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Original Research Article

A clinical study of the pattern of nonvenereal dermatoses of adult male genitalia attending dermatology department in Silchar medical college & hospital

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ABSTRACT

Introduction: External genitalia of male is common site for rashes, itching and minor infections. Because of its anatomical variation, the area is always warm, moist and occluded, which predisposes to occur many dematoses. These dermatoses can be divided into two groups: venereal dermatoses and nonvenereal dermatoses. Non-venereal dermatoses are the diseases which are not sexually transmitted.

Aims and Objectives: 1: To study the pattern of non-venereal dermatoses of adult male genitalia of patients of age 18 years and above; 2: To study frequency of various non-venereal dermatoses among that population.

Materials and Methods: The study was conducted in the Department of Dermatology, Silchar Medical College & Hospital, Silchar, Assam over a period of one year extending from 1st June 2018 to 31st May 2019 after satisfying all the inclusion and exclusion criteria. It was a clinical observational study (cross sectional study).

Results and Observations: In the study, we came across 152 male patients of age 18 years and above. The prevalence of non-venereal dermatoses of male genitalia was found to be 54 per 10,000 populations. The mean age of presentation was 35.5 years. Pearly penile papule was the most common presentation among normal variants with 5.9% patients. Among inflammatory dermatoses eczematous dermatoses was most common dermatoses with 14.47% patient. Among miscellaneous cutaneous genital conditions, vitiligo was the only dermatoses we found with 17.11% patients. Scabies was the most common among infections and infestations with 9.9% patient. Sebaceous cyst was the most common benign tumour with 3.3% patient. Among pre-cancerous lesions, we found 2(1.3%) cases of porokeratosis and 1(0.66%) case of penile horn. We found 3 cases of squamous cell carcinoma (2%) in our study.

Conclusion: With the knowledge of clinical pattern of the non-venereal dermatoses in an area, clinical diagnosis of common dermatoses can be made easily. It is a common misbelieve among the patients that all dermatoses occurring in the genitalia are manifestations of sexually transmitted diseases. So, proper knowledge of these non-venereal dermatoses helps to create awareness among patients

1. Introduction

The male external genitalia consists of the scrotum and the penis.[1] External genitalia of male is common site for rashes, itching and minor infections. The area is always warm, moist and occluded. Contrary to popular belief, all dermatoses on the genitalia are not manifestations of sexually transmitted diseases.[2] They can be divided into two groups: venereal dermatoses and nonvenereal dermatoses. Non-venereal dermatoses are the diseases which are not sexually transmitted.[3]

Non-venereal genital dermatoses include a wide array of diseases with varied etiology. They can either affect genitalia alone or may affect other body parts also.

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These non-venereal dermatoses of male genitalia can be : normal variants, congenital abnormalities, inflammatory dermatoses, trauma and artifacts, non sexually transmitted infections and infestations, benign tumours, precancerous dermatoses and carcinoma in situ, malignant lesions and miscellaneous cutaneous male genital conditions.[4] Certain conditions like phimosis and paraphimosis, Peyronie's disease, plasma cell balanitis, lichen sclerosus et atrophicus, fixed drug eruption, Fournier's gangrene, Behcet's disease, non-venereal sclerosing lymphangitis are important conditions peculiar to male genitalia.[5]

These non-venereal disorders cause immense concern to the patients, causing mental distress and feeling of guilt in them, who believe that they have developed a sexually transmitted infection. Often these dermatoses cause a diagnostic dilemma to the physician. Therefore, it is necessary to understand various causes of dermatoses and their presentations.

2. Aims a nd Objectives

1. To study the pattern of non-venereal dermatoses of adult male genitalia of patients of age 18 years and above.
2. To study frequency of various non-venereal dermatoses among that population.

3. Materials and Methods

The study has been conducted in the Department of Dermatology, Silchar Medical College & Hospital, Silchar, Assam over a period of one year extending from 1st June 2018 to 31st May 2019 after approval from the Institutional Ethical Committee (IEC) and after obtaining informed consent from the patients.

