

A CLINICAL INVESTIGATION ON NON-VENEREAL GENITAL DERMATOSES IN ADULT MALE

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**Abstract**

Background: This study aimed to investigate the clinical presentation, types, and underlying causes of non-venereal genital dermatoses in adult male patients, providing insights into their epidemiology, symptomatology, and diagnostic outcomes. **Materials and Methods:** A prospective, observational study was conducted with 120 adult male patients presenting with non-venereal genital dermatoses. Inclusion criteria encompassed adult males with clinical signs and symptoms indicative of non-venereal genital conditions. Exclusion criteria included confirmed or suspected sexually transmitted infections (STIs), genital malignancies, recent trauma, or immunocompromised status. Detailed demographic data, clinical history, and a comprehensive dermatological examination were performed. Investigations included routine laboratory tests, potassium hydroxide (KOH) mount for fungal infections, skin biopsies, and patch testing. Data were statistically analyzed using descriptive methods and chi-square tests, with significance set at $p < 0.05$. **Result:** The mean age was 42.3 ± 15.7 years, with 70.00% of patients being married and laborers comprising the largest occupational group (33.33%). The majority (43.33%) experienced symptoms for less than six months, with itching reported by 75.00% of patients as the predominant symptom. Lesion types varied, with papules (28.33%) being most frequent, followed by plaques (21.67%). Inflammatory dermatoses, such as psoriasis and lichen planus, were the most common, affecting 31.67% of patients. Infectious dermatoses accounted for 30.00%, with candidiasis and scabies being prevalent. Diagnostic tests revealed fungal infections in 15.00%, positive skin biopsies in 26.67%, and elevated blood sugar in 11.67% of cases. **Conclusion:** This study underscores the complexity of non-venereal genital dermatoses in adult males, highlighting the need for thorough clinical evaluation and targeted diagnostic investigations. The findings emphasize the significance of individualized treatment plans and a multidisciplinary approach to improve patient outcomes and quality of life.

INTRODUCTION

Non-venereal genital dermatoses encompass a broad spectrum of dermatological conditions that manifest in the genital area but are not transmitted through sexual contact. These conditions often pose a diagnostic challenge for clinicians due to their varied presentation and overlap with venereal diseases, which may result in unnecessary anxiety and stigma for the affected individuals. The genital region's unique anatomical and physiological characteristics, including increased moisture, warmth, and friction, make it a site susceptible to various dermatoses, both infectious and non-infectious. Understanding the clinical features and underlying causes of non-venereal genital dermatoses is crucial for effective diagnosis and management, especially given the sensitive nature of the area and the potential impact on patients' quality of life.^[1] Patients often present

with a wide range of symptoms that may include itching, pain, burning sensations, or the presence of visible lesions such as macules, papules, plaques, or nodules. These symptoms can cause significant discomfort and distress, prompting individuals to seek medical attention. One of the primary concerns in evaluating genital dermatoses is distinguishing between conditions that are benign and those that may signify systemic diseases or serious underlying health issues. For example, chronic inflammatory conditions like lichen planus and psoriasis not only affect the genital area but may also have broader systemic implications, requiring a comprehensive approach to treatment.^[2] Non-venereal genital dermatoses can be categorized into various groups, including inflammatory, infectious, physical or mechanical causes, and miscellaneous conditions. Inflammatory dermatoses, such as psoriasis and lichen planus, are characterized by chronic

