documented over a period of 18 months (January 2014-June 2015) at a tertiary care centre in Telangana, India. Out of 100 patients, 82 (82%) were males, 18 (18%) were females. Male to female ratio being 4.5:1. Neerja Puri et al.[2] observed 60% of the patients were males and 40% were females and a male to female ratio of 1.5:1. Acharya et al reported a male to female ratio of 1.8:1. In our study, the age group of the patients ranged from 6 years-72 years with the mean age of 34.1 years, whereas the age range was from 1 month to 80 years in the study population by Acharya et al[3]. The age range among the male population in this study was 16 to 72 years with the mean age of 33.8 years which was similar to the study done by Karthikeyan K et al. (9 to 70 years with the mean age of 33.7 years). The age range among the female population in this study was 6 to 52 years with the mean age of 35.5 years, whereas Singh N et al. reported age range from 1 to 85 years with the mean age of 37 years among the female population. In this study, most of the patients belonged to the age group of 21-30 years (41%), whereas in a study by Acharya et al. majority were in the age group of 31-40 years (31%). In our study, among males, majority belonged to the age group of 21-40 years which is similar to the study by Karthikeyan K et al. (21-40 years). In our study, among the female population most of them were in the age group of 31-40 years, which was in contrast to a study done by Singh N et al (41-60 years) among females population. In this study, genital involvement alone comprised of 78(78%) and 22% of the patients had both genital and extra genital involvement. Involvement of extra genital sites may provide a clue to the diagnosis of non-venereal genital dermatoses. In our study, among males, penis was the most common site involved (48.7%), which is similar to the study done by Neerja Puri et al[2] (52%). Whereas scrotum was the most common site involved in the studies done by Karthikeyan K et al. (52%) and Saraswat P.K et al. (60%). Sites of involvement of non-venereal genital dermatoses in females in our study, among females, labia majora was the most common site involved (61.1%), which was similar to the studies done by Singh N et al.(91.7%) Neerjapuri et al.(87%). Based on etiology, Fitzpatrick and Gentry[7] categorised various conditions of non-venereal genital dermatoses into benign, congenital, inflammatory, infectious, premalignant, malignant and miscellaneous categories. In our study, a total of 33 different conditions (etiological types) of non-venereal genital dermatoses were observed in both sexes, whereas Neerja Puri et al found only 18 different conditions in their study. In our study, 27 different conditions of non-venereal genital dermatoses were documented, when compared to the study done by Karthikeyan K et al(25 different of non-venereal dermatoses) and Saraswat P.K et al(16 different types of non-venereal dermatoses). Our study documented 4 different conditions of benign category, 13 different conditions of inflammatory category, 3 different conditions of infectious category, 1 condition of malignant category and 6 different conditions of miscellaneous category. Among males, benign category constituted around 23% of our study population when compared to Saraswat P.K et al[6](16%), Neerja Puri et al.(13.3%), Karthikeyan K et al. (6%) The group of inflammatory category constituted 44.6% of our study population which was similar to the studies done by Saraswat P.K et al.6 (58%), Neerja Puri et al. (57.4%), Karthikeyan K et al. (48%). Infections and Infestations accounted for 9.6% of our study population when compared to the studies done by Saraswat P.K et al. (16%), Neerja Puri et al. (16.6%), Karthikeyan K et al.

(18%). Malignant category accounted for 1.2 % of our study population which was similar to the study done by Saraswat P.K et al[6] (1%) and was in contrast with the study done by Neerja Puri et al.[2] (6.6%). In our study, among the benign conditions, pearly penile papules was found to be the most common condition (68.4%), which was similar to the studies done by LS Khoo et al.[8](58.2%), Saraswat P.K et al [6](100%), Karthikeyan K et al(66.6%) and Neerja Puri et al[2] (75%). In our study, among the inflammatory conditions, Scrotal dermatitis was found to be the most common condition (27%), which was similar to the study done by Neerja Puri et al[2] (29.4%), whereas vitiligo was found to be the most common condition in other studies done by Saraswat PK et al[6](31%), Karthikeyan K et al.[4](32%). Among the non-venereal Infections and Infestations of male genitalia, tinea (6%) was found to be most common in our study, whereas scabies was found to be the most common condition in other studies done by Saraswat P.K et al. (10%), Karthikeyan K et al.(9%), Neerja Puri et al.(10%). Malignant conditions accounted for 1 patient of our study population which was similar to the study done by Saraswat P.K et al. (1 patient). Among the miscellaneous conditions, Sebaceous cyst (9.7%) was found to be most common in our study, which was similar to the other studies done by Saraswat P.K et al.6 (7%), Karthikeyan K et al. (14%), Neerja Puri et al. (6.6%). Distribution of various types of non-venereal female genital dermatoses 13 different types of non-venereal genital dermatoses were documented in females in our study which was similar to the study done by Neerja puri et al. (9 different of non-venereal dermatoses) whereas Muktamani G et al.9 and Singh N et al[8] documented 26 and 19 different types of non-venereal dermatoses respectively. Our study documented 2 different conditions of benign category, 6 different conditions of inflammatory category, 2 different conditions of infectious category and 3 different conditions in miscellaneous category. Non venereal genital dermatoses in females based on etiology in our study, benign conditions among females constituted around 11% which was similar to the study done by Muktamani G et al.9(8%) whereas Neerjapuri et al., Singh N et al[5] reported 5% and 2.5% respectively which was in contrast to the present study. The group of inflammatory dermatoses constituted majority (60.9%) of our study population which was similar to the studies done by Singh N et al.(59.2%), Neerja Puri et al.(50%), Muktamani G et al.(42%). Infections and Infestations accounted for 11% of our study population when compared to the studies done by Singh N et al.(23.3%), Neerja Puri et al.(25%), Muktamani G et al.(38%). Benign non-venereal genital dermatoses in females Among the benign conditions of non-venereal female genital dermatoses, acrochordon and Seborrheic keratosis had an equal split of 5.5% each. Neerja Puri et al. and Singh N et al. reported acrochordon to be the most common benign non-venereal female genital dermatoses. Among the Inflammatory conditions of non-venereal female genital dermatoses, Lichen sclerosus et atrophicus (22.2%) was found to be most common in our study, similar to the studies done by Singh N et al(21.7%), Neerja Puri et al.(15%) whereas vitiligo was found to be the most common condition in a study by Muktamani G et al.(14%). In our study, among the non-venereal Infections and Infestations of female genitalia, tinea and scabies were found to be 5.5% each, whereas Neerja Puri et al(10%) and Singh N et al (5%) found tinea to be the most common infection. In contrast, folliculitis was the most common in a study by Muktamani G et al[9]. Among the miscellaneous conditions, bartholin's cyst, pemphigus vegetans were found in one (5.5%) each. Pearly penile papule is a benign/normal physiological variant. It was

