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Original Article

Dermatology Section

Clinicoepidemiological Profile of Non Venereal Urogenital Dermatoses among Males: A Cross-sectional Study from Southern India

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ABSTRACT

Introduction: Diseases that affect the male external genitalia can be divided into venereal and non venereal dermatoses. Non venereal dermatoses are a cause of great concern and anxiety to the patient, significantly affecting their quality of life. Hence, understanding the non sexual nature and varied presentations of these diseases may provide clues for diagnosing major systemic and generalised cutaneous diseases at the earliest.

Aim: To study the clinical pattern of Non Venereal Urogenital Dermatoses (NVUD) and assess the frequency of various dermatoses, their presenting complaints and different sites of genital involvement.

Materials and Methods: A cross-sectional study was conducted in the Department of Dermatology at an urban-based tertiary care hospital in Chennai, Tamil Nadu, India, from November 2023 to October 2024. All male patients aged 18 years and above who attended the dermatology outpatient department with complaints of skin lesions in the genital area were screened for NVUD and were included in the study after obtaining informed consent. Most of them were examined clinically and diagnosed; in case of diagnostic dilemma, tests and investigations were done to confirm the diagnoses. Detailed demographic data and medical and sexual history were collected from all participants.

Results: The study included 125 male patients with NVUD who presented over a 12-month period. The majority were from urban areas (72%; 90/125) and were married (82.4%; 103/125). The most common complaints were pruritus and dyspigmentation (each 22.4%). Vitiligo (23.2%) was the most common urogenital dermatosis encountered in the study, followed by balanoposthitis (14.4%).

Conclusion: NVUD are often overlooked rather than noticed. Genital dermatoses are perceived as stigmatised by a majority of the population, considerably delaying their presentation to a dermatologist or urologist.

Keywords: Balanoposthitis, Pruritus, Sexually transmitted, Venereophobia, Vitiligo

INTRODUCTION

All genital lesions being venereal is a popular myth among patients, which readily leads to anxiety. Diseases that affect the male external genitalia can be divided into venereal and non venereal dermatoses. The term non venereal is used to designate a large group of genital disorders that are not sexually transmitted. NVUD can affect the genitalia alone or involve other body parts. In males, NVUD encompasses a broad spectrum of diseases ranging from normal physiological variants to rapidly growing malignant tumours [1].

There is no specific classification for non venereal male genital dermatoses and there can be considerable overlap between the two classes. However, based on available literature, the different diseases of the male external genitalia can be classified into the following categories: 1) congenital; 2) variation from normal; 3) infections and infestations; 4) inflammatory disorders; 5) genital manifestations of cutaneous diseases; 6) genital manifestations of systemic diseases; 7) benign swellings and cysts; 8) premalignant conditions and malignant conditions [1,2]. The treatment modalities, in turn, range from simple reassurance to undertaking complex surgical procedures, including amputation. Because of the high sensitivity and vulnerability of the thin genital skin and the increased penetration of topical treatments applied to this area, treatment of genital lesions is challenging [1]. This study aimed to investigate the frequency and pattern of various NVUD in males attending a tertiary care centre. Additionally, it explores the frequency of different presenting complaints and their genital and extragenital sites of involvement.

MATERIALS AND METHODS

A cross-sectional study was conducted at the dermatology, venereology and leprosy outpatient department of Sri Ramachandra Institute of Higher Education and Research (SRIHER), Chennai, Tamil Nadu, India, from November 2023 to October 2024. The Institutional Ethics Committee (IEC) approval (CSP-MED/23/AUG/37/98) was obtained before initiating the study. During this period, male patients were screened for evidence of NVUD. This study included all 125 patients, irrespective of their treatment status, who attended during the study period.

Inclusion criteria: Male patients attending dermatology OPD aged more than 18 years with genital lesions (on the penis and scrotum) and willing to participate in the study were included.

Exclusion criteria: Major and minor sexually transmitted diseases such as syphilis, genital herpes, molluscum contagiosum, chancroid, scabies and phthiriasis were excluded from the study.

Study Procedure

Patients were recruited for the study after informed consent was obtained. A detailed history, including demographic data such as residence, chief complaints related to the genitalia, onset and associated medical disorders, was elicited and recorded. Information on sexual exposure was collected. The external genitalia were examined and findings noted. Most were diagnosed clinically; in case of a dilemma, tests and investigations such as potassium hydroxide (KOH) mount, Gram stain, blood tests, Enzyme Linked Immuno Sorbent Assay (ELISA) for Human Immunodeficiency Virus

(HIV), Venereal Disease Research Laboratory (VDRL) and biopsy to confirm the diagnoses were performed as required.