inflammation and immune-mediated processes that lead to the formation of plaques, scaling, and erythema. These conditions are often associated with significant morbidity, and the genital involvement may exacerbate symptoms or lead to complications like secondary infections. Infectious dermatoses, although non-venereal, are another important category, including conditions such as candidiasis and scabies. Fungal infections like candidiasis are common in warm, moist environments, and the genital region provides an ideal habitat for fungal overgrowth, especially in individuals with compromised immunity or poorly controlled diabetes.^[3] Physical or mechanical factors can also contribute to genital dermatoses. Conditions such as irritant contact dermatitis and fixed drug eruptions arise from exposure to irritants or allergens, leading to localized inflammation and lesion formation. The genital area is particularly vulnerable to these conditions due to the frequent use of personal hygiene products, topical medications, and the potential for friction-related irritation from clothing. Identifying and removing the offending agent is often a key component of treatment, alongside symptomatic management to relieve discomfort.^[4] Miscellaneous conditions, including vitiligo and pearly penile papules, represent a diverse group of non-venereal genital dermatoses. Vitiligo, characterized by the loss of pigmentation in the skin, can affect the genital area and may be associated with significant psychological distress due to its visible nature. Pearly penile papules, on the other hand, are benign anatomical variations that are often mistaken for a pathological condition, leading to unnecessary concern. Educating patients about these benign conditions is an important aspect of clinical care, as it can alleviate anxiety and reduce the burden on healthcare resources. A thorough clinical history and examination are essential in the evaluation of non-venereal genital dermatoses. Understanding the onset, duration, and progression of symptoms, as well as any associated systemic illnesses or use of topical agents, can provide valuable insights into the diagnosis. Physical examination should include not only the genital area but also a broader assessment of the skin to identify any associated dermatological conditions. Laboratory investigations, such as potassium hydroxide (KOH) mounts, skin biopsies, and patch testing, can aid in confirming the diagnosis and ruling out infections or allergic contact dermatitis. The use of diagnostic imaging is typically limited but may be considered in cases where there is suspicion of deeper tissue involvement or malignancy.^[5] Management of non-venereal genital dermatoses requires a multifaceted approach that addresses both the underlying cause and the patient's symptoms. Topical and systemic therapies may be used, depending on the severity and extent of the condition. For inflammatory dermatoses, corticosteroids and immunomodulators are often the mainstay of treatment, while antifungal agents are used for infectious conditions. Supportive measures,

such as the use of emollients and education on proper genital hygiene, are also important to prevent exacerbation and promote healing. Additionally, patient education is crucial in managing expectations and ensuring adherence to treatment regimens, especially for chronic conditions that require long-term care. The psychosocial impact of genital dermatoses should not be underestimated. The genital region is closely associated with self-image and intimacy, and any visible or symptomatic condition can lead to embarrassment, anxiety, and even depression. Addressing these concerns through counseling and support groups can be beneficial for patients struggling with the emotional burden of their condition. Clinicians must approach these cases with sensitivity and understanding, fostering an environment where patients feel comfortable discussing their symptoms and concerns.^[6]

MATERIALS AND METHODS

This was a prospective, observational study aimed at investigating non-venereal genital dermatoses in adult male patients. The inclusion criteria comprised adult males presenting with clinical signs and symptoms indicative of non-venereal genital dermatoses. Patients were excluded if they had confirmed or suspected sexually transmitted infections (STIs), any genital malignancies, a history of recent trauma to the genital area, or were immunocompromised, such as those who were HIV-positive or on long-term immunosuppressive therapy. Detailed demographic information was collected for each patient, including age, marital status, occupation, and history of the present illness. A thorough clinical history was recorded, focusing on the onset, duration, and progression of the lesions. Associated symptoms such as itching, burning, or pain were also documented. Additionally, patients were asked about their personal hygiene practices, history of systemic diseases, and the use of any medications or topical agents on the genital area.

A comprehensive dermatological examination of the genital region was conducted. The lesions were evaluated based on their type, such as macules, papules, plaques, ulcers, or nodules, and their distribution, color, surface changes, and any secondary features like excoriation or lichenification. The rest of the body was also examined to identify any associated dermatological conditions. Each case was photographed with the patient's consent for documentation and future reference.

Routine laboratory investigations, including a complete blood count (CBC) and blood sugar levels, were conducted to rule out underlying systemic conditions. Specific investigations included a potassium hydroxide (KOH) mount, where scrapings from the lesions were examined under a microscope to detect fungal infections. Skin biopsies were performed in selected cases to confirm diagnoses, especially when the clinical presentation was unclear or suggestive of chronic or inflammatory dermatoses.

Patch testing was carried out in patients suspected of having allergic contact dermatitis.

The non-venereal genital dermatoses were classified into groups based on clinical and histopathological findings. These categories included inflammatory dermatoses, such as psoriasis and lichen planus; infectious dermatoses, like candidiasis and scabies; dermatoses related to physical or mechanical causes, such as fixed drug eruptions and irritant dermatitis; and miscellaneous conditions, like vitiligo and pearly penile papules.

The collected data were analyzed using appropriate statistical methods. Descriptive statistics were used to summarize demographic and clinical characteristics. Continuous variables, including age and duration of illness, were presented as mean \pm standard deviation, while categorical variables, such as types of dermatoses, were expressed as frequencies and percentages. Chi-square tests were employed to assess the association between categorical variables, with a p-value of <0.05 considered statistically significant.

RESULTS

[Table 1] Demographic Characteristics of the Study Population

The demographic analysis of the 120 male patients showed an average age of 42.3 ± 15.7 years. Marital status distribution revealed that the majority of participants were married, accounting for 70.00% (84 patients), while unmarried patients made up 30.00% (36 patients). Regarding occupation, the study observed that laborers represented the largest occupational group at 33.33% (40 patients), followed by self-employed individuals at 26.67% (32 patients), office workers at 23.33% (28 patients), and others at 16.67% (20 patients). These demographic characteristics help provide context for understanding the population affected by non-venereal genital dermatoses and may have implications for exposure risks and lifestyle factors.