3.1. Inclusion criteria

All male patients of age 18 years and above presenting with non-venereal dermatoses of genitalia & involvement of other body parts are included in the study.

3.2. Exclusion criteria

The following patients were excluded from the study

1. All cases of venereal diseases with genital lesions.
2. Patients below 18 years of age.
3. Patients unwilling to give consent.

3.3. Study design

Clinical observational study (cross sectional study).

4. Results and Observations

In the study, we came across 152 male patients of age 18 years and above who presented with non-venereal genital dermatoses. The prevalence of non-venereal dermatoses of male genitalia was found to be 54 per 10,000 populations in our study. The mean age of presentation was 35.5 years. The youngest patient was 18 years old, while the oldest patient was 76 years old. The most common age group was 21-30 years of age with 37.5% patients followed by 28.3% of patients in the age group 31-40 years. In this study, out of 152 patients, 90(59.21%) patients were married and 62(40.79%) patients were unmarried. Most common occupation in our study was found to be manual labourers with 54 (35.52%) cases, followed by 33 (21.71%) cases of farmers.

Most common presenting feature was raised lesions (50.65%) followed by itching (45.39%), depigmentation (19.07%), burning sensation (15.79%), pain (15.13%),erosion (11.18%), redness (9.21%), oozing from lesion (8.55%), thickening of skin (8.55%), bleeding (4.6%), fluid filled lesion (2%) and ulcer (1.32%). A total of 23 individual types of non-venereal male genital dermatoses were noted in this study. Most common dermatoses was found to be vitiligo with 26(17.11%) patients. Second most common disease was eczematous dermatoses with 22(14.47%) patients, which included 8 cases of lichen simplex, 10 cases of irritant contact dermatitis and 4 cases of allergic contact dermatitis. Inflammatory dermatoses group formed the major group with 38.81% patients.

Among normal variants, pearly penile papule was the most common presentation with 5.9% patients. Among inflammatory dermatoses eczematous dermatoses was most common dermatoses with 14.47% patient. Among miscellaneous cutaneous genital conditions, vitiligo was the only dermatoses we found with 17.11% patients. Among infections and infestations, scabies was the most common with 9.9% patient. Sebaceous cyst was the most common benign tumour with 3.3% patient. Among pre-cancerous lesions, we found 2(1.3%) cases of porokeratosis and 1(0.66%) case of penile horn. We found 3 cases of squamous cell carcinoma (2%) in our study.

In the present study it was found that most common site involved was penis in 81(53.3%) cases, second most common site was scrotum in 53(34.9%) cases while both scrotum and penis were affected in 18(11.8%) cases. In our study, we found, in 93(61.18%) patients genitalia was involved alone, followed by 50(32.9%) patients involving genital and other body parts, 4(2.63%) patients with oro-genital involvement and 5(3.3%) patients with concurrent involvement of oro-genital and other body parts.

Among the non-venereal conditions those involving only genitalia, majority was constituted by 15 cases of vitiligo (9.9%). Among the dermatoses involving genitalia and other body parts, scabies was most common with 12(7.9%) patients, followed by 10(6.6%) patients with vitiligo. Among oro-genital distribution, 1(0.66%) patient of lichen planus, 2(1.3%) patients of fixed drug eruption and

1(0.66%) patient of vitiligo presented with oral and genital involvement. 2(1.3%) cases each with lichen planus and pemphigus vulgaris and 1 case (0.66%) with toxic epidermal necrolysis presented with concurrent oral, genital and other body parts involvement.

We found 13 cases (8.6%) of fixed drug eruption. The drugs implicated were cotrimoxazole, paracetamol, metronidazole and ofloxacin. We observed genital involvement in one case of toxic epidermal necrolysis which was induced by phenytoin

We came across 2 cases of pemphigus vulgaris and 1 case of bullous pemphigoid with genital involvement. Among the clinical tests, Nikolsky's sign was found to be positive in 2 cases of pemphigus vulgaris and 1 case (Pseudo Nikolsky's sign) of toxic epidermal necrolysis. Bulla spread sign was positive in 1 case of pemphigus vulgaris and 1 case of bullous pemphigoid. Grattage test was positive in 5 cases of psoriasis patients.