STATISTICAL ANALYSIS

All collected data were entered into an Excel sheet and the results were recorded. Continuous variables were expressed as mean±standard deviation and categorical variables were presented as counts and percentages.

RESULTS

A total of 125 patients were enrolled in this study. Among the 125 participants with NVUD, 33 (26.4%) were aged 31-40 years and 31 (24.8%) were aged 41-50 years. The mean age was 43.69±14.8 years. The youngest patient was 19 years old and the oldest was 86 years old. Nearly 21 (16.8%) were asymptomatic at presentation and their genital involvement was found incidentally during dermatological examination [Table/Fig-1].

Variables	n (%)
Age distribution (years)	
18-20	2 (1.6)
21-30	24 (19.2)
31-40	33 (26.4)
41-50	31 (24.8)
51-60	16 (12.8)
61-70	12 (9.6)
71-80	6 (4.8)
≥81	1 (0.8)
Chief complaints	
Itching	28 (22.4)
Pain	1 (0.8)
Dyspigmentation	28 (22.4)
Burning	27 (21.6)
Growth/swelling	20 (16)
Asymptomatic	21 (16.8)
Disease duration (weeks)	
<4	31 (24.8)
4-12	80 (64)
>12	14 (11.2)
Area of residence	
Urban	90 (72)
Rural	35 (28)
Marital status	
Married	103 (82.4)
Unmarried	22 (17.6)
Prior sexual exposure	
Present	40 (32)
Not Present	85 (68)

[Table/Fig-1]: Demographic profile and patient complaints.

Vitiligo 29 (23.2%) was the most common condition in the study, followed by balanoposthitis 18 (14.4%) and scrotal dermatitis 17 (13.6%) [Table/Fig-2].

Dermatoses	n (%)
Vitiligo	29 (23.2)
Lichen planus	6 (4.8)
Scrotal dermatitis	17(13.6)
Psoriasis	10 (8.0)
Balanoposthitis	18 (14.4)
Fixed Drug Eruption (FDE)	3 (2.4)
Bullous pemphigoid	2 (1.6)
Pearly penile papule	3 (2.4)
Irritant contact dermatitis	3 (2.4)
Angiokeratoma	10 (8.0)
Sebaceous cyst	4 (3.2)
Parameatal urethral cyst	1 (0.8)
Exfoliative dermatitis	2 (1.6)
Lichen simplex chronicus	6 (4.8)
Steatocystoma multiplex	3 (2.4)
Fourniers gangrene	1 (0.8)
Zoon's balanitis	3 (2.4)
Tinea genitalis	2 (1.6)
Filarial hydrocele	1 (0.8)
Erythroplasia of queyrat	1 (0.8)

[Table/Fig-2]: Frequency of different non venereal genital dermatoses.

Among the genital sites, the scrotum was the most frequently affected (62/125, 49.6%), followed by the penis (55/125, 44%), while involvement of both scrotum and penis occurred in 8 cases (6.4%) [Table/Fig-3].

Sites of genital involvement	No. of cases (%) (n=125)
Penis only	**55 (44)**
Shaft	25 (20)
Corona	14 (11.2)
Glans	50 (40)
Prepuce	44 (35.2)
Scrotum only	**62 (49.6)**
Penis+Scrotum	**8 (6.4)**

[Table/Fig-3]: Site distribution of genital lesions.

Extragenital cutaneous involvement was seen in 29 (23.2%) cases and 96 (76.8%) patients had only genital skin lesions. Among extragenital involvement, the face was the most commonly involved region (7/125, 5.6%), followed by the upper limbs (6/125, 4.8%) and the groin/pelvis (6/125, 4.8%) [Table/Fig-4]. Face and neck involvement, alongside genital involvement, occurred in 5.6% of cases, comprising vitiligo in 4 (3.2%), lichen planus in 2 (1.6%) and Fixed Drug Eruption (FDE) in 1 (0.8%) [Table/Fig-5].

Site	Frequency (%) (n=125)
Only genital	**96 (76.8)**
Genital+skin/mucosa	**29 (23.2)**
Face and neck	7 (5.6)
Upper limbs	6 (4.8)
Trunk	5 (4.0)
Groin and pubis	6 (4.8)
Lower limbs	5 (4.0)

[Table/Fig-4]: Sites of extra-genital skin/mucosal involvement.

