

A Prospective Observational Clinical Research on Non-Venereal Genital Dermatoses in Adult Males

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Conflict of interest: Nil

Abstract

Aim: A clinical study on non-venereal genital dermatoses in adult males at a tertiary care center.

Methods: The prospective analytical study was conducted in the Department of Dermatology venereology and leprosy Narayan Medical College and Hospital, Sasaram, Bihar, India. A total of consecutive 100 male patients with genital lesions of non-venereal origin were included in this study. All male patients >18 years of age who presented with genital complaints were screened for non-venereal dermatoses. The external genitalia was examined, and findings were noted. A detailed physical examination was done to see any associated lesions elsewhere in the body. Investigations such as Gram-stain, KOH mount, venereal disease research laboratory test, HIV test and histopathological examination were done as and when required establishing the diagnosis.

Results: Most patients belong to the age group of 20-30 years (45%), followed by the age group of 30-40 years (22%). 75 patients (75%) were from the urban area while 25 patients (25%) belong to rural background. 57 (57%) patients were married and the remaining 43 (43%) patients were unmarried. Scrotum was involved in 62% and penis in 30% while both scrotum and penis were affected in 8% cases. 28% patients were farmers while 18% patients were students. A total of 16 types of non-venereal dermatoses were noted in this study. The most common disorder was vitiligo present in 20 cases, followed by pearly penile papule, which accounted for 15 cases. The other disorder encountered included fixed drug eruption (FDE) in 13; scabies in 8, scrotal dermatitis and lichen planus in 8 cases each etc.

Conclusion: Contrary to normal belief all the lesions on genitalia are not sexually transmitted. It is very important to distinguish between venereal and non-venereal genital dermatoses, as these non-venereal disorders are a considerable concern to patients causing mental distress and feeling of guilt.

Keywords: genital dermatoses, non-venereal, disorders

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Introduction

Male genitalia, being a sexual organ, harbor many sexually transmitted infections (STIs). The external genitalia is a site for various inflammatory diseases which are completely unrelated to sexual transmission, such as psoriasis and zoon's balanitis which is completely or predominantly confined to this area and yet not sexually transmitted. These all genital dermatoses which are not transmitted sexually are called as non-venereal genital dermatoses. [1] Patients with genital dermatoses are anxious and apprehensive at presentation as they believe them to be the manifestations of sexually transmitted diseases (STDs). In contrast to this popular belief, not all genital dermatoses are sexually transmitted. The diseases which are not sexually transmitted are referred to as non-venereal dermatoses. Fitzpatrick and Gentry [2] classified these dermatoses based on pathogenesis as 1) Benign abnormalities 2) congenital abnormalities 3) Trauma and artefacts 4) Inflammatory diseases 5) Non venereal infections and infestations 6) Benign tumours 7) Premalignant lesions 8) Malignant lesions 9) Miscellaneous lesions. Genital dermatoses pose a difficulty in diagnosis as the morphology is modified by the special environment of the genitalia like heat, friction and occlusion. Non-venereal genital dermatoses may not be restricted to the genitalia alone but can also affect other areas of the body. So, examining the extra genital sites aids in the diagnosis. Even with benign lesions some patients develop venerophobia, cancer phobia. Hence it is important to be aware of these conditions and to differentiate them from venereal disease. Explaining the true and benign nature of these lesions will remove this fear. Because of the stigma associated with

genital lesions, most of these patients do not approach the medical fraternity unless the disease burden is unbearable which in case of malignant lesions can endanger their lives. [3] Clinicians should have an open mind to look for these genital lesions so that patients feel confident to seek medical help. A comprehensive understanding of the various presentations, their causes and appropriate treatment options is essential to effectively manage these non-venereal dermatoses and allay the associated anxiety. The aim of our study was to determine the clinical and etiological factors, various patterns of presentation of non-venereal dermatoses in male genitalia and to assess which dermatoses have a predilection for exclusive genital involvement and which occur as a part of the generalised skin involvement.

