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A Clinical and Etiological Study of Non venereal Genital Dermatoses In Male Patients- A Descriptive Study Pattern In 100 Cases Attending To SKIN & STD OPD

Dr. T.V.Narasimha Rao, M.D[1] & Dr. M.Suneeth Kumar[2]
[1]*Professor & Head of Department in Department of DVL, Siddhartha Medical College & Government General Hospital, Vijayawada, Andhra Pradesh, India*
[2]*Final year post graduate in Department of DVL, Siddhartha Medical College & Government General Hospital, Vijayawada , Andhra Pradesh, India*
Corresponding Author: Dr. M.Suneeth kumar

Abstract:
Background: *Non venereal dermatosis tend to create confusion from venereal dermatosis. This may be responsible for considerable concern to the patient as well as may cause diagnostic dilemma to the physicians. They may be responsible for mental distress and guilt feelings in patients. Non venereal dermatosis may not be restricted to genitalia alone, it may affect skin and mucous membrane also. Most of the patients with genital lesions had apprehension of suffering from some venereal disorders and attends opd for seeking venerophobia.*
Objectives & Aim: *We conducted this study to find the pattern of non-venereal dermatosis of male external genitalia and to correlate non venereal dermatosis with various clinical parameters. The aim was to determine clinical and etiological pattern of non venereal dermatosis of male external genitalia. The present study was undertaken to know about non- venereal genital dermatosis in detail as this topic is neglected as compared to venereal genital dermatoses*
Materials and Methods: *The study included a series of 100 male patients with non-venereal dermatoses of external genitalia who were screened amongst patients attending SKIN & STD OPD of Government General Hospital, Vijayawada, Andhra Pradesh. The demographic or epidemiological characteristics and clinical findings were recorded. Cases having venereal diseases were excluded from the study.*
Results: *The study included 100 male patients with non venereal genital lesions. A total of 20 different types of non venereal dermatoses were noted in the study. Most of the patients (75 percent) belonged to rural area. The most common disorder was candidal balanoposthitis present in 17 cases, followed by genital scabies, accounted for 12 cases. The other disorders encountered included pearly penile papules in 10 cases, scrotal deramtitis in 8 cases, lichen atrophicus(LSA) in 7 cases, penile vitiligo and irritant contact dermatitis(ICD) in 6 cases each , lichen planus and fixed drug eruptions(FDE) in 5 cases, and zoons balanitis(plasma cell balanitis) and sebaceous cysts of scrotum in 4 cases each . Other dermatoses included psoriasis, immunobullous disorders, porokeratosis, Bowens disease, angiokeratoma of Fordyce, lymphangiectasia of scrotum, fordyce spots etc.The age ranged from 18 years to 65 years . The majority of patients (78%) were in age group of 21-50 years and which constitutes about 3/4th bulk of total patients.*
Conclusion: *The study has been quite useful in understanding the clinical and aetiological characteristics of various types of non-venereal dermatoses in males and highlights the importance of diagnosing common non-venereal dermatoses. It also helps in avoiding the general misconception that all genital lesions are sexually transmitted. So, physician and other health professonial related to these conditions should have proper knowledge, so that they can diagnose the disease promptly and manage properly.*
Key words: *Non venereal genital dermatoses, Non sexually transmitted diseases, venerophobia*

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I. Introduction

Venereology is a branch of medicine that is concerned with the study and treatment of sexually transmitted diseases. The specialty is usually combined with dermatology. Dermatoses involving genital areas are not always sexually transmitted(not all of them should be veneral diseases). They can be divided into two groups: Venereal and non venereal dermatoses. The diseases, which are not sexually transmitted are referred as nonvenereal 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.[1] However, penile non veneral dermatoses are classified [Table 1] for easy understanding of their pattern. They include infective (bacterial, viral,

fungal, parasitic), inflammatory (psoriasis, lichen planes , lichen scleroses, seborrhea dermatitis), autoimmune (vitiligo), multisystem diseases (Behcet's Syndrome, Reiter's Syndrome, Crohn's disease), exogenous (contact dermatitis, corticosteroid abuse, fixed drug eruption, Steven Johnson Syndrome) and benign and malignant neoplasms and others. As these groups include various types of disorders, the identification of diseases is quite challenging. Sometimes this leads to confusion between venereal and non venereal dermatoses which cause mental distress, psychological agony and guilt feelings to the patients.

