

A Clinical-Epidemiological Study of Facial Dermatoses in Women: A Cross-Sectional Study

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Abstract

Background: Highly common facial dermatoses can significantly impact the quality of life, particularly for women. This clinical-epidemiological Study was to explain the incidence, severity, and risk factors associated with face dermatoses in females. This research will focus on the prevalence of facial dermatoses and contribute to creating effective treatment plans.

Methods: A cross-sectional investigation was conducted with women over 18 years of age. The volunteers were recruited from dermatology offices and other ambulatory medical facilities. The participants' demographic information, medical history, and face dermatoses were collated using a standardised questionnaire. Dermatologists conducted clinical examinations to diagnose and classify facial dermatoses. Correlations between variables were determined using descriptive statistics, chi-square tests, and logistic regression models.

Results: Initial findings from 500 participants indicate that women suffer from various facial dermatoses. The most frequently diagnosed dermatoses affecting the face were acne vulgaris (n=200, 40%), melasma (n=120, 24%), rosacea (n=70, 14%), and seborrheic dermatitis (n=50, 10%). Contact dermatitis, perioral dermatitis, atopic dermatitis, and photodermatoses were also identified, albeit less frequently on the face.

Conclusion: In an ongoing clinical-epidemiologic study, the prevalence and clinical characteristics of facial dermatoses in women are being investigated. This Study's findings will focus on the prevalence of these diseases and may guide the development of effective preventative measures and targeted therapies. Familiarity with the clinical-epidemiological characteristics of facial dermatoses can improve patient care, education, and resource allocation.

Categories: Healthcare Technology, Other

Keywords: Acne vulgaris, Clinical characteristics, Clinical-epidemiological Study, Facial dermatoses, Melasma, Prevalence, women

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Background

Acne vulgaris, rosacea, seborrheic dermatitis, and contact dermatitis are numerous facial dermatoses that can affect the skin. These dermatoses can harm a person's physical, mental, and social health, particularly in women who care about their facial beauty [1]. To improve the diagnosis, treatment, and prevention of face dermatoses in women, it is necessary to understand the clinical-epidemiological factors that contribute to their occurrence and prevalence [2].

Due to their high prevalence and associated morbidity, face dermatoses are an important area of Study. Numerous studies [3] have highlighted these illnesses' heavy burden on patients, who frequently experience low self-esteem, decreased quality of life, and increased healthcare utilisation. Further-

more, hormonal changes, the use of cosmetic products, and cultural factors related to facial care practices may all contribute to the distinct clinical symptoms and treatment outcomes of women with facial dermatoses. This clinical-epidemiological analysis was performed on a group of women to ascertain the incidence, severity, and location of facial dermatoses.

The objective of this study is to improve clinical management and public health measures for women with facial dermatoses through examining a diverse sample of women and identifying risk factors for these conditions. The findings will lead to the advancement of medical skills, to the enhancement of diagnostic accuracy, and the development of evidence-based management programmes for women.



Figure 1 Few cases of facial dermatoses in women[4]

Research Objectives

- To determine the prevalence of various facial dermatoses in women.
- To describe the clinical characteristics and patterns of facial dermatoses in women, including their age of onset, duration, and severity.
- To explore the association between demographic factors (age, ethnicity, and socioeconomic status) and specific facial dermatoses.
- To assess the current management strategies and treatment outcomes for facial dermatoses in women and evaluate their effectiveness and patient satisfaction.
- To provide recommendations for improving the diagnosis, management, and prevention of facial dermatoses in women based on the study findings.

By addressing these research objectives, this study aims to fill existing knowledge gaps, enhance clinical understanding, and contribute to developing evidence-based strategies for preventing, diagnosing, and treating facial dermatoses in women.

Literature Review

Very common facial dermatoses can significantly impact the quality of life, particularly for women. The prevalence of face dermatoses has been the subject of several studies, with the findings informing treatment and prevention.

Prevalence of Facial Dermatoses

The prevalence of facial dermatoses among women

varies substantially between studies. Acne vulgaris, a persistent inflammatory condition of the pilosebaceous units, is one of the most prevalent facial dermatoses in females[5]. Approximately 12-14% of adolescents with the disorder continue to experience symptoms as adults. Melasma, which manifests as hyperpigmented spots on the face, is another common facial dermatosis in women, particularly those with Fitzpatrick skin types III-V. Up to fifty per cent of the world's women may be affected. Chronic inflammatory rosacea is more prevalent in pale-skinned individuals and affects 2% to 22% of females [6]. Seborrheic dermatitis, which causes erythematous and flaky regions, affects approximately 3-5% of the general population.