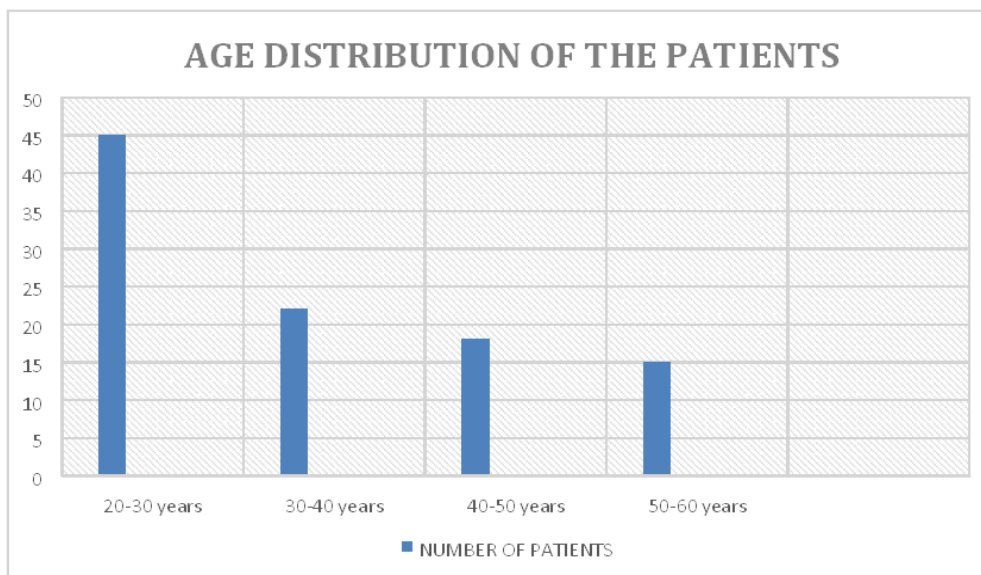
Material and methods

The prospective analytical study was conducted in the Department of Dermatology venereology and leprosy Narayan Medical College and Hospital, Sasaram, Bihar, India. A total of consecutive 100 male patients with genital lesions of non-venereal origin were included in this study. All male patients >20 years of age who presented with genital complaints were screened for non-venereal dermatoses. Informed consent was obtained. A detailed history including demographic data, chief complaints related to skin, onset and duration of disease and associated medical or skin disorders was elicited and recorded. History of sexual exposure was also recorded. Cases having any venereal diseases were excluded from the study. The external genitalia were examined, and findings were noted. A detailed physical examination was done to

see any associated lesions elsewhere in the body. Investigations such as Gram-stain, KOH mount, venereal disease research laboratory test, HIV test and histopathological examination were done as and when required establishing the diagnosis. A proforma was prepared to record the relevant details of patient, examination, investigations and diagnosis.

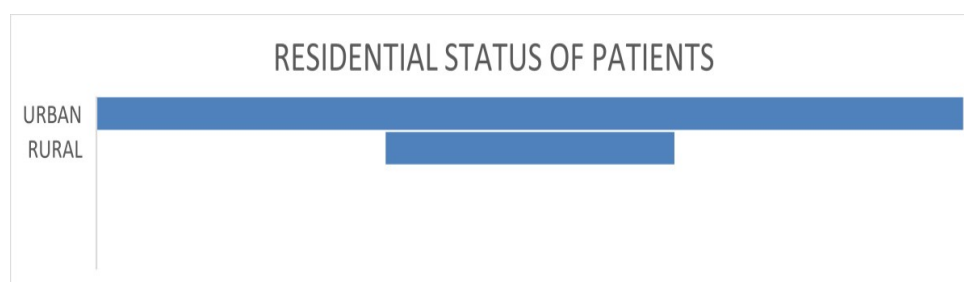
A total of 100 male patients with non-venereal dermatoses of external genitalia were included in the study. The age of the patients ranged from 20 years to 60 years, with the mean age of 31.7 years. Most patients belong to the age group of 20-30 years (45%), followed by the age group of 30-40 years (22%).

Results

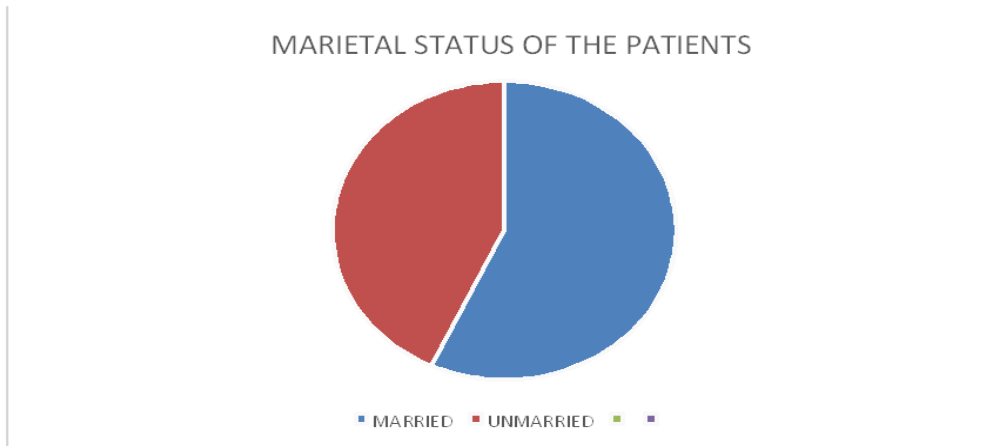


75 patients (75%) were from the urban area while 25 patients (25%) belong to rural background.

