

Clinical Pattern of Non-Venereal and Venereal Genital Dermatoses in Males Attending Dermatology OPD in A Tertiary Care Hospital**Mohammed Zahir¹, Preetam Singh Katroliya², Chaturvedi Mohini³, Argal Deepak⁴, Vivek Kumar Dey⁵, Animesh Saxena⁶**¹Senior Resident, Dermatology, V.D & Leprosy, Chirayu Medical College Hospital & Research Centre, Bhopal, MP²Assistant Professor, Dermatology, V.D & Leprosy, SRVS Govt. Medical College Shivpuri, MP³Senior Resident, Dermatology, V.D & Leprosy, Sukh Sagar Medical College and Hospital Jabalpur⁴Senior Resident, Dermatology, V.D & Leprosy, SRVS Govt. Medical College Shivpuri, MP⁵Professor & Head of Department, Dermatology V.D & Leprosy, People's College of Medical Sciences & Research Centre, Bhopal, MP⁶Associate Professor, Dermatology, V.D & Leprosy, People's College of Medical Sciences & Research Centre, Bhopal, MP

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Abstract:**Context:** The present study was conducted at a tertiary care centre to determine the prevalence and clinical patterns of various non-venereal and venereal genital dermatoses affecting males. Genital disorders include a spectrum of diseases with varied etiology. As, venereal, and non-venereal dermatoses tend to be confusing, they may be associated with mental distress and guilt feelings in affected patients.**Aims:** To determine the prevalence, clinical and epidemiological patterns of various non-venereal and venereal genital dermatoses affecting males.**Settings and Design:** Observational study was carried out at a tertiary hospital.**Methods and Material:** Data was collected from OCT 2019 to MAR 2020 (6 months). 240 patients with non-venereal & venereal dermatoses of external genitalia were studied. Investigations such as Gram stain, KOH mount, VDRL, ELISA for HIV were done to confirm clinical diagnosis.**Statistical analysis:** On completion of data collection, data was compiled using Microsoft excel version 2016 and analysis was done using IBM Corp., Armonk, N.Y., USA SPSS Statistics for Windows, version 20. Numerical data was expressed as mean and SD whereas categorical variables were expressed as frequency and proportions. Independent sample t test was applied to assess the difference in mean between two groups whereas chi square test was applied to assess the difference between proportions. P value less than 0.05 was considered statistically significant.**Results:** The prevalence of non-venereal & venereal genital lesion during the period was found to be 6.1 per 1000 respectively among patients attending dermatology department.**Conclusions:** Based on this study, non-venereal diseases constitute the major burden of genital dermatoses in adult males. Our study will aid to understand prevalence, clinical and epidemiological patterns of various non-venereal and venereal genital dermatoses affecting males in future studies.**Keywords:** Non-Venereal; Venereal; Male; Genital Dermatoses.

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Introduction

Genital dermatoses describe disorders that predominantly affect the skin of male and female genital area, broadly classifying them into venereal and non-venereal genital disorders. Dermatoses involving the genital areas are not always sexually transmitted. The diseases, which are not sexually transmitted, are referred as non-venereal dermatoses. [1] Genital dermatoses in men can become stressful and psychological concerns may arise. So, a

comprehensive understanding of the various presentations, their causes, aggravating factor, and appropriate treatments options is essential to effectively manage these non-venereal dermatoses, allay the associated anxiety and improving the symptomatology. [2] We did this study to find the prevalence, clinical and epidemiological patterns of various non-venereal and venereal genital dermatoses affecting males. Knowledge about the prevalence, etiology of

various non-venereal and venereal genital dermatoses shall be helpful in making a concrete diagnosis and creating awareness among patients to improve their personal hygiene and social habits.

Subjects and Methods

It was an observational study which was approved by the institutional ethics committee.

Data was collected from all new patients attending the dermatology OPD at a tertiary care center, having lesions over the genital area during the study period (Nov. 2019 to April 2020). 240 patients with non-venereal & venereal dermatoses of external genitalia were studied.