In laboratory tests, out of 152 patients, the study showed that anaemia was present in 16 cases. Leucocytosis was present in 2 cases including one patient each with pemphigus vulgaris and toxic epidermal necrolysis. 5 patients of scabies showed eosinophilia. 12 patients reports showed raised random blood sugar, which included 7 patients with candidal balanoposthitis, 2 patients with dermatophytosis and 1 case each with psoriasis, scrotal eczema and vitiligo. Among the special tests, KOH mount showed yeasts in 8 cases of candidal balanoposthitis and hyphae in 6 cases of dermatophytosis. Tzanck smear showed acantholytic cells in 1 case of pemphigus vulgaris. HIV 1 and HIV 2 was done in 35 cases and none of the patients came out to be positive. Rapid plasma reagin test was done in 19 cases, and all patients came out to be negative. Biopsy was done in 18 cases and histopathologic diagnosis of psoriasis was done in 2 cases, lichen planus in 1 case, porokeratosis in 1 case, scrotal calcinosis in 1 case, pemphigus vulgaris in 2 cases, lichen sclerosus in 3 cases, squamous cell carcinoma in 3 cases and bullous pemphigoid in 1 case. Chest X-ray was done in 15 cases and no abnormality was detected in any of them. Ultrasonography whole abdomen was done in 6 cases and was found to be normal in all cases.

Table 1:

Genital dermatoses	Number of patients	Percentage (%)
Normal Variants	**16**	**10.5**
Pearly penile papule	9	5.9
Angiokeratoma of Fordyce	7	4.6
Inflammatory Dermatoses	**59**	**38.81**
Eczematous dermatoses	22	14.47
• Lichen simplex	8	5.3
• Irritant contact dermatitis	10	6.6
• Allergic contact dermatitis	4	2.63
Lichen sclerosus	7	4.6
Lichen planus	4	2.6
Psoriasis	6	3.9
Zoon balanitis	3	2
Fixed drug eruption	13	8.6
Pemphigus vulgaris	2	1.3
Bullous pemphigoid	1	0.66
Toxic epidermal necrolysis	1	0.66
Infections and Infestations	**35**	**23.03**
Candidal balanoposthitis	12	7.9
Dermatophytosis	8	5.26
Scabies	15	9.9
Benign Tumours	**10**	**6.6**
Scrotal calcinosis	4	2.6
Lymphangioma circumscriptum of penis	1	0.66
Sebaceous cyst	5	3.3
Pre-Cancerous Lesions	**3**	**2**
Porokeratoses	2	1.3
Penile horn	1	0.66
Malignant Lesions	**3**	**2**
Squamous cell carcinoma of penis	3	2
Miscellaneous Cutaneous Genital Conditions	**26**	**17.11**
Vitiligo	26	17.11
Total	152	100

5. Discussion

The prevalence of non-venereal male genital dermatoses was found to be 0.54%, that is equivalent to 54 per 10,000 population. Karthikeyan K et al.,[6] had done a prevalence study in South India and found prevalence to be 14.1 per 10,000 population and Kumar PS et al.,[7] did a study in Andhra Pradesh where prevalence was found to be 30.8 per 10,000 populations.

In a study done by Karthikeyan K et al.,[6] on non-venereal dermatoses of male genitalia the mean age of the patients found to be 33.7 years (range 9 to 70 years). Most patients belonged to the age group of 21 to 30 years, which is similar to our study. Majority of the cases (74 %) were labourers, students, and landlords. In our study also most of cases were manual labourers with 54(35.52%). Scrotum was affected in 52% and penis in 41% and both penis and scrotum were affected in 7% of cases. Where as, in the present study it was found that most common site involved was penis in 81(53.3%) cases, second most common site was scrotum in 53(34.9%) cases while both scrotum and penis were affected in 18(11.8%) cases. In their study a total of 25 different types of non venereal diseases were encountered, which is similar to our study with a total of 23 individual types of non-venereal male genital dermatoses. Similar to our study, they found genital vitiligo (15.3%) as most common disorder.

