

Original Research Article

Incidence of non-venereal lesions of the male genitalia: a study of 248 male cases at a tertiary care centre

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ABSTRACT

Background: Non-venereal dermatoses of external genitalia refers to those dermatoses involving external genitalia which are not sexually transmitted. These are associated with mental distress and guilt feelings in affected patients. The aim was to study the incidence of non-venereal lesions of the genitalia.

Methods: This was a cross-sectional clinical observational study in 248 male patients attending dermatovenereology OPD of Vydehi Institute of Medical Sciences and Research Center with non-venereal genital lesions for a period of 18 months. Cases having venereal diseases were excluded from the study.

Results: The study included 248 male patients 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 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 hansen's, squamous cell carcinoma, Zoon's balanitis.

Conclusions: This study reflected the importance of diagnosis of non-Venereal dermatoses and refutes the general misconception that all genital lesions are of venereal origin.

Keywords: Dermatoses, Male genitalia, Non-venereal

INTRODUCTION

Dermatoses involving male external genitalia are not always sexually transmitted. Those which are not sexually transmitted are referred to as non-venereal dermatoses of external genitalia.¹ Based on aetiopathogenesis, non-venereal dermatoses are classified by Fitzpatrick as follows, normal variants (pearly penile papules, Fordyce spots), inflammatory dermatoses (psoriasis, lichen planus), infestation and infections (dermatophytosis, scabies), pigmentary disorders (vitiligo), congenital disorders (median raphe cyst),

pre-malignant lesions (Zoon's balanitis), malignant lesions (squamous cell carcinoma) and miscellaneous.

Patients with non-venereological skin problems commonly present to genitourinary physicians, urologists, pediatricians, who have had little or no training in dermatovenereology. These diseases fall through the cracks of medical education at all levels and in all specialities.²

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. Although the literature is saturated with case reports of non-venereal dermatoses, no formal study has been done on the overall occurrence. Hence, we undertook this study to find the incidence of non-venereal dermatoses of external genitalia in males and their relative frequencies at a tertiary care center.

METHODS

This was a cross-sectional, clinical observational study. The study was done in Dermatovenereology OPD of Vydehi Institute of Medical Sciences and Research Centre, Bengaluru for a period of 18 months from May 2018 to November 2019. All consenting male patients irrespective of their age who presented with genital complaints were screened for non-venereal dermatoses and were included in the study. Cases having venereal diseases were excluded from the study.

Informed consent was obtained. Detailed history including demographic data, chief complaints related to skin, its onset, sexual exposure history and associated medical or skin disorders was recorded. The patients were thoroughly examined clinically keeping focus on the external genitalia lesions.

Investigations such as Gram stain and KOH mount were done as and when required. Biopsy, venereal disease research laboratory test (VDRL) and HIV test were done when required to confirm the diagnosis.

Results were tabulated and analyzed using SPSS version 21. Categorical variables were presented as frequency and percentage.

RESULTS

A total of 248 male patients were included in the study. In this study, the majority of patients belonged to the age group of 21-30 years (24%). 145 males (58.46%) were married. 165 males (66.53%) belonged to rural area whereas 74 (26.81%) were from urban area. The majority of the cases were laborer’s 99 (39.91%) followed by students 62 (25%), businessmen 47 (18.95%) and 20 (18.06%) were preschool children.

The most common presenting feature was itching seen in 135 cases (54.43%) followed by other complaints such as pain, asymptomatic lesions in 57 cases (21.98%) and white discoloration in 35 cases (14.11%).

A total of 25 different types of non-venereal dermatoses were noticed in this study. The non-venereal dermatoses of male external genitalia were categorized into eight categories: normal variants (12 patients), inflammatory disorder (99 patients), pigmentary disorder (12 patients), non-venereal infections and infestations (107 patients), benign tumors and cysts (5 patients), premalignant

lesions (7 patients), malignant lesions (3 patients) and others (2 patients) (Table 1).

Table 1: Various categories.

Categories	Number of patients
Normal variants	12
Inflammatory disorder	99
Pigmentary disorder	12
Non venereal infections and infestations	107
Benign tumors and cysts	5
Premalignant lesions	7
Malignant lesions	3
Others	2

Table 2: Various genital dermatoses.