Inclusion criteria included all male patients, having genital lesions, patients aged ≥ 18 years, patients willing to participate in the study.

Exclusion criteria excluded the patients unwilling to participate in the study. After taking a written consent from the patients, detailed history regarding age, marital status, sexual practices, and application of topical creams, recurrence, and initial site of affection, duration, and progression of the disease were taken.

External genitalia, anal and perianal regions were examined. A thorough examination of the skin and mucosa was done to look for lesions elsewhere in the body. Gram's stain, KOH mount, VDRL, ELISA, skin biopsy was done as and when required, to establish the final diagnosis.

The relevant details of the patient, examination findings, investigations, diagnosis were recorded in a standard proforma.

Results

Number of patients with non-venereal and venereal genital lesions were 170 (70.83%) and 70 (29.17%) respectively. Table 1 & 2.

Majority were in the age group of 31-40 years, mean age of 35.16 years (32.1%) followed by 20-30 years (30%). Married patients (60%) were more commonly affected as compared to the unmarried (40%). A total of 28 different conditions were identified which were broadly classified into eight categories based on the etiology. (Table 3 & Table 4.)

Table 1: Non venereal dermatoses in the study population

S. No.	Non venereal dermatoses	No. Of patients	%
1	Genital scabies	42	24.1 %
2	Candidal balanoposthitis	21	12.4 %
3	Genital dermatophytosis	16	16 %
4	Irritant contact dermatitis	15	8.8 %
5	Fixed drug eruption	10	5.9 %
6	Scrotal dermatitis	10	5.9 %
7	Pearly penile papule	9	5.3 %
8	Paraphimosis	6	3.5 %
9	Lichen sclerosus et atrophicus	5	2.9 %
10	Vitiligo	5	2.9 %
11	Pemphigus vulgaris	5	2.9 %
12	Sebaceous cyst of scrotum	4	2.4 %
13	Lichen nitidus	4	2.4 %
14	Lichen planus	3	1.8 %
15	Balanitis xerotica obliterans	3	1.8 %
16	Steatocystoma multiplex	2	1.2 %
17	Angiokeratoma of Fordyce	2	1.2 %
18	Zoon's balanitis	2	1.2 %
19	Psoriasis	2	1.2 %
20	Fordyce spots	2	1.2 %
21	Herpes zoster	1	0.6 %
	Total	170	100 %

Table 2: Venereal dermatoses in the study population

S. No.	Venereal dermatoses	No. Of patients	%
1	Genital wart	21	30 %
2	Non gonococcal urethritis	18	25.7 %
3	Herpes genitalis	12	17.1 %
4	Molluscum contagiosum	7	10 %
5	Syphilis	5	7.1 %
6	Chancroid	4	5.7 %
7	Gonococcal urethritis	3	4.4 %
	Total	70	100 %

A total of 27 different conditions were identified which were broadly classified into 2 categories i.e. venereal 29.17% and non-venereal 70.83% genital dermatoses.

S. No	Type	No. of Patients	%
1	Venereal Dermatoses	70	29.17
2	Non-Venereal Dermatoses	170	70.83
3	Total Enrolled Cases	240	100