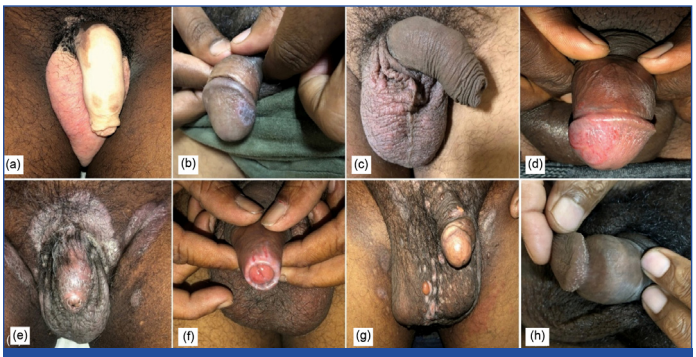
Dermatoses	n (%)
Vitiligo	**21 (72.4)**
Face and neck	4 (19.0)
Trunk	4 (19.0)
Upper limbs	6 (28.6)
Lower limbs	7 (33.4)
Lichen planus	**3 (10.4)**
Face and neck	2 (66.7)
Trunk	-

Upper limbs	1 (33.3)
Lower ,limbs	-
Psoriasis	**2 (6.9)**
Face and neck	-
Trunk	1 (50)
Upper limbs	-
Lower limbs	1 (50)
Fixed Drug Eruption (FDE)	**2 (6.9)**
Face and neck	1 (50)
Trunk	-
Upper limbs	1 (50)
Lower limbs	-
Dermatophytosis	**1 (3.4)**
Face and neck	-
Trunk	-
Upper limbs	-
Lower limbs	1 (100)

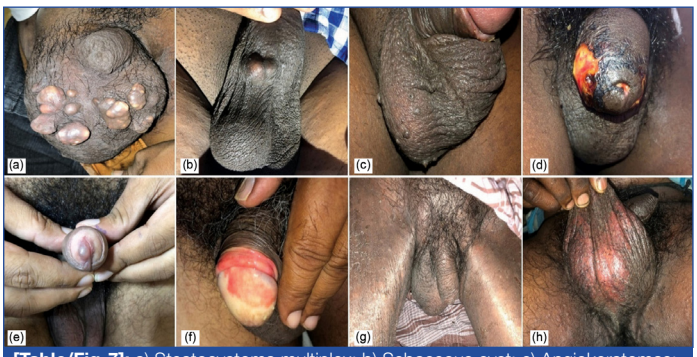
[Table/Fig-5]: Dermatoses with extragenital involvement (n=29).

Among vitiligo patients, involvement included the lower limbs (seven cases), the upper limbs (six) and the face and trunk (four each). FDEs (6.9%) were seen on the face and hands, each in one patient. Psoriatic lesions (6.9%) were found on the trunk and legs in one patient each. One case of tinea with extragenital involvement had lesions on the inner thighs.

[Table/Fig-6,7] represent the clinical images of a few NVUD among males.



[Table/Fig-6]: a) Vitiligo; b) Lichen planus; c) Scrotal dermatitis; d) Dermatophytosis; e) Psoriasis; f) Balanoposthitis; g) Bullous pemphigoid; h) Pearly penile papule.



[Table/Fig-7]: a) Steatocystoma multiplex; b) Sebaceous cyst; c) Angiokeratomas; d) Fournier's gangrene; e) Median raphe cyst; f) Zoon's balanitis; g) Exfoliative dermatitis; h) Contact dermatitis

DISCUSSION

The most prevalent age group affected in present study was 31-40 years, with 33 males (26.4%). In contrast, the majority of studies report the 21-30 years age group as the most affected, reflecting the sexually active age group seeking medical attention for genital lesions [1-5].

About 90 patients (72%) were from an urban area, while 35 patients (28%) belonged to a rural background in present study. Urban residents also dominated in Hogade AS and Mishra S, (64%), Kakkar S et al., (75%) and Saraswat P et al., (74%) studies, likely reflecting tertiary care centre accessibility in urban areas and the urban location of these hospitals [2-4]. Singhal RR and Nair PA, had a near-even split (50.5% urban, 49.5% rural), possibly due to the rural-based setting of their study [6]. In this study, 103 (82.4%) patients were married and the remaining 22 (17.6%) were unmarried. A similar trend of relatively higher married patients was seen in Singhal RR and Nair PA (60%) and Kakkar S et al., (57%), while unmarried patients slightly outnumbered married ones in Hogade AS and Mishra S (52% unmarried) study [2,4,6].