Types	N (%)
Normal variants	
Pearly penile papules	8 (3.22)
Fordyce spots	3 (1.61)
Inflammatory disorder	
Lichen simplex chronicus	23 (9.27)
Irritant contact dermatitis	16 (6.45)
Lichen planus	11 (4.43)
FDE	12 (4.83)
Psoriasis	15 (6.4)
Balanitis xerotica obliterans	7 (2.82)
Bullous disorder	6 (2.41)
Lymphangioma circumscriptum	5 (2.01)
Lymphedema	4 (1.61)
Pigmentary disorder	
Vitiligo	12 (5)
Verrucous epidermal nevus	1 (0.4)
Non venereal infections	
Scabies	45 (18.14)
Candidiasis	28 (11.29)
Tinea cruris	25 (10.05)
Folliculitis	4 (1.61)
Herpes zoster	3 (1.2)
Furuncle	2 (0.8)
Benign tumors	
Steatocystoma multiplex	5 (2.01)
Premalignant lesions	
Erythroplasia of queryat	4 (1.61)
Zoon’s balanitis	2 (0.8)
Scrotal horn	1 (0.4)
Malignant conditions	
Squamous cell carcinoma	3 (1.2)
Others	
Histoid hansen	1 (0.4)
Phimosis	1 (0.4)

The normal variants included pearly penile papules 8 (3.22%) and Fordyce spots 3 (1.61%). The inflammatory disorders were lichen simplex chronicus 23 (9.27%), irritant contact dermatitis 16 (6.45%), lichen planus 11 (4.43%), fixed drug eruptions 12 (4.83%), psoriasis 15 (6.4%), balanitis xerotica obliterans 7 (2.82%), bullous disorders 6 (2.41%), lymphangioma circumscriptum 5 (2.01%) and lymphedema 4 (1.61%). The pigmentary disorders included vitiligo 12 (5%) and verrucous epidermal nevus 1 (0.40%). The non-venereal infections included scabies 45 (18.14%), candidiasis 28 (11.29%), Tinea cruris 25 (10.05%), folliculitis 4 (1.61%), herpes zoster 3 (1.20%) and furuncle 2 (0.80%). The benign tumors included steatocystoma multiplex 5 (2.01%). The premalignant lesions were erythroplasia of Queyrat 4 (1.61%), Zoon's balanitis 2 (0.80%) and Scrotal horn 1 (0.40%). Squamous cell carcinoma was found in three (1.20%). Histoid Hansen in 1 (0.40%) and Phimosi 1 (0.40%) (Table 2).

The most common non venereal dermatoses in prepubertal boys were scabies and vitiligo and in the sexually active age group- tinea cruris and candidiasis.



Figure 3: Vitiligo.



Figure 1: Pearly penile papules.



Figure 4: Scrotal erosion.

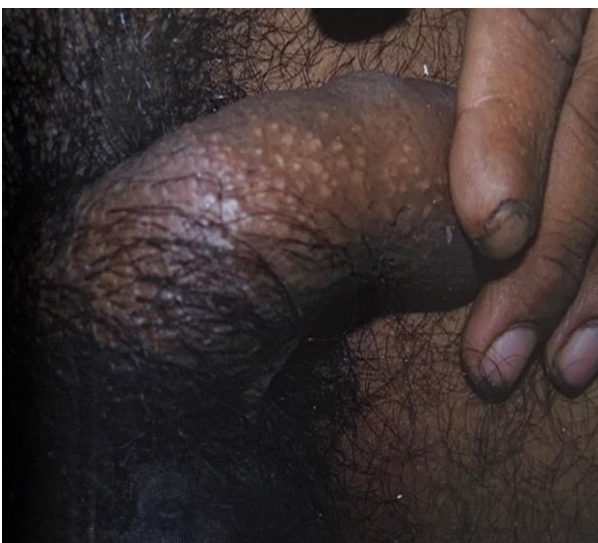


Figure 2: Fordyce spot



Figure 5: Verrucous epidermal nevus.



Figure 6: Steatocystoma multiplex.



Figure 7: Histoid Hansen.



Figure 8: Squamous cell carcinoma of penis.

DISCUSSION

Non-venereal dermatoses of external genitalia include a spectrum of diseases with varied etiology. Genital diseases may be associated with severe psychological

trauma and fear in the mind of patients. Therefore, it is of immense importance to diagnose these non-venereal dermatoses to relieve the patient from stigma of sexually transmitted diseases. There are no comprehensive studies on the pattern of non-venereal dermatoses from a developing country like ours.

A total number of 25 different types of non-venereal dermatoses were noticed in our study on male external genitalia. Saraswat et al observed 16 different non venereal dermatoses in their study.³ Karthikeyan et al observed 25 different non venereal dermatoses in their study.⁴ The most common non-venereal dermatoses were non-sexually transmitted infections, scabies 45 (18.14%), candidiasis 28 (11.29%), tinea cruris 25 (10.08%). Scabies infection was most common in boys. The nodular variant of scabies is seen affecting the genitalia. Although scabies can be sexually transmitted, it can also be transmitted by causal exposure or exposure to contaminated clothing or bedding. Acharya et al observed scabies as most common non venereal dermatoses, which was in concordance with our study.⁵ Tinea of the penis or scrotum is usually associated with crural disease.