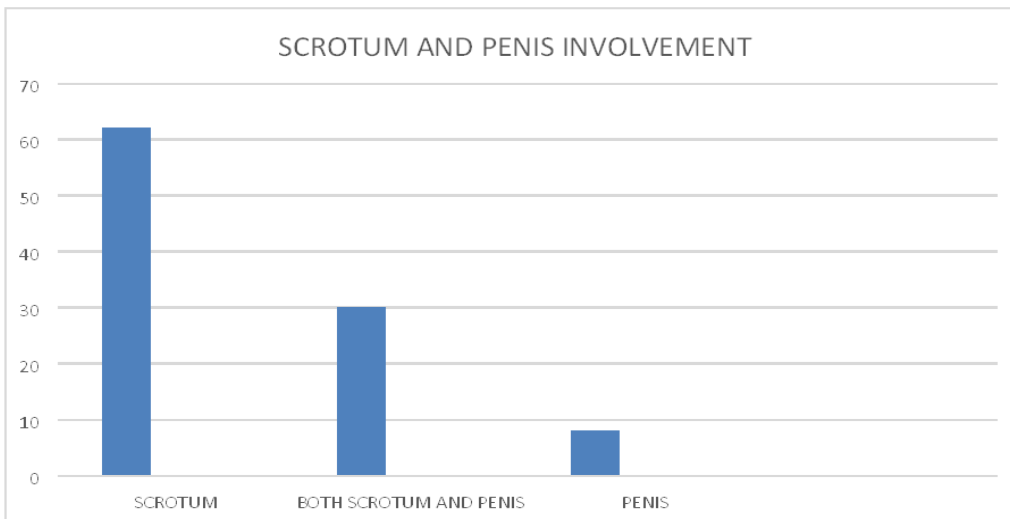
| RESIDENTIAL STATUS OF PATIENT | NUMBER OF PATIENTS |
|-------------------------------|--------------------|
| URBAN | 75 |
| RURAL | 25 |



57 (57%) patients were married and the remaining 43 (43%) patients were unmarried.

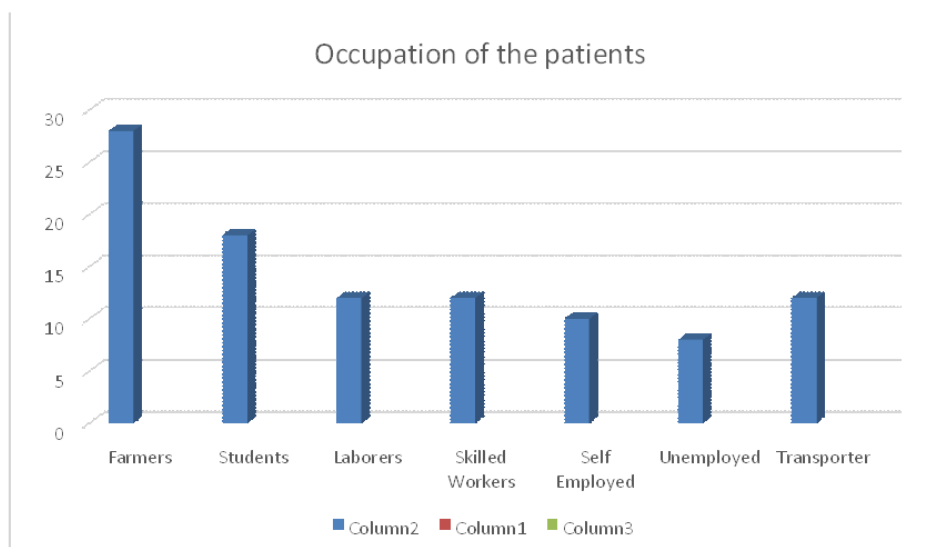


Scrotum was involved in 62% and penis in 30% while both scrotum and penis were affected in 8% cases.



Occupation

28% patients were farmers while 18% patients were students.



A total of 16 types of non-venereal dermatoses were noted in this study [Table 1]. The most common disorder was vitiligo present in 20 cases, followed by pearly penile papule, which accounted for 15 cases. The other disorder encountered included fixed drug eruption (FDE) in 13; scabies in 8, scrotal dermatitis and lichen planus in 8 cases each etc.