The frequency distribution of various dermatoses was compared and tabulated with a few other studies in [Table/Fig-8] [1-6]. The most common non venereal genital dermatosis in the present study was vitiligo, seen in 29 (23.2%) cases, which was similar to most other studies conducted by Karthikeyan K et al., Saraswat P et al., Hogade AS and Mishra S and Kakkar S et al., [1-4]. Scabies was predominant in Singhal RR and Nair PA, while pearly penile papules were most frequent in Nanda RN et al., [5,6].

Candidal balanoposthitis was seen in 18 (14.4%) patients in the current study. All cases were confirmed with a potassium hydroxide (KOH) mount for *Candida* species. Dermatophytosis, an uncommon fungal infection of the genitalia, was reported in 2 (1.6%) patients and has been described in several other studies [1,2,4-6]. These cases were confirmed by microscopic identification of fungal filaments in KOH-mounted skin scrapings. These fungal infections were treated with oral antifungals and topical azole creams.

Only one patient (0.8%) presented with recurrent fever, chills and scrotal enlargement (hydrocele) with watery discharging sinuses, secondary to filariasis of the scrotum. The diagnosis was confirmed by ultrasonography of the scrotum and testes and by peripheral blood examination for microfilariae. The patient was treated with antifilarial medications and referred for follow-up with a general physician. Three cases (1.5%) of hydrocele of the scrotum were reported by Singhal RR and Nair PA [6].

Pearly penile papules are asymptomatic, benign angiofibromas histologically, arranged in rows along the corona of the glans penis [7]. This condition was reported in 3 (2.4%) patients in present study and was commonly observed in studies by Saraswat P et al., (16%), Nanda RN et al., (25.3%), Singhal RR and Nair PA (5%), Hogade AS and Mishra S (10%) and Kakkar S et al., (15%) [2-6]. In present study, patients were reassured of the benign nature of the condition and were treated with cryotherapy and electrocauterisation.

Papulosquamous disorders such as psoriasis and lichen planus were seen in 10 (8%) and 6 (4.8%) patients, respectively, in present study. They significantly impact the mental and sexual wellbeing of these patients. These individuals were managed along the treatment lines for psoriasis and lichen planus, considering the extent of involvement and associated co-morbidity. Karthikeyan K et al., and Nanda RN et al., each observed a meagre 1% incidence of genital psoriasis in their studies [1,5]. FDE manifested in 3 (2.4%) cases after taking oral formulations of cotrimoxazole, Non Steroidal Anti-Inflammatory Drugs (NSAIDs) and fluoroquinolones, each in present study. Patients attained remission after discontinuation of the offending drug, along with a short course of topical and systemic corticosteroids. The incidence was highest in Saraswat P et al.'s study (12%), where NSAIDs (like ibuprofen), sulfonamides (e.g., cotrimoxazole), ornidazole, fluconazole and ampicillin were implicated [3]. Karthikeyan K et al., reported 3% of cases, with cotrimoxazole as the sole trigger [1]. Nanda RN et al., had reported drug reactions such as FDE (3%) and Stevens-Johnson syndrome (2%) to NSAIDs, quinolones and Ayurvedic medicines in their study [5].

Cases	Present Study n (%) (n=125)	Karthikeyan K et al., [1] % (n=100)	Saraswat P et al., [3] % (n=100)	Nanda RN et al., [5] % (n=200)	Singhal RR and Nair PA [6] % (n=200)	Hogade AS and Mishra S [2] % (n=50)	Kakkar S et al., [4] % (n=100)
Balanoposthitis	18 (14.4)	5		9.5	7	6	
Tinea	2 (1.6)	2		1.5	9.5	10	6
FDE	3 (2.4)	3	12	6.5	3	16	13
LSC	6 (4.8)	2		1		4	
PS	10 (8)	1	3	1		2	3
Lichen planus	6 (4.8)	1	9			2	8
SD	17 (13.6)	13	9	0.5	8	4	8
Vitiligo	29 (23.2)	16	18	10.5	6	20	20
Angiokeratoma	10 (8)	2		2	3		
Zoon's balanitis	3 (2.4)		2	3	3	2	1
Immunobullous	2 (1.6)			4	1.5		
Pearly penile papule	3 (2.4)		16	25.3	5	10	15
Median raphe cyst	1 (0.8)				0.5		
Hydrocele	1 (0.8)				1.5		
EOQ	1 (0.8)	1					
Sebaceous cyst	4 (3.2)	14	7	3	4.5		6
SCM	3 (2.4)	1				4	
Erythroderma	2 (1.6)				0.5		
Contact dermatitis	3 (2.4)				3		
Fournier's Gangrene (FG)	1 (0.8)						
Varicella				0.5			
Pyoderma		20		3.5	3.5		
LS		2	3	3.5			3
SH					3		
LN		1	1	2	1		1
Circinate balanitis				1.5			
SCC			1	1			1
Scabies		9		10	13.5	14	11