Fixed drug eruptions (FDE) are red swollen plaques sometimes with central blister formation, erosion and ulceration, most commonly occurs due to tetracyclines, sulphonamides, phenolphthaline and barbiturates. Twelve cases of FDE (4.83%) had been observed, eight cases due to cotrimoxazole and rest four cases due to NSAIDS (non-steroidal anti-inflammatory drugs) such as Aspirin, Naproxen. 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.⁶

Vitiligo was seen in 12 cases (4.85%). It was seen most common in prepubertal boys and young adults. Only three men were reported to have vitiligo above 50 years. Moss et al carried out a study on 54 male patients and observed 38 cases of genital vitiligo, the etiology being occupation and chemical induced.⁷ While two cases were attributed to idiopathic vitiligo. Balanitis xerotica obliterans (BXO) also known as lichen sclerosus. It may be asymptomatic or present with itching, burning, discomfort with urination and sexual dysfunction. When it occurs on glans penis, it carries a risk of squamous cell carcinoma (4-9.5%). Seven cases (2.82%) were reported with BXO. Out of seven cases, two cases were in the age group below 12 years. Chalmers et al observed 14 cases of lichen sclerosus in hundred prepubertal boys who were referred for medically indicated circumcision.⁸ In a study conducted at the department of paediatric surgery at Gaslini Research Institute, Genova, Italy, found Lichen sclerosus common in patients with phimosis.⁹

Zoon's balanitis presents as asymptomatic well demarcated, glistening, moist, shiny, bright red or brown patches over the glans and prepuce. It does not occur on

the keratinised penile shaft or foreskin of uncircumcised men. It is not seen in circumcised men. Two cases presented with Zoon's balanitis. 0.8% occurred in the age group of 44-48 years involving both prepuce and glans. Mallon et al observed in 27 patients out of 357 males referred for genital skin disease, belonging to middle age to elderly age group.¹⁰ Kumar et al studied manifestations of Zoon's balanitis in 112 patients and found prepuce and glans to be affected in 58.92% of patients and only prepuce in 23.21% of patients.¹¹

Genital psoriasis is difficult to interpret due to moist nature of skin and relatively less scaling. 15 cases (6.4%) were noted in our study, which was associated with lesions elsewhere in the body. Saraswat et al reported 3% cases in their study.³ Fordyce spots are ectopically located sebaceous glands. We had four cases (1.61%) in our study. Basher et al found solitary case of Fordyce spot in their study. Irritant and Allergic contact dermatitis present as scrotal dermatitis. It accounted for 16 cases (6.45%) in our study. Saraswat et al observed 9% cases in their study, Karthikeyan et al had 13% cases in their study.^{3,4} Friction, maceration, over washing, concomitant anorectal or urogenital diseases are the chief predisposing factors for scrotal dermatitis which manifest as itching predominantly.

Lichen planus was seen in 11 cases (4.43%) in our study whereas Puri et al found in 6.6% cases.¹² It presents as itchy red-purple papules or plaques. Oro-genital predilection is explained by the Koebner phenomenon. Five cases (2.01%) of sebaceous cyst of scrotum were reported in our study, which is in contrast to Karthikeyan et al study, where it was observed in 14%. Saraswat et al observed in 7% of the cases.^{3,4}

Eight cases (3.22%) were observed with pearly penile papules, belonging to the age group of 15-30 years. Pearly penile papules are found commonly in approximately 8-20% of males during 2nd and 3rd decade.¹³ Three cases of squamous cell carcinoma were observed, belonging to the age group above 60 years, manifesting as ulcerated mass over the penis. The incidence of squamous cell carcinoma of penis is 1:100,000 and seen in the 7th decade.¹⁴

Four cases presented with erythroplasia of Queyrat, belonging to age group above 50 years which manifested as erythematous plaque over shaft of penis. There were 4 cases of lymphedema and five cases of lymphangioma out of which 2 cases were associated with filariasis. Saraswat et al reported two cases of lymphangiectasia of scrotum.³ Three cases of herpes zoster (1.2%) were observed in our study. One case of verrucous epidermal naevus over the shaft of penis is noticed. Six cases of bullous disorder have been noted. They were associated with bullous lesion elsewhere over the body. Rare cases like scrotal horn and histoid Hansen have been found. In histoid Hansen, scrotum was involved along with skin involvement.

CONCLUSION

This study reflected the importance of diagnosing non-venereal dermatoses and refutes the general misconception that all genital lesions are of venereal origin, and refuted the general misconception of considering all genital itching to be caused by fungal infections. It reflects the different in patterns of various non-venereal dermatoses affecting male patients. Thus, clinicians need to think of possibility of non-venereal lesions in patients with genital lesions. Dermatovenerologists are best trained in pattern recognition of disorders of skin and they are vital for genital care to deliver the best genital care.

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