Patient usually attends the physician only if there is a complaint. A comprehensive understanding of various presentations, their cause and appropriate management options is therefore essential. These non venereal disorders are the cause of considerable concern to patients causing mental distress, psychological agony and guilt feeling in them. Non venereal dermatoses are quiet often a diagnostic dilemma to the treating physician, who has to effectively manage the condition and also abscind the associated anxiety. We undertook this study to find out the pattern of nonvenereal dermatoses presenting with genital lesions and to correlate its various parameters. External genitalia are common site for rashes, itching and minor infection. This area is always warm, moist and occluded and it is frequently exposed to irritating substances like urine, faeces, seminal fluid and vaginal secretion. In addition, concerns about hygiene and sexually transmitted diseases prompt some people to use overly vigorous cleaning regimens, deodorants and specialized hygiene products. Suddenly the dermatoses become complicated by both the local environment and psychological factors.

The lesions that occur at the external genitalia have varied etiology and it causes anxiety in patients and therefore they should be explained the true nature of the disease and this requires a knowledge about nonvenereal genital dermatoses [3]. Hence the identification of diseases is quite challenging. There is a wide variation in the pattern of penile dermatoses reported from different parts of the world, even in same country due to factors such as genetic constitution, hygiene standards, climate, customs, sexual behavior, religion, socioeconomic condition, occupations, and quality and quantity of medical care. Although the literature is saturated with the pattern of overall skin diseases, no formal study has been done on the overall occurrence of penile dermatoses hence we undertook this study to find out the pattern of penile dermatoses at a tertiary care centre like Government General hospital, Vijayawada, Andhra Pradesh.

The occupation of patients being important in demographical presentation of various non veneral genital diseases [Table 2]. The majority of patients were workers (daily labour , night guard, industrial labour, construction workers etc) 25 patients , followed by students (15 patients), driver of all types of vehicals (bus driver, truck driver, rickshaw puller, taxi driver etc) 20 patients, Service holder (official staff of government & non- government (18 patients), businessmen of all types 16 patients, and others (6 patients). Some patients also had other sites of body involvement particularly patients with psoriasis, lichen planus, vitiligo, scabies, drug reaction and immune bullous disorders etc .Uncircumbscribed patients were associated with candidiasis, dermatitis and phimosis

Table- 1: CLASSIFICATION OF NON VENERAL MALE GENITAL DERMATOSES

Non veneral genital dermatosis in males

CONGENITAL

Congenital anomalies of penis
Pearly penile papules
Fordyce spots
Penile Acrochordons
Sebaceous gland ectasis
Penile acne/comedones
Median raphe cyst
Mucoid/urethral cyst
Dermoid cyst

AQUIRED

I. Infective

Bacterial- staphylococcal cellulitis
- streptococcal cellulitis
- Tuberculid ulcer
- Buruli ulcer
- trichomycosis pubis

Fungal - candidiasis
Parasitic – scabies
- pediculosis

II. Inflamatory

- Lichen sclerosis atrophicus
-Lichen simplex chronicus
-Crohn's disease
-Pyoderma gangrenosum
-Sweet's disease

-Zoons balanoposthitis

III. Autoimmune

-Vitiligo
-Leucoderma
-Lepra reactions
-Peyronies disease

IV.Eczematous/spongiotic

-Atopic dermatitis
-Seborheic dermatitis
-Allergic contact dermatitis
-Irritant contact dermatitis
-Scrotal dermatitis
-Radiation dermatitis