[Table/Fig-8]: Comparison of various study results with the present study [1-6].
FDE: Fixed drug eruption; LSC: Lichen simplex chronicus; LS: Lichen sclerosus; PS: Psoriasis; SD: Scrotal dermatitis; SH: Seborrheic hyperplasia; LN: Lichen nitidus; SCC: Squamous cell carcinoma; SCM: Steatocystoma multiplex; EOQ: Erythroplasia of queyerat

Scrotal dermatitis is characterised by erythema, scaling and thickening of the skin of the scrotum. Topical creams, clothing dyes and riboflavin deficiency—particularly in alcoholics—have been postulated as likely aetiologies [8]. This was seen frequently in present study population (13.6%), as in other studies by Karthikeyan K et al., (13%), Saraswat P et al., (9%), Nanda RN et al., (0.5%), Singhal RR and Nair PA (8%), Hogade AS and Mishra S (4%) and Kakkar S et al., (8%) [1-6]. In present study, patients responded better to topical steroids and oral antihistamines, along with oral riboflavin supplementation. Lichen simplex chronicus of the scrotum was reported in 6 (4.8%) patients in the present study and was reported at lower frequencies in studies by Karthikeyan K et al., (2%), Nanda RN et al., (1%) and Hogade AS and Mishra S (4%) [1,2,5]. Three (2.4%) patients presented with irritant contact dermatitis of the genitalia due to the use of antiseptic solutions and shaving creams. Singhal RR and Nair PA had reported a considerable number of cases in their study [6].

Two cases of bullous pemphigoid had lesions over the scrotum along with generalised skin involvement. These patients were treated with systemic corticosteroids and immunomodulators. Autoimmune bullous disorders were uncommonly reported in other studies, such as Nanda RN et al., (4%) and Singhal RR and Nair PA (1%) [5,6].

Premalignant conditions such as erythroplasia of Queyrat and Zoon's balanitis were reported in present study (each 0.8%) and were confirmed after biopsy and histopathology of the lesions. The patients were then managed with topical corticosteroids, calcineurin inhibitors and imiquimod. The patients responded well to treatment.

Benign conditions such as angiokeratomas, sebaceous cysts and steatocystoma multiplex presenting as nodules and cysts on the scrotum were seen together in 17 patients in present study. Angiokeratomas are blue or reddish vascular telangiectasias presenting as papules on the scrotal skin [9]. Present study had 10 (8%) patients with angiokeratomas, while Karthikeyan K et al., Nanda RN et al., and Singhal RR and Nair PA studies documented 2%, 2% and 3% cases, respectively [1,5,6]. Sebaceous cysts were reported in studies by Karthikeyan K et al., (14%), 7% in Saraswat P et al., 3% in Nanda RN et al., and 4.5% in Singhal RR and Nair PA [1,3,5,6].

Median raphe cyst may appear as a solitary, movable cyst anywhere along the midline on the ventral side of the male anogenital region, from the urethral meatus to the anus and the perineum [10]. In present study, patient had a history of a slow-growing solitary cyst near the urethral opening for six months and the patient was referred to a urologist for excision and further management. Singhal RR and Nair PA also reported a single case of median raphe cyst in their study [6].

Fournier's gangrene (FG) is an uncommon necrotising fasciitis predominantly affecting the scrotum and perineum in males [11]. In present study, patient presented to the emergency department with rapid onset of scrotal pain, fever and discoloration of the skin over the scrotum. The patient was stabilised and microbial culture taken from the skin lesion demonstrated a mixed polymicrobial growth of aerobic and anaerobic bacteria. The patient was treated with broad-spectrum antibiotics and plastic surgery reconstruction was consulted.

The most common presenting complaint in this study was pruritus in 28 cases (22.4%), which was similar to most other studies [1-6]. The scrotum was the most affected site in male external genitalia, comprising 62 patients (49.6%). This was similar to studies by Hogade AS and Mishra S (68%), Kakkar S et al., (62%), Saraswat P et al., (60%) and Karthikeyan K et al., (52%) [1-4]. The penis was more commonly involved in studies by Singhal RR and Nair PA and Nanda RN et al., [5,6].