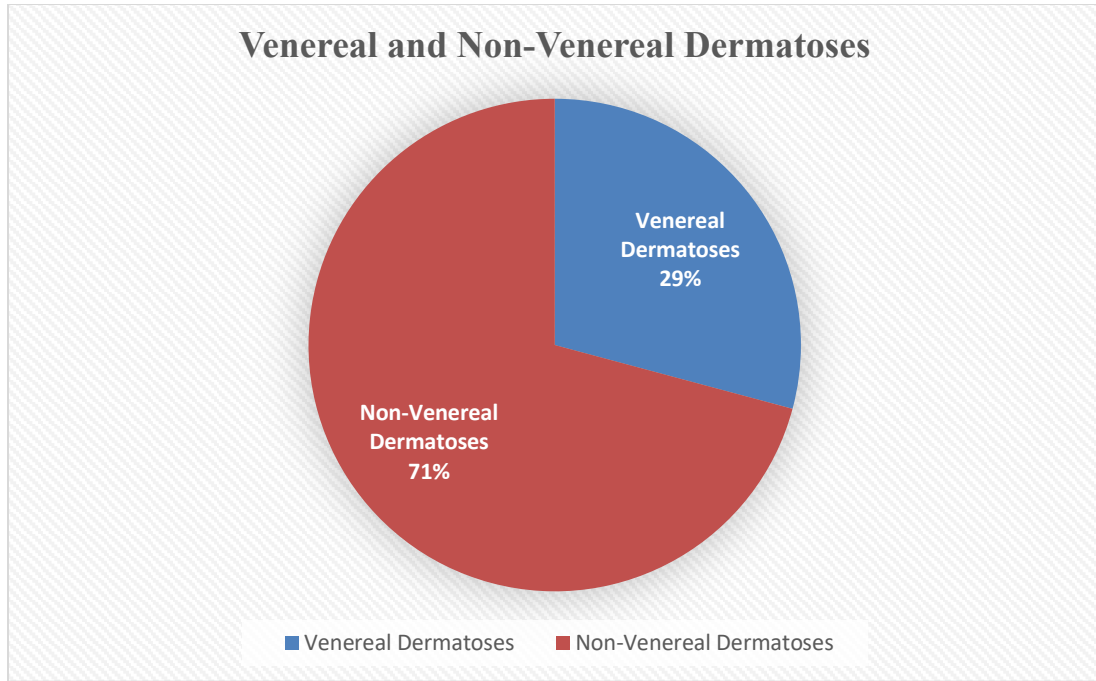


Figure 1: Venereal and Non-Venereal Dermatoses

Non venereal dermatoses figures



Figure 2: Balanoposthitis



Figure 3: Nodular Scabies

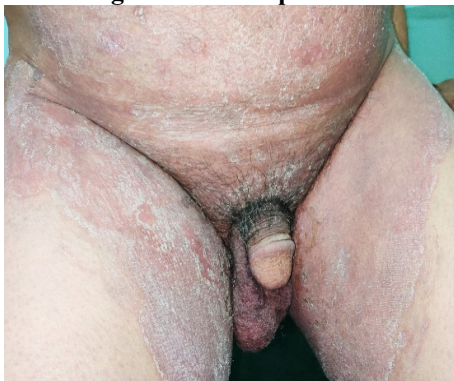


Figure 4: Genital Dermatophytes



Figure 5: ICD

Venereal dermatoses figures



Figure 6: Genital wart



Figure 7: Genital MC



Figure 8: Genital Herpes



Figure 9: Urethral discharge

Discussion

Dermatoses of the external genitalia region have a discrete etiology. Therefore, to decide, it requires extensive knowledge and experience about non-venereal and venereal genital dermatoses. Hence, the characterization and identification of the diseases becomes quite challenging. [1,2]

In this study, age of patients ranged from 18 to 65 years with mean age of 35.16 years. Majority were in the age group of 31-40 years (32.1%) followed by 20-30 years (30%) like in the study done by Acharya et al majority where patients belonged to the age group of 31 to 40 years (31%). Whereas, Karthikeyan et al and Saraswat et al, in their studies observed patients belonging to the age group of 21-30 years. [1,2,3]

A total of 28 genital dermatoses were identified which were broadly classified based on the etiology into two categories i.e. non-venereal 21 and venereal [7] genital dermatoses. Previous studies reported 62% infective [venereal & non venereal] and 38% non-infective genital dermatoses by Himaja et al and Sandeep Kumar et al had observed 38% of non-venereal dermatoses. [4,5]

In non-venereal genital dermatoses, infections and infestations group formed the majority (46.5%) followed by inflammatory disorders (28.8%), benign variants (11.8%), miscellaneous conditions (9.8%),

pigmentary disorder (2.9%) and malignant lesions (0.6%). The most common disorder in non-venereal dermatoses was genital scabies which accounted for 24.1% and lowest for squamous cell carcinoma (0.6%).

