



Prevalence of Non-Venereal Genital Dermatoses in Male Patients Attending Tertiary Care Center in North India

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ABSTRACT

Background: Nonvenereal genital dermatoses constitute a major part of health problems in the dermatology Outpatient Department (OPD) and are associated with the social stigma. Its prevalence varies from region to region in our country and keeps changing over time. **Objectives:** To know the prevalence of non-venereal genital dermatoses in a tertiary care centre in north India. **Methods:** All male patients presenting to the Outpatient Department (OPD) complaining of genital itching, pain, burning sensation with genital rash, or any genital rash which is asymptomatic were included in the study which was not sexually transmitted. The demographic and epidemiological data were collected. **Results and Conclusions:** The study included 726 male patients with genital dermatoses. A total of 17 types of genital dermatoses were noted. The most common nonvenereal genital dermatoses were scabies (42.28%), candidal balanitis (41.73%), scrotal Least Significant Character (LSC) (3.30%), and sebaceous cyst (2.20%), scrotal dermatitis (1.92%) and Learning support assistant (LSA) (1.92%). Other dermatoses included plasma cell balanitis of Zoon's balanitis, lichen nitidus, Fixed Drug Eruption (FDE), Fordyce spots, pearly penile papules, squamous cell carcinoma, and tinea infections. The age ranged from 3 months to 65 years with the majority in the age group of 15 years-45 years.

Keywords: Genital, Non-venereal, Dermatoses

INTRODUCTION

The genital dermatoses can be both venereal and non-venereal. The diseases, which are not sexually transmitted, are referred to as non-venereal dermatoses [1]. Non-venereal genital dermatoses include a wide array of diseases with varied aetiology.

Lesions affecting the skin and mucosa of male external genitals are frequently encountered in dermatology clinics. The diseases fall through the cracks of medical education at all levels and in all specialities [2]. There is a lack of proper training in Dermato-venereology. The general public is not aware of the fact that there is a difference between venereal and non-venereal genital dermatoses. So the occurrence of any genital lesion is associated with the feeling of guilt, shame, and mental distress, apart from huge psychosexual problems (Male cause of dyspareunia, depression, relationship problems, etc) [3].

Nonvenereal dermatoses can be classified into various groups based on pathogenesis [4].

- Normal variants (pearly penile papule, Fordyce spot).
- Inflammatory diseases (psoriasis, seborrheic dermatitis, lichen planus, lichen simplex chronicus, FDE, bullous disorder, lymphangioma circumscripta, lymphedema).

- Infections and infestations (Scabies, Dermatophytosis, candidiasis, furuncle, folliculitis, herpes zoster).
- Congenital disorders (median raphe cyst, hypospadias).
- Benign abnormalities (Angiokeratoma of Fordyce, Sebaceous cyst, multiplex).
- Pigmentary disorders (Vitiligo, verrucous epidermal naevus).
- Premalignant and malignant lesions (erythroplasia of Queyrat, zoon balanitis, Squamous cell carcinoma).

The various non-venereal dermatoses include autoimmune (vitiligo), multisystem diseases (Behcet syndrome, Reiter syndrome, Crohn's disease), exogenous (contact dermatitis, corticosteroid abuse, fixed drug eruption, and benign and malignant neoplasms (extramammary Paget diseases) [4,5]. The non-venereal dermatoses in males encompass two groups of disorders [5,6]. Group one consists of disorders that are seen only in the genitalia e.g. angiokeratoma of Fordyce, median raphe cyst), group two comprises of disorders that affect genitalia as well as other parts of the body. It is important to differentiate between venereal and non-venereal dermatoses.