Table 1: Genital dermatoses

| Genital dermatoses | Number (n=100) | % Age |
|----------------------------|----------------|-------|
| Vitiligo | 20 | 20 |
| Pearly penile papule | 15 | 15 |
| Psoriasis | 3 | 3 |
| Scrotal dermatitis | 8 | 8 |
| Squamous cell carcinoma | 1 | 1 |
| Lichen planus | 8 | 8 |
| Dermatophytosis | 6 | 6 |
| Granuloma annulare | 1 | 1 |
| Scabies | 11 | 11 |
| Lichen nitidus | 1 | 1 |
| Fixed drug eruption | 13 | 13 |
| Sebaceous cyst | 6 | 6 |
| Lichen sclerosus | 3 | 3 |
| Lymphangiectasia scrotum | 2 | 2 |
| Zoon's balanitis | 1 | 1 |
| Papulo-necrotic tuberculid | 1 | 1 |

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. Some patients had more than one complaint.



Figure 1: Penile Vitiligo in a 23 year old male



Figure 2: Genital Scabies in 33 year old male



Figure 3: Pearly Penile Papule in 43 ear old male

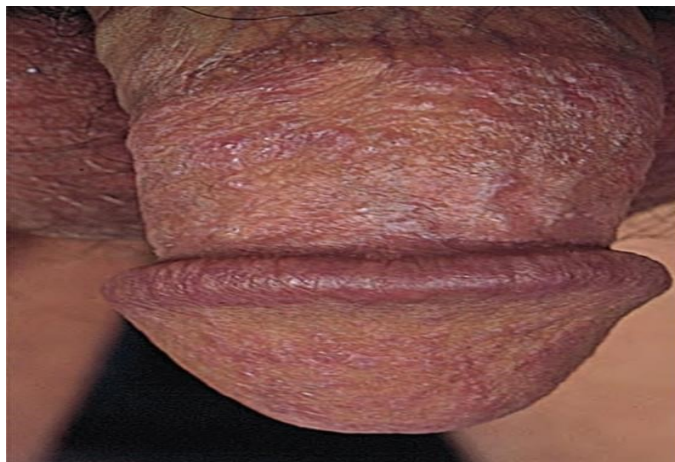


Figure 4: Lichen Planus in a 48 year old male**Figure 5: Fixed Drug Eruption in a 33 year old male Discussion**

As venereal dermatoses are of primary concern to the patient and causes mental stress and guilt feeling among patients, it is, therefore, utmost important to distinguish between venereal and non-venereal dermatoses. Male patients with non-venereal dermatoses usually present to genitor-urinary experts or physicians, where the training and expertise are not oriented to adequate dermatological diagnosis and treatment. [4] Disorders of genitalia have proved confusing to various specialists involved in the diagnosis and treatment. The problem is confounded by the fact that the normal characteristics of common diseases at flexural sites are lost or modified, making the diagnosis difficult for even an experienced dermatologist.

The non-venereal dermatoses of male external genitalia include wide spectrum of disease with varied etiology. [5] There are very few comprehensive study on the pattern of non-venereal dermatoses in males from our country. [6,7] Also, our study is first of its kind from this part of the country. Acharya *et al.* [6] had done a study of 200 patients with genital lesions of nonvenereal origin. Karthikeyan *et al.* [7] had done a study on the pattern of non-venereal dermatoses of male external genitalia from South India.

Khoo and Cheong [8] had done a similar study on male patients at Singapore.

The age ranged from 20 to 60 years in the present study with the mean age of 31.7 years whereas the age ranged from 9 to 70 years with a mean age 33.7 years in a study by Karthikeyan *et al.* [7]

Most of the patients belong to the age group of 20–30 years (45%) in the present study which is similar to Karthikeyan *et al.* [7]

A total of 16 different non-venereal dermatoses were observed in this study [Table 1]. Karthikeyan *et al.* [7] had 25 different non-venereal dermatoses in their study.

The most common disorder was vitiligo present in 20 cases, followed by pearly penile papule, which accounted for 15 cases. The other disorder encountered included fixed drug eruption (FDE) in 13; scabies in 8, scrotal dermatitis and lichen planus in 8 cases each etc.

The study by Acharya *et al.* [6] reported infections as commonest disorder contributing 40% cases. Genital vitiligo as most common disorder (16%) was observed in an another study, which is almost similar to our study.⁷ Khoo and

Cheong [8] had 14.3% pearly penile papule as most common non-venereal dermatoses, which are similar to this study (16%).