Genital scabies was found in 24.1 % of cases in the present study. The prevalence of scabies was 10% in Saraswat et al study and 9% in Karthikeyan et al study.[2,3] Candidal balanoposthitis presented in 12.4% of cases as lesions on the glans, radial fissures over the prepuce. Most of these patients were in 40-to-50-year age group and eight of them were found to have type 2 diabetes mellitus. Cases of candidal balanoposthitis reported by Karthikeyan et al and Acharya et al in their studies as 5% and 6.5% respectively.[1,2]

Genital vitiligo in 2.9% cases, as observed in the present study, which contrasts with the studies done by Karthikeyan et al and Saraswat et al who reported vitiligo in 16% and 18% cases respectively.[2,3] In our study population pearly penile papules were seen in 5.3%. The percentage of pearly penile papules ranged from 2.5% to 34.4% in various studies. They appeared as multiple flesh colored to pale small, rounded papules around the coronal sulcus. Most patients belonged to the younger age group and were apprehensive considering them to be warts. Sebaceous cysts were found in 2.4 % of cases. [6] Angiokeratoma of Fordyce was observed in 1.2%

patients as bluish red keratotic papules over the scrotum. There were no similar lesions elsewhere in the body. Lichen planus and Lichen nitidus were found in six patients 1.8% and 2.4% of patients contrasts with Saraswat et al (9%), Puri and Puri et al (6.6%), Karthekeyan et al (1%).[2,3,7]

Psoriasis involving the genitalia was found in two (1.2%) patients. Saraswat et al and Acharya et al observed 3% and 5% cases of genital psoriasis in their study.[1,3] Genital involvement can occur in up to 30% of patients with psoriasis. 10 cases of fixed drug eruption (FDE) were noticed, and the drugs implicated were ibuprofen, diclofenac, cotrimoxazole, tetracycline, ciprofloxacin, ornidazole and metronidazole. Saraswat et al reported 12% cases of FDE whereas; Karthekeyan et al had 3% cases in their study. [2,3] Scrotal dermatitis was found 10% cases in our study. Angiokeratoma of Fordyce, Balanitis xerotica obliterans, Fordyce spots and Zoon's balanitis were found 1.2%, 1.8% and 1.2% respectively.[8]

Irritant contact dermatitis was seen in 11 (8.8%) patients. It was caused by condoms, hair removing cream, salicylic acid based, cassia tora based, phenol, tincture iodine based cream and dithranol, salicylic acid, and coal tar based cream. Lichen sclerosus et atrophic was encountered in five (2.9%) patients. Patients presented with phimosis and mild itching. No evidence of involvement of perianal and oral mucosa was noted. Infections like Herpes zoster involving scrotum and penis due to involvement of L1 dermatome in one patient in the form of vesicles, erosions and crusts were also seen. Pemphigus vulgaris was noticed in five patients. One patient with malignant lesions (SCC) was noticed in the present study.

Among venereal genital dermatoses, genital warts were the commonest non-ulcerative viral STD accounting for 30% while, herpes genitalis being the most common genito-ulcerative disease observed in our study accounting for 17.1%, followed by molluscum contagiosum 10.0% which is comparable with the studies of Devi et al, Jain et al and Chandragupta et al.[9,10] Among bacterial STIs NGU, was at top with 25.7% followed by gonococcal urethritis 8.6%, syphilis 7.1%, chancroid 5.7%.

Marked decline in bacterial STIs, resulting in an apparent increase of the viral STIs, has been reported from various Indian studies. Our study confirmed a similar pattern and showed an increasing trend of herpes and genital warts. There was an increasing trend of viral STIs with reduction in those of bacterial origin probably due to better antibiotics, empirical treatment provided by clinician.

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