V. Papulo squamous disorders

-Psoriasis
-Lichen nitidus
-Lichen planus
-Porokeratosis

VI. Immuno bullous diseases

-Pemphigus vegetans/vulgaris
-Bullous pemphigoid
-Hailey-Hailey disease
-Acantholytic diseases

VII. Drug induced

-FDE
-SJS
-TEN

VIII. Vascular

-Small vessel vasculitis
-Behcets disease
-Erythema elevatum diutinum
- Mondor's phlebitis

IX. Benign

- Bowen's disease
-Bowenoid papulosis
-Erythroplasia of queyrat
- Erythroplakia
-Leucoplakia
-Sebaceous cyst
-Steatocystoma multiplex
-Angiokeratoma of Fordyce
-Lymphangiectasia of scrotum
-PKMB
-Extra mammary pagets

X.Malignant

- SCC
-Malignant melanoma

XI. Artefacts

-Penile fracture
-Penile strangulation
-Penile rupture
-Penile hamartoma
-Lipogranuloma penis

XII.Miscelleneous

XIII. Un classified

II. Materials and Methods

A total of consecutive 100 male patients with genital lesions of nonvenereal origin, attending the SKIN and STD OPD at Government General Hospital, Vijayawada, Andhra Pradesh constituted the study group. All male patients >18 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 and <18years & >65 years of patients age group were excluded from the study. The external genitalia were examined and findings were noted. A detailed physical examination was made to see any associated lesions elsewhere in the body. Microbilogical Investigations such as Gram stain, KOH mount, VDRL etc were done to establish the diagnosis. Biopsy and histopathological examination of the specimen was done when required to confirm the diagnosis. VDRL and Elisa test for HIV were done in all the patients to exclude any sexually transmitted disease.

A proforma was prepared to record the relevant details of patient, examination, investigations and diagnosis. Because venereal and non-venereal dermatoses tend to be confused, the occurrence of these dermatoses may be associated with mental distress and guilt feelings in affected patients. It is also important to distinguish between venereal and non venereal dermatoses, as venereal diseases are of primary concern to the patient

III. Results

A total of 100 male patients with nonvenereal dermatoses of external genitalia were included in the study. The age of the patients ranged from 18 years to 65 years, with the mean age of 32.2 years. Most patients belong to the age group of 21-30 years (40%), followed by the age group of 31-40 years (20%) [Table 3]. Seventy-five patients (75%) were from the rural area while twenty-five patients (25%) belong to urban area [Table 4]. sixty (60%) patients were married and the remaining forty (40%) patients were unmarried [Table 5]. Only Penis was involved in 52% and only scrotum in 22% while both scrotum and penis were affected in 26% cases[Table 6].

A total of twenty (20) types of nonvenereal dermatoses were noted in this study [Table 7]. The most common disorder was candida balanoposthitis [Figure 1] present in 17 cases, followed by genital scabies[Figure 2], which accounted for 12 cases. The other disorders encountered included pearly penile papules [Figure 3] in 10, Scrotal dermatitis [Figure 4] in 8, Lichen sclerosis(LSA) [Figure 5] in 7,Vitiligo [Figure 6] in 6 cases, Irritant contact dermatitis [Figure 7] in 6 cases and Lichen planus [Figure 8] in 5 cases, Fixed drug eruptions [Figure 9] in 5 cases, Zoon's balanitis/ plasma cell balanitis [Figure 10] was seen in 4 cases, Sebaceous cyst of scrotum [Figure 11] in 4 cases, Angiokeratoma of fordyce [Figure 12] in 3 case, Steatocystoma multiplex [Figure 13] in 3 case, Fordyce spots [Figure 14] in 2 case and 1 case of Psoriasis, Porokeratosis, PKMB(Pseudoepitheliomatous keratosis and micaceous balanitis), Bowens disease [Figure 15,16,17,18] were also observed in this study.