In another study done by Saraswat PK et al.,[8] on non-venereal dermatoses of male genitalia in the age group 18-65 years, the mean age of the patients was 32.2 years, which was 35.5 years in our study. Most common age group was 21-30 year (40%). 52% patients were married and 48% were unmarried. Similarly, in our study, 59.21% patients were married and 40.79% patients were unmarried. They found scrotal involvement in 60% cases, penile involvement in 30% cases and both penis and scrotum involvement in 10% cases, where as penile involvement was most common in our study. They found overall 16 dermatoses. Among them most common dermatoses was vitiligo (18%), which is similar to our study. Most common presenting feature was itchy genitalia, depigmentation, where as, in our study most common presenting feature was raised lesions (50.65%) followed by itching (45.39%) and depigmentation (19.07%).

In a study done by Talamala SPK et al.,[9] a total of 100 cases were identified as having non-venereal genital dermatoses. The commonest age group affected were in the age group of 19 to 30 years (38%). 67% were married and 33% were unmarried. Similar to our study, penis was involved in 57% of patients and scrotum was involved in 27%, both penis and scrotum were involved in 16% of patients. A total of 14 different non venereal dermatoses were observed in their study. Genital Vitiligo (19%) and Pearly Penile Papules (16%) were the commonest non-venereal genital dermatoses found in their study, followed by Balanoposthitis (10%).

In a study done by Hogade AS et al.,[10] a total of 50 male patients with nonvenereal dermatoses of external genitalia were included. The age of the patients ranged from 18 years to 65 years, with the mean age of 30.2 years. Most patients belong to the age group of 21-30 years (44%). Twenty four (48%) patients were married and the remaining twenty six (52%) patients were unmarried. Scrotum was involved in 68% and penis in 26% while both scrotum and penis were affected in 6% cases. A total of fourteen types of non-venereal dermatoses were noted in this study. The most common disorder was vitiligo, followed by fixed drug eruption (FDE). The other disorder encountered included scabies, pearly penile papule, dermatophytosis, candidiasis, staetocystoma multiplex, lymphangiectasia of scrotum, lichen simplex chronicus, psoriasis, scrotal dermatitis, squamous cell carcinoma, lichen planus and Zoon balanitis. The common presenting features were itchy genitalia, depigmentation. Other complaints were pain, burning sensation, redness, exfoliation of the skin, raised lesions over the skin, oozing, ulceration, erosions and thickening of the skin.

In another study done by Karunakaran,[11] in a total of 100 male patients of age 12 years and above for non-venereal dermatoses, the majority of patients (78%) were in age group of 21-50 years. They found Pearly penile papules (30%) as the most common nonvenereal dermatoses in men. Other genital dermatoses were psoriasis (17%) followed by superficial dermatophytosis (16%), stevens-johnson syndrome (7%), pemphigus vulgaris (7%), steatocystoma multiplex (5%) and vitiligo (5%) squamous cell carcinoma 1%.

6. Conclusion

It is a common misbelief that all dermatoses occurring in the genitalia are manifestations of sexually transmitted diseases. It is observed that though non-venereal in nature, these dermatoses cause immense concern, feeling of guilt and mental depression among the patients, who believe that these dermatoses are sexually transmitted diseases. Therefore, all the physicians specially dermatologists and venereologists should have a free approach to observe into these conditions and treat accordingly. This will remove anxiety and hesitation of the patient to seek medical advice. This will also help in early diagnosis of the diseases. Also, it is the responsibility of physician to make patient understand that all dermatoses in genital region are not sexually transmitted. With the knowledge of clinical pattern of the non-venereal dermatoses in an area, clinical diagnosis of common dermatoses can be made easily. Though majority of non-venereal dermatoses are benign in nature in the genital region but may be affected by malignant diseases also. So, proper knowledge of these malignant conditions helps in early intervention. Also, proper knowledge of these non-venereal dermatoses helps to create awareness among patients to improve their daily habits, cleanliness and personal hygiene.

7. Conflict of Interest

The authors declare no relevant conflicts of interest.

8. Source of Funding

None.

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