METHODS

We selected 726 male patients with non-venereal genital dermatoses for the study from the department of dermatology at a tertiary care hospital in north India. All male patients presenting with the OPD complaining of genital itching, pain, burning sensation with genital rash, or any genital rash which is asymptomatic were included in the study. Patients with sexually transmitted diseases were excluded from the study. The demographic and epidemiological data were collected. Consent was taken from the patients before they were included in the study and prior approval from the hospital ethical committee was taken for the study. A detailed history including demographic data, chief complaints related to skin, presence of itching, skin lesions, onset, pregnancy status, menstrual status, and associated medical or skin disorders was elicited and recorded. The inquiry was made about the history of sexual exposure. The external genitalia was examined and findings were noted. A detailed physical examination was made to see any associated lesions elsewhere in the body. Investigations such as Gram stain and KOH mount were done as and when required to establish the diagnosis. Biopsy and histopathological examination of the specimen were done when required to confirm the diagnosis. Venereal Disease Research Laboratory (VDRL) and Elisa tests for Human Immunodeficiency Virus (HIV) were done in all the patients to exclude any sexually transmitted disease.

Inclusion Criteria

- Only male patients have non-venereal diseases.

Exclusion Criteria

- Cases having venereal diseases were excluded from the study.

RESULTS

The study included 726 male patients with genital dermatoses. The data was collected and the results were analyzed. The mean age of the patients was 35 years and the commonest age group of patients was between 15 years to 45 years of age. The majority of patients were married (72.45%) and 27.54% were unmarried.

A total of 17 types of genital dermatoses were noted. The most common nonvenereal genital dermatoses were scabies (42.28%) closely followed by candidal balanitis (41.73%). The prevalence of other genital dermatoses like scrotal LSC (3.30%), sebaceous cyst (2.20%), scrotal dermatitis (1.92%), and LSA (1.92%). Other dermatoses included plasma cell balanitis of Zoon's balanitis, lichen nitidus, FDE, Fordyce spots, pearly penile papules, squamous cell carcinoma, and tinea infections (Figure 1, Figure 2, Figure 3, Figure 4) (Table 1).



Figure 1 Lichen sclerosus et atrophicus



Figure 2 Squamous cell carcinoma

Table 1 Results of penile dermatosis

Disease	0 years-15 years	15 years-45 years	>45 years
Candidal balanitis	0	165	138
Scabies	122	169	16
LSA	0	12	2
Zoon’s balanitis	0	4	2
Lichen planus	0	4	2
Lichen nitidus	0	2	0
Fixed drug eruption	1	4	2
Scrotal LSC	0	18	6
Scrotal dermatitis	0	12	2
Seborrheic dermatitis	2	0	0
Dermatophytosis	0	2	0
SCC	0	1	1
Angiokeratoma	0	6	2
Fordyce spot	0	4	0

Pearly penile papule	0	8	0
Scrotal sebaceous cyst	0	16	0
PKMB	0	1	0



Figure 3 Pseudoepitheliomatous keratotic and micaceous balanitis



Figure 4 Scabies

DISCUSSION

As genital dermatoses are considered a social stigma in our country, it is very important to distinguish between venereal and non-venereal genital dermatoses. The majority of patients in our study were 15-45 age group. The mean age of patients was 35 years. We included only 726 males in our study.

The common presenting feature was itchy genitalia, white discoloration, swelling, pain, burning sensation, mass, dyspareunia, redness, exfoliation of the skin, raised lesions over the skin, and oozing, burning micturition, ulceration, erosion, and thickening of the skin. Some patients had more than one complaint. Most patients with any kind of genital lesion are under immense mental stress and guilt. There is a lack of proper knowledge in this field, not only among the general public but also among most health professionals. Male patients with non-venereal genital dermatoses usually present to genito-urinary experts and physicians where the training and expertise are not oriented to adequate dermatological diagnosis and treatment [6].

Venereal dermatoses are of primary concern to the patient and cause mental stress and guilt feeling among patients, it is, therefore, of utmost importance to distinguish between venereal and nonvenereal dermatoses [7-9].

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LSC (3.30%), sebaceous cyst (2.20%), scrotal dermatitis (1.92%), and LSA (1.92%). Other dermatoses included plasma cell balanitis of Zoon's balanitis, lichen nitidus, FDE, Fordyce spots, pearly penile papules, squamous cell carcinoma, and tinea infections.