75 patients (75%) were from the urban area while 25 patients (25%) belong to rural background. 57 (57%) patients were married and the remaining 43 (43%) patients were unmarried. Scrotum was involved in 62% and penis in 30% while both scrotum and penis were affected in 8% cases.

Genital vitiligo could be an exclusive finding, or it can be associated with generalized vitiligo. Genital vitiligo accounted for 20% cases as commonest disorder in our study and is seen in all age group from young adult to older age group. This is in contrast with the study conducted by Karthikeyan *et al.* [7] where the entire patients with vitiligo were in older age group. Ten patients in our study had associated vitiligo elsewhere while eight patients had only genital vitiligo. Duration of illness ranged from 3 months to 8 years.

Pearly penile papule is a common disorder found in up to 50% of men. [9] They were present in 15% cases in our study, which is almost similar to the study conducted by Khoo and Cheong [8] They are frequently mistaken as warts and misdiagnosed as Tyson's gland or ectopic sebaceous gland of Fordyce. [5] All the patients with pearly penile papule came to visit OPD in apprehension of some venereal disease. They were counseled about the benign nature of the disease.

Fixed drug eruptions were observed in 13% of cases in our study as third most common disorder. This is in contrast with Karthikeyan *et al.*, [7] where only 3 cases had FDE and all of them because of cotrimoxazole. In our study, various drugs were implicated such as, nonsteroidal anti-inflammatory drugs, sulphonamides, ornidazole, fluconazole, ampicillin, etc.,

Half of our patients with FDE had oral involvement also.

Acharya *et al.* [6] in their study recorded scabies as most common non-venereal dermatoses accounting for 30 cases (15%), while it was present in only 11% cases in our study. This may be due to lesser prevalence of scabies in this population.

Lichen planus was present in 8% cases in our study that is in contrast with Puri and Puri [10] where it was seen in only 6.6% (3) cases and Karthikeyan *et al.* [7] where it was seen in only 1 case. Four of our cases had involvement of the oral mucosa also Itching particularly around scrotum is a common presenting problem. Contributory factors include, tight clothing, friction, maceration, atopy, over-washing, use of various toiletries, topical medicaments and indigenous preparations. [11-13] Scrotal dermatitis accounted for 8% cases in our study inclusive of allergic contact dermatitis, irritant contact dermatitis. Most of the patients were from the rural background. Acharya *et al.* [6] did not report any case while Karthikeyan *et al.* [7] had 13% cases of scrotal dermatitis.

Sebaceous cysts of scrotum were observed in 6% cases in our study, while it was second most common finding (14%) by Karthikeyan *et al.* [7] They were observed in only 3.7% cases by Khoo and Cheong [8] All of our cases were asymptomatic and from younger age group.

Dermatophytic infection was present in 6% cases in our study as scaly pruritic plaques over scrotum. All of them were confirmed by KOH mount.

Lichen sclerosus (LS) is chronic inflammatory dermatoses which are associated with substantial discomfort and morbidity with an unknown etiology. [14] LS was observed in 3 cases in our study, while it was seen in only 2 cases by Karthikeyan *et al.* [7] All 3 cases had phimosis and were advised circumcision.

Duration of illness ranged from 6 months to 3 years. Clinical findings in cases of LS in this study were found to be in concordance with the literature review.

Around 2% of the world population has psoriasis, but it is possible that many more could have ano-genital psoriasis at some time. [15] Also, psoriasis of ano-genital region can present alone. [16]

Genital appearance could be challenging to interpret, especially in uncircumcised individuals because a mucosal site is affected rather than keratinized skin. [5] Psoriasis was encountered in 3% cases in our study. Karthikeyan *et al.* [7] reported a solitary case of psoriasis of glans penis while Acharya *et al.* [6] reported 5 cases of psoriasis over genitalia. All of our cases had classical lesions of psoriasis elsewhere.

Zoon's balanitis or plasma cell balanitis was observed in 1% cases in this study that had not been reported by Acharya *et al.*, [6] Khoo and Cheong [8] Karthikeyan *et al.*⁷ It is a disorder of middle and older age in uncircumcised male, the etiology remains unknown. [15]

Conclusion

Contrary to normal belief all the lesions on genitalia are not sexually transmitted. It is very important to distinguish between venereal and non-venereal genital dermatoses, as these nonvenereal disorders are a considerable concern to patients causing mental distress and feeling of guilt. This study was quiet useful in understanding the epidemiological, clinical and etiological characteristics of various non-venereal genital dermatoses. The most common etiological diagnosis in our study was vitiligo.

Declaration Patient Consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient (s) has/have given his/her/their consent for his/her/their images and other clinical information to be

reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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