The majority of patients were workers (daily labour, night guard, industrial labour, construction workers etc) 25 patients , followed by students (15 patients), driver of all types of vehicals (bus driver, truck driver, rickshaw puller, taxi driver etc) 20 patients, Service holder (official staff of government & non-government (18 patients), businessmen of all types 16 patients, and others (6 patients) [Table 2].

Some patients also had other sites of body involvement particularly patients with psoriasis, lichen planus, Pediculosis ,scabies,drug reaction and vitiligo. Diabetes mellitus was present in patients of candidal balanoposthitis. Uncircumbscribed patients were associated with candidiasis, dermatitis and phimosis. 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.

Table 2: PATIENTS OCCUPATION

OCCUPATION	NUMBER OF PATIENTS(n=100)
Daily labours, guards, construction workers, industrial labours	25
Drivers of all vehicle types	20
Service holder (Government & Non Government)	18
Businessmen	16
Students	15
Others	6

Table 3: Percentage of cases according to AGE GROUP

18-20 Years	4 cases (4%)
21-30 Years	40 cases (40%)
31-40 Years	20 cases (20%)
41-50 Years	18 cases (18%)
51-60 Years	15 cases (15%)
61-65 Years	3 cases (3%)

Table 4: Percentage of cases according to AREA WISE

Rural	75 cases (75%)
Urban	25 cases (25%)

Table 5: Marital status

Married	60 cases (60%)
Un married	40 cases (40%)

Table 6: Involvement of Genitalia

Penis	52 cases (52%)
Scrotum	22 cases (22%)
Both penis and scrotum	26 cases (26%)

Table 7: 20 types of non veneral genital dermatoses in study

NON VENERAL MALE GENITAL DERMATOSES	NUMBER(n=100) & PERCENTAGE
1.Candidal balanoposthitis	17 cases (17%)
2. Genital scabies	12 cases (12%)
3. Pearly penile papules	10 cases (10%)
4. Scrotal dermatitis	8 cases (8%)
5. Lichen sclerosis atrophicus(LSA)	7 cases (7%)
6. Vitiligo	6 cases (6%)
7. Irritant contact dermatitis	6 cases (6%)
8. Lichen planus	5 cases (5%)
9. Fixed drug eruptions(FDE)	5 cases (5%)
10. Zoon'sbalanitis/ Plasma cell balanoposthitis	4 cases (4%)
11. Sebaceous cyst of scrotum	4 cases (4%)
12. Angiokeratoma of Fordyce	3 cases (3%)
13. Steatocystoma multiplex	3 cases (3%)
14. Fordyce spots	2 cases (2%)
15. Lymphangiectasia of scrotum	2 cases (2%)
16. Bowens disease	2 cases (2%)
17. Immuno bullous disorders	1 case (1%)
18. Porokeratosis	1 case (1%)
19. Psoriasis	1 case (1%)
20.PKMB (Pseudoepitheliomatous keratotic and micaceous balanitis)	1 case (1%)

Figure 1: Candidal balanoposthitis

Figure 2: Genital scabies

Figure 3: Pearly penile papules

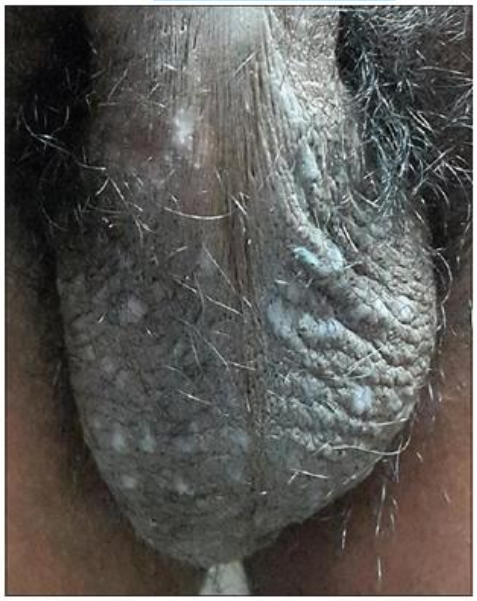

Figure 4: Scrotal dermatitis(LSC)