[Table 2] Clinical History and Symptom Profile

The clinical history and symptom profile highlighted that a significant proportion of patients (43.33%, or 52 patients) experienced symptoms for less than six months. Those with symptom durations between six to twelve months comprised 31.67% (38 patients), while 25.00% (30 patients) had symptoms persisting for over a year. The primary symptoms reported included itching, experienced by a substantial 75.00% (90 patients), followed by burning sensation

in 23.33% (28 patients), and pain in 20.00% (24 patients). The predominance of itching suggests that pruritic dermatoses may be a common issue in this patient population, impacting their quality of life.

[Table 3] Types of Lesions Observed

The lesion types observed in the patients revealed that papules were the most frequent, affecting 28.33% (34 patients), followed by plaques in 21.67% (26 patients) and macules in 18.33% (22 patients). Ulcers were seen in 13.33% (16 patients), nodules in 10.00% (12 patients), and mixed lesions were noted in 8.33% (10 patients). These findings indicate a diverse range of dermatological presentations, necessitating a comprehensive clinical assessment to differentiate between various non-venereal dermatoses.

[Table 4] Classification of Dermatoses

The classification of non-venereal genital dermatoses showed that inflammatory dermatoses were the most common, affecting 31.67% (38 patients). This category included psoriasis (16.67%, or 20 patients) and lichen planus (15.00%, or 18 patients). Infectious dermatoses were observed in 30.00% (36 patients), with candidiasis in 16.67% (20 patients) and scabies in 13.33% (16 patients). Dermatoses related to physical causes accounted for 20.00% (24 patients), including fixed drug eruption (11.67%, or 14 patients) and irritant dermatitis (8.33%, or 10 patients). Miscellaneous conditions were seen in 18.33% (22 patients), comprising vitiligo in 10.00% (12 patients) and pearly penile papules in 8.33% (10 patients). This classification aids in understanding the distribution and potential causes of these conditions, guiding diagnosis and management strategies.

[Table 5] Laboratory and Diagnostic Findings

Laboratory and diagnostic investigations revealed that 15.00% (18 patients) tested positive for fungal infections on KOH mount. Skin biopsies were performed in 26.67% (32 patients), which helped confirm diagnoses in ambiguous cases. Patch testing identified positive results in 8.33% (10 patients), suggesting allergic contact dermatitis in a subset of patients. Elevated blood sugar levels were found in 11.67% (14 patients), indicating the potential role of systemic conditions like diabetes in the manifestation of dermatoses. Anemia, defined by low hemoglobin levels, was observed in 16.67% (20 patients), pointing to the importance of evaluating overall health and nutritional status in affected individuals. These diagnostic findings underscore the need for a multidisciplinary approach to manage and treat non-venereal genital dermatoses effectively.

Table 1: Demographic Characteristics of the Study Population.

Characteristic	Value (n=120)	Percentage (%)
Age (mean \pm SD)	42.3 \pm 15.7 years	-
Marital Status		
- Married	84	70.00
- Unmarried	36	30.00
Occupation		
- Laborer	40	33.33
- Office Worker	28	23.33
- Self-Employed	32	26.67

- Others	20	16.67
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Table 2: Clinical History and Symptom Profile

Characteristic	Value (n=120)	Percentage (%)
Duration of Illness		
- < 6 months	52	43.33
- 6-12 months	38	31.67
- > 12 months	30	25.00
Primary Symptoms		
- Itching	90	75.00
- Burning Sensation	28	23.33
- Pain	24	20.00

Table 3: Types of Lesions Observed

Lesion Type	Number of Patients (n=120)	Percentage (%)
Macules	22	18.33
Papules	34	28.33
Plaques	26	21.67
Ulcers	16	13.33
Nodules	12	10.00
Mixed Lesions	10	8.33

Table 4: Classification of Dermatoses

Dermatosis Category	Number of Patients (n=120)	Percentage (%)
Inflammatory Dermatoses	38	31.67
- Psoriasis	20	16.67
- Lichen Planus	18	15.00
Infectious Dermatoses	36	30.00
- Candidiasis	20	16.67
- Scabies	16	13.33
Dermatoses Related to Physical Causes	24	20.00
- Fixed Drug Eruption	14	11.67
- Irritant Dermatitis	10	8.33
Miscellaneous Conditions	22	18.33
- Vitiligo	12	10.00
- Pearly Penile Papules	10	8.33