found to be the most common benign male non-venereal dermatoses in our study as documented with other studies (LS Khoo et al., Saraswat PK et al., Karthikeyan K et al. and Neerja Puri et al). They presented with asymptomatic whitish papular lesions on the corona of the glans arranged in two to three rows. In our study most common age group involved was 21-30 years. Apprehension of a venereal disease was frequently associated with this condition. They were counseled and reassured about the benign nature of the disease.

In our study, scrotal dermatitis was the most common inflammatory dermatoses in males. Most common age group involved was 31-50 years. Itching over the scrotum was the common complaint. Contributory factors in our study include riboflavin deficiency in (50%), topical medicaments in (20%), use of various toiletries in (20%), and atopy in (10%). Genital vitiligo could be an exclusive finding, or it can be associated with generalized vitiligo. In our study, nine patients of vitiligo were documented of which exclusive genital vitiligo accounted for 55.5% (5) of patients and 45.5% (4) had both genital and extra genital involvement. Vitiligo was the second most common inflammatory dermatoses in our study. Most common age group involved was 21- 30 years. Youngest patient recorded was 6 years female. Among the male population, it constituted 8.5% in our study which was in contrast to the study done by neerja puri et al. (14.3%). In our study, vitiligo accounted for 11.1% of female population similar to 14% reported by Muktamani G et al[9] in their study. Sebaceous cyst was the most frequently observed condition among miscellaneous group, accounted for 8% of all non-venereal genital dermatoses. Most common age group involved was 21-30 years. In this study, no female patients were affected, whereas Singh N et al.[5] reported 3(2.5%) female patients with sebaceous cyst. In our study, all the patients had multiple sebaceous cysts (more than two). Tinea infection was present in 6% cases in our study. It is the most common condition among non-venereal male dermatoses of infectious etiology. Scaly pruritic plaques were the common presentation. Penile shaft involvement was seen in one patient. All of them were confirmed by KOH mount. Most common age group involved was 31-40 years. Five (83.3%) were males and one (16.6%) was female. Genitalia alone was involved in (66.6%) and 33.3% had genitalia and skin involvement. In our study, Lichen sclerosus atrophicus was the most common non-venereal inflammatory genital dermatoses of females. It comprised of six (6%) of all non-venereal genital dermatoses, of which two (33.3%) were males and four (66.6%) were females. Out of four females, two females were of post-menopausal age. Most common age group involved was 41-50 years. Burning sensation and itching being the most presenting complaints. Labia majora was the most common site involved in females followed by labia minora and clitoris. Prepuce and glans penis were the most common sites involved in males. In our study, four 4 patients(4%) had fixed drug eruption caused by fluoro-quinolones and NSAID's two cases each whereas in a study done by Karthikeyan et al[4], 3% patients had FDE and all of them were cotrimoxazole induced. Out of four patients, two (50%) had exclusive genital involvement. Glans penis was

the most common site affected, which was involved in all cases. Oral mucosal involvement was present in two patients similar to that reported by Saraswat P.K et al[6] (50%).

Conclusion

Contrary to normal belief all the lesions on genitalia are not sexually transmitted. It is very important to distinguish between venereal and nonvenereal genital dermatoses, as these nonvenereal disorders are a considerable concern to patients causing mental distress and feeling of guilt. Also, these nonvenereal disorders are quiet difficult in making a diagnosis by the treating physicians. A comprehensive understanding of the various presentations, their etiology is, therefore, essential. This study was quiet useful in understanding the epidemiological, clinical and etiological characteristics of various nonvenereal genital dermatoses. The most common etiological diagnosis in our study was vitiligo.

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Conflict of Interest: Nil

Source of support: Nil