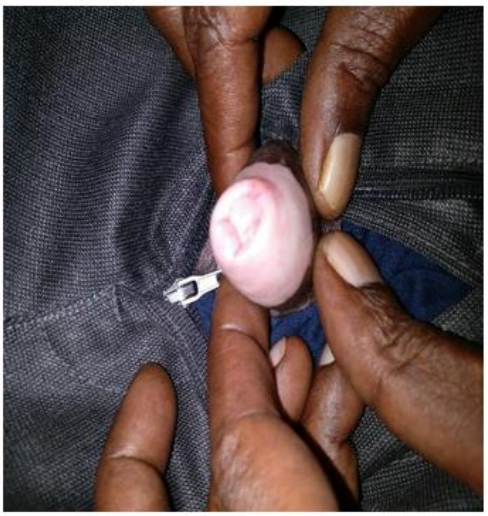

Figure 5: Lichen sclerosis(LSA)

Figure 6: Penile vitiligo

Figure 7: Irritant contact dermatitis to condom

Figure 8: Penile Lichen planus

Figure 9: Fixed drug eruption(FDE)

Figure 10: Zoon's balanitis/ Plasma cell balanoposthitis

Figure 11: Multiple Sebaceous cyst of scrotum

Figure 12: Angiokeratoma of Fordyce

Figure 13: Steatocystoma multiplex of scrotum

Figure 14: Fordyce spots

Figure 15: Penile Psoriasis

Figure 16: Penile Porokeratosis

Figure 17: Pseudoepitheliomatous keratotic and micaceous balanitis(PKMB)

Figure 18: Bowens disease

IV. Discussion

Penile dermatoses include a spectrum of diseases with varied etiology. These diseases may cause severe psychological trauma and fear in the mind of patients. So it is necessary to diagnose and manage these non-venereal dermatoses to relieve the patient from the stigma of sexually-transmitted diseases and cancer phobia even in benign conditions There are no comprehensive studies on the pattern of penile dermatoses from a developing country like us.There is little literature about the incidence and distribution of other penile dermatological diseases. There was lack of knowledge, misconceptions in beliefs and attitude, poor personal and sexual hygiene, overcrowding in living and working environment, poor sanitary condition in living and working environment of our attending patients. Health service facilities in the working area are also poor which need to be modified to ensure early diagnosis and treatment. Modern diagnostic techniques are not widely developed and little standardization of medical arrangements. People also sometimes contact pharmacies or traditional healers, homeopathic doctors instead of health care facilities and sometimes self medications worsen the diseases. Our working place is Government General Hospital, Vijayawada,AP which is the only tertiary care hospital in this arena. The catchmanent area of this hospital is large. Number of factories, day labour of various classes, drivers of various categories, poor socio-economic status people stay in this area. There are lot of schools, colleges under private and government sector present in this area. There are very few comprehensive studies on the pattern of non-venereal dermatoses from India, [4,5]. Thus, the present study was carried out on 100 cases of clinically diagnosed nonvenereal genital dermatoses with a view of studying the clinical pattern, aectiological factors, age/sex distribution and the percentage of cases studied constituted by the particular dermatoses. Majority of our patients belonged to age group of 21-50 years. Maximum incidence (40%) of non-venereal dermatoses was observed in 21-30 years age group, 20% in 31-40 years, 18% in 41-50 years, i.e. total 78% in 21-50 years which constitutes about 3/4th bulk of total patients.

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 nonvenereal dermatoses. The nonvenereal dermatoses of male external genitalia include a wide spectrum of disease with varied etiology [Table 1] .[1] There are very few comprehensive studies on the pattern of nonvenereal dermatoses in males from our country.[2,3] Also, our study is first of its kind.