Twenty-nine patients (23.2%) in present study had extragenital lesions of the same disease, with vitiligo (21 cases) being the most common. Karthikeyan K et al., and Saraswat P et al., studies also showed that more than half of their vitiligo cases had genital lesions as part of generalised disease [1,3]. Singhal RR and Nair PA reported 19 (9.5%) cases of dermatophytosis and Nanda RN et al., reported 20 (10%) cases of scabies with major extragenital involvement [5,6]. Hence, a complete dermatological examination is necessary in all cases, as it provides clues to diagnosis and helps determine management based on the total body surface area involved. There is a proven increase in the incidence of penile inflammatory dermatoses (such as balanoposthitis, Zoon's balanitis and erythroplasia of Queyrat) among uncircumcised males with poor genital hygiene [12]. This was highlighted in a study that found the prevalence of balanitis to be 68% lower in circumcised versus uncircumcised males (odds ratio=0.32) [13].

This study helps in understanding the frequency, clinical patterns and demographic characteristics of several NVUD affecting the male population. In the future, larger-scale studies involving patients from multidisciplinary clinics such as venereology, psychology, gynecology, medicine, urology, fertility clinics, etc., are required to understand various etiopathological factors and other related aspects associated with these diseases.

Limitation(s)

The smaller sample size in the current study may not portray the actual patterns of various dermatoses in the population. Hence, larger clinical studies encompassing a wider range of dermatoses that were not documented during the study may be warranted.

CONCLUSION(S)

NVUD are often overlooked rather than noticed. Genital dermatoses are stigmatised, which leads to delays in consulting a dermatologist. They may cause anxiety and concern for patients; therefore, adequate counseling regarding non sexual modes of transmission is essential to prevent psychological stress. Genital involvement may be the initial presentation and may provide clues to diagnosing major systemic and generalised cutaneous diseases. Hence, recognising the varied presentations of NVUD is vital for improving patients' quality of life.

REFERENCES

[1] Karthikeyan K, Jaisankar TJ, Thappa DM. Non-venereal dermatoses in male genital region-prevalence and patterns in a referral centre in South India. Indian J Dermatol. 2019;46(1):18-22.
[2] Hogade AS, Mishra S. A study of pattern of nonvenereal genital dermatoses of male attending skin OPD of tertiary centre in Kalaburagi. Int J Res Dermatol. 2017;3(3):407.
[3] Saraswat P, Garg A, Mishra D, Garg S. A study of pattern of nonvenereal genital dermatoses of male attending skin OPD at a tertiary care center. Indian J Sex Transm Dis. 2014;35(2):129.
[4] Kakkar S, Mohan M, Agrawal R, Kumari P, Phad PY, Singh PK. A prospective observational clinical research on non-venereal genital dermatoses in adult males. Int J Pharm Clin Res. 2022;14(8):805-14.
[5] Nanda RN, Gantayat CK, Subudhi SJ, Ram K, Mohanty P, Bisoyi D. Clinico-epidemiological study of non-venereal dermatoses involving male genitalia. Int J Pharm Clin Res. 2024;16(2):104-11.
[6] Singhal RR, Nair PA. A study on clinical patterns of nonvenereal male genital dermatoses at a rural-based tertiary care center. Clin Dermatol Rev. 2021;5(1):78-84.
[7] Aldahan AS, Brah TK, Nouri K. Diagnosis and management of pearly penile papules. Am J Mens Health. 2018;12(3):624-27.
[8] Krishnan A, Kar S. Scrotal dermatitis - Can we consider it as a separate entity? Oman Med J. 2013;28(5):302-05.
[9] Bayraktar N. Fordyce angiokeratoma: Comparison of cryotherapy and electrocauterization treatments. Dermatol Res Pract. 2022;2022:2223602.
[10] Alphones S, Phansalkar M, Manoharan P. Median raphe cyst of the penis: A startling diagnosis for the unaccustomed clinician. Urol Ann. 2019;11(3):314-16.
[11] Huayllani MT, Cheema AS, McGuire MJ, Janis JE. Practical review of the current management of fournier's gangrene. Plastic and Reconstructive Surgery - Global Open. 2022;10(3):e4191.
[12] Eichmann AR. Dermatoses of the male genital area. Dermatology. 2005;210(2):150-56.
[13] Morris BJ, Krieger JN. Penile inflammatory skin disorders and the preventive role of circumcision. Int J Prev Med. 2017;8(1):32.

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