Clinical Characteristics and Patterns

Facial dermatoses in women exhibit various clinical characteristics and presentational patterns. Acne vulgaris commonly presents as comedones, papules, pustules, and nodules, whereas melasma manifests as symmetrical dark patches on the forehead, cheekbones, and upper lip [7].

Signs of rosacea include persistent facial erythema, flushing, telangiectasia, and inflammatory papules or pustules. Seborrheic dermatitis is most noticeable on the nasolabial folds, eyebrows, and scalp, where it appears as viscous, erythematous areas with yellowish scales. Contact dermatitis, perioral dermatitis, atopic dermatitis, and photo dermatoses are uncommon facial dermatoses with distinct clinical characteristics.



Figure 2: Facial dermatoses in women[8]

Associated Factors

Several socioeconomic and environmental factors have been linked to facial dermatoses in women. The hormonal fluctuations during puberty, menstruation, pregnancy, and menopause can initiate or exacerbate facial dermatoses [9]. In addition, acne vulgaris and seborrheic dermatitis can be caused or worsened by using specific cosmetic products, especially those with oily or comedogenic formulations. Sun exposure and photodamage have been linked to melanomas and other photo dermatoses. It has been suggested that cultural practices, such as traditional cosmetics or hair products, genetic predisposition, stress, and diet, may be contributors [10].

Management Strategies and Outcomes

Face dermatoses in women may be treated with topical and oral medications, surgical procedures, and behavioural modifications [11].

In severe cases of acne vulgaris, systemic retinoids may be considered; topical retinoids, benzoyl peroxide, and antibiotics are the standard first-line treatments. In addition to UV protection and topical depigmenting medications, chemical peels and laser treatments can treat melasma. Common treatments for rosacea include topical or oral antibiotics and the avoidance of inciting factors. Antifungal medications, corticosteroids, and mild skincare routines are all effective treatments for seborrheic dermatitis [12]. Nevertheless, there is some variation in treatment outcomes, and factors such as treatment duration, adverse effects, and cosmetic products all influence patient satisfaction.

Methodology

Study Design

This cross-sectional study used a clinical-epidemiological methodology to investigate female face dermatoses. Due to the cross-sectional design, the prevalence, and characteristics of face dermatoses in the study population can be captured at a specific time.

Study Population and Sampling Technique

The analysis included 500 women participants over 18 who visited dermatology clinics and hospital outpatient departments. Participants were chosen using convenience sampling, which relied on their availability and willingness to participate.

Data Collection Methods

Using clinical examinations and a standardised questionnaire, the data were compiled. Dermatologists diagnosed and classified the participants' facial dermatoses based on the findings of clinical evaluations.

Participants were asked to complete a structured questionnaire about demographic information (such as age, ethnicity, and socioeconomic status), medical history, and factors associated with facial dermatoses (such as hormonal factors, use of cosmetic products, and cultural practices).

Ethical Considerations

Throughout the investigation, ethical considerations were afforded their due importance. Institutional review boards or ethical committees offered the Study's protocol and methods their mark of approval. All women who participated in the trial gave their informed consent after receiving a thorough explanation of the Study's objectives, procedures, risks, and benefits. All data were collected, analysed, and reported on without divulging any personally identifiable information about the partici-

pants.

Results

Demographic Characteristics of the Study Population

The investigation included 500 women over 18 who sought dermatological care. The sample population comprised individuals with the following demographic characteristics: The ages of the participants ranged from 18 to 65, with the most significant age group (60%) being 25 to 40 years old. 30% of the population was Asian, 10% was of another ethnicity, and 60% was Caucasian. Forty per cent of participants were from low-income families, thirty per

cent were from middle-income families, and thirty per cent were from high-income households.

Prevalence of Facial Dermatoses

The incidence of facial dermatoses in the sample population was determined by evaluating facial dermatoses in the sample population. 40% of women (n=200) had acne vulgaris, followed by 24% of women (n=120) with melasma as the most common face dermatosis. 14 % of women (n=70) were diagnosed with rosacea, and 10 % (n=50) had seborrheic dermatitis. There were 30 cases of contact dermatitis, 20 cases of perioral dermatitis, 15 cases of atopic dermatitis, and 15 cases of photodermatoses

Table 1: Prevalence and Clinical Characteristics of Facial Dermatoses in Women

Facial Dermatoses	Prevalence (%)	Clinical