Acharya *et al.*[2] had done a study of 200 patients with genital lesions of nonvenereal origin. Karthikeyan *et al.*[3] had done a study on the pattern of nonvenereal dermatoses of male external genitalia from South India.

The age ranged from 18 to 65 years in the present study with the mean age of 32.2 years whereas the age ranged from 9 to 70 years with a mean age 33.7 years in a study by Karthikeyan *et al.*[3]Most of the patients belong to the age group of 21–30 years (40%) in the present study which is similar to Karthikeyan *et al.*[3]A total of 20 different nonvenereal dermatoses were observed in this study [Table 1]. Karthikeyan *et al.*[3] had 25 different nonvenereal dermatoses in their study.

The most common disorder was Candidal balanoposthitis [Figure 1] present in 17 cases, followed by genital scabies [Figure 2], which accounted for 12 cases. The other disorder encountered included Pearly penile papules [Figure 3] in 10 cases in the present study. The study by Acharya *et al.*[2] reported commonest disorder contributing 40% cases. Pearly penile papule is the most common disorder. They were present in 10 cases in our study [Figure 1], which is almost similar to the study conducted by Khoo and Cheong[4].

All the patients with pearly penile papule came to visit OPD in apprehension of some venereal disease and they are frequently mistaken as warts. They were counseled about the benign nature of the disease. Acharya *et al.*[2] in their study recorded genital scabies as most common nonvenereal dermatoses accounting for 30 cases (15%), while it was present in 10 cases in our study [Figure 2] as second commonest disorder. This may be due to more prevalence of scabies in this population. Pearly penile papules [Figure 3] was observed in 10 cases in the present study, as third most common disorder

Genital vitiligo[Figure 6] could be an exclusive finding, or it can be associated with generalized vitiligo. Genital vitiligo accounted for 6 cases 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.*,[3] where the entire patients with vitiligo were in older age group. Four patients in our study had associated vitiligo elsewhere while two patients had only genital vitiligo. Duration of illness ranged from 3 months to 6 years.

Fixed drug eruptions[Figure 9] were observed in 5 cases in our study. This is in contrast with Karthikeyan *et al.*,[3] where only 3 cases had FDE and all of them because of Oflaxacin. In our study, various drugs were implicated such as, sulphonamides, oflaxacin, NSAID's, Phenatoin, etc., Half of our patients with FDE had oral involvement also.

Lichen planus[Figure 8] was present in 5 cases in our study that is in contrast with Puri and Puri[5]where it was seen in (3) cases and Karthikeyan *et al.*[3] where it was seen in only 1case.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.[6,7,8] Scrotal dermatitis [Figure 4] accounted for 8 cases in our study. Most of the patients were from the rural background. Acharya *et al.*[2] did not report any case while Karthikeyan *et al.*[3] had 13% cases of scrotal dermatitis. Irritant contact dermatitis due to condome was noticed in 1 case. Sebaceous cysts of scrotum [Figure 11] were observed in 4 cases in our study, while it was second most common finding (14%) by Karthikeyan *et al.*[3] They were observed in only 3.7% cases by Khoo and Cheong[4] All of our cases were asymptomatic to burning and stringing sensation from younger age group. Zoon's balanitis or plasma cell balanitis [Figure 10] was observed in 4 cases in this study that had not been reported by Acharya *et al.*,[2] Khoo and Cheong[4] Karthikeyan *et al.*[3] It is a disorder of middle and older age in uncircumcised male, the etiology remains unknown.[9] Seventy-five patients (75%) were from the rural background while twenty-five patients (25%) belong to urban area. Sixty (60%) patients were married and the remaining forty (40%) patients were unmarried. Only Scrotum was involved in 22% and only penis in 52% while both scrotum and penis were affected in 26% cases in our study

V. 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. This study was quite useful in clinical diagnosis and management of non-venereal dermatoses and differentiating them from venereal dermatoses which helps to Abscind the guilt and fear among patients

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