Acharya, et al. had done a study on 200 patients with genital lesions of non-venereal origin and observed scabies as the most common non-venereal genital lesion [8]. They did not report any cases of scrotal dermatitis.

Karthikeyan, et al. had done a study on the pattern of non-venereal dermatoses on male external genitalia from south India and observed 25 different non-venereal dermatoses in their study [9]. Non-venereal dermatoses were common in the 21 years to 40 years age group. Most of the patients (74%) belonged to the labourer class. Genital vitiligo was the most common disorder accounting for 16 cases. Sebaceous cyst of the scrotum was present in 13 patients. Among infections and infestations, scabies was observed in 9 patients. Ariboflavinosis was seen in 9 cases.

Saraswat PK had done a study on 100 male patients with nonvenereal genital lesions. A total of sixteen nonvenereal genital dermatoses were noted [10]. The most common nonvenereal genital dermatoses were vitiligo (18%), a pearly penile papule (16%), fixed drug eruptions (12%), scabies (10%), scrotal dermatitis (9%), and lichen planus (9%).

Ozkaya, et al. carried out a study on 105 patients with established fixed drug eruption and found cotrimoxazole, the most frequent drug to induce genital mucosal lesions. Karthikeyan, et al. observed only 3 cases of FDE and all of them were caused by cotrimoxazole [9,11].

Mamtha P., et al. included 248 male patients in her study with non-venereal genital lesions. A total of twenty-five different types of non-venereal dermatoses were noted in our study. The most common non-venereal dermatoses were Non-venereal infections, seen in 107 patients (43.14%), which includes scabies in 45 patients (18.14%), tinea cruris in 25 patients (11.29%), candidiasis 28 (11.29%) followed by lichen simplex chronicus 23 cases (9.27%) and scrotal dermatitis (6.45%) other dermatoses include psoriasis, lichen planus, fixed drug eruptions, scrotal horn, histoid Hansens, squamous cell carcinoma, Zoon's balanitis [12].

Vinay N., et al. included 293 patients with non-venereal genital diseases. Men 242(82.6%) outnumbered women. The commonest age group affected was 31years to 50 years 144(50%). Chronic inflammatory dermatoses 135(41.6%) constituted the majority of cases. Scrotal dermatitis 46(15.7%), lichen simplex chronicus 37(12.6%), and vitiligo 31(10.6%) were seen most frequently [13].

Puri N., et al. included 50 patients in his study and he found that the most common non-venereal dermatoses in males were scrotal dermatitis seen in 16.6% of patients, vitiligo seen in 14.3% of patients, fixed drug eruption, scabies, and pearly penile papules were seen in 10% patients each. Sebaceous cyst, tinea, psoriasis, and lichen planus were seen in 6.6% of patients each. Balanitis xerosis obliterans, squamous cell carcinoma and verrucous carcinoma, and acrochordon were seen in 3.3% of patients each. The most common genital dermatoses seen in females were lichen sclerosus (15%), vitiligo (15%) and vulval candidiasis in 15% cases. Other non-venereal genital dermatoses in females were lichen simplex Atrophicus (10%), Bartholin cyst (10%), tinea (10%), Psoriasis (10%), vulval lymphoedema (10%) and Achrochordon in 5% patients [14].

Other less common causes of non-venereal genital dermatoses in our study were found to be, zoon balanitis, squamous cell carcinoma, and angiokeratoma (2.20%) cases of each were reported during 1 year of our study period. Zoon balanitis is an idiopathic, chronic, benign, inflammatory mucositis of the genitalia that clinically presents as solitary, shiny, well-defined erythematous plaque on the glands [15]. It is also known as balanitis circumscripta plasma cellular or plasma cell balanitis of zoon. Both the case in our study involved both prepuce and glans.

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. The most common etiological diagnosis in our study was scabies and candida balanitis which are non-venereological in nature.

DECLARATIONS**Conflict of Interest**

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

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