Table 5: Laboratory and Diagnostic Findings

Investigation	Positive Cases (n=120)	Percentage (%)
KOH Mount (Fungal Infection)	18	15.00
Skin Biopsy Performed	32	26.67
Patch Testing Positive	10	8.33
Elevated Blood Sugar	14	11.67
Anemia (Low Hemoglobin)	20	16.67

DISCUSSION

The demographic characteristics of the study population provide a vital foundation for understanding the context in which non-venereal genital dermatoses occur. The mean age of 42.3 ± 15.7 years aligns with findings from Patel et al. (2019), who reported a similar age range (41.8 ± 14.9 years) among male patients with genital dermatoses, suggesting that middle-aged men are a key demographic affected.^[7] The predominance of married individuals (70.00%) also supports findings from Sharma et al. (2020), where married men were found to have higher exposure risks, likely due to shared environmental or lifestyle factors with their partners.^[8] Occupation-wise, the prevalence of laborers (33.33%) highlights potential occupational exposures, which have been similarly documented by Singh et al. (2018), who noted a higher incidence of dermatoses in manual laborers, potentially due to increased exposure to irritants and allergens.^[9] The clinical history and symptom profile reveal that most

patients (43.33%) had symptoms lasting less than six months. This finding is consistent with studies by Mehta et al. (2021), where acute dermatoses were common, and symptoms like itching (reported by 75.00% of patients) were the most frequent.^[10] Itching being the predominant symptom emphasizes the pruritic nature of many dermatological conditions, as corroborated by Gupta et al. (2018), who found that pruritus was a major symptom affecting 72% of their study population. The symptom duration data also suggests that many patients seek medical attention relatively early, possibly due to discomfort or concern over lesion appearance.^[11] The types of lesions observed in the study varied significantly, with papules being the most common (28.33%), followed by plaques (21.67%) and macules (18.33%). These findings are comparable to results from a study by Kumar et al. (2018), where papular lesions were the most frequent presentation in patients with non-venereal genital dermatoses.^[12] The presence of ulcers and nodules, though less common, indicates the need for

differential diagnoses to rule out more severe or systemic conditions, as highlighted by Jain et al. (2020), who emphasized the importance of distinguishing between benign and potentially malignant lesions.^[13] Classification of the dermatoses showed that inflammatory conditions were the most common, affecting 31.67% of patients, with psoriasis and lichen planus being the leading causes. This finding mirrors research by Desai et al. (2019), who reported a similar distribution of inflammatory dermatoses in their cohort.^[14] Infectious dermatoses, such as candidiasis and scabies, were also prevalent, accounting for 30.00% of cases. These results are consistent with studies by Raj et al. (2021), who found that fungal infections and infestations were common, especially in regions with warm, humid climates. Dermatoses related to physical causes and miscellaneous conditions like vitiligo and pearly penile papules further illustrate the wide spectrum of non-venereal genital dermatoses, requiring tailored diagnostic and management approaches.^[15] Laboratory and diagnostic findings provided crucial insights into the underlying causes and associated conditions. The 15.00% positivity rate for fungal infections on KOH mount aligns with findings by Mishra et al. (2020), who documented a similar prevalence of dermatophyte infections.^[16] Skin biopsies were instrumental in confirming diagnoses in 26.67% of cases, underscoring their value in ambiguous presentations, as also noted by Verma et al. (2018), who advocated for histopathological confirmation in chronic or atypical dermatoses. The identification of allergic contact dermatitis through patch testing in 8.33% of patients highlights the importance of allergen identification and avoidance.^[17] Elevated blood sugar levels in 11.67% of patients point to a link between metabolic conditions and dermatological manifestations, consistent with the work of Chatterjee et al. (2021), who found a significant association between diabetes and chronic dermatoses. Anemia observed in 16.67% of patients underscores the importance of holistic patient evaluation, as nutritional deficiencies can exacerbate dermatological conditions.^[18]

CONCLUSION

In conclusion, this study highlights the diverse and complex nature of non-venereal genital dermatoses in adult male patients. The findings emphasize the importance of a thorough clinical assessment, including detailed history, physical examination, and appropriate diagnostic investigations, to accurately diagnose and manage these conditions. The most common symptoms, such as itching, and varied lesion types underscore the need for individualized treatment strategies. Addressing both the physical

and psychological impacts of these dermatoses is crucial to improving patient outcomes and quality of life. A comprehensive, multidisciplinary approach is essential for effective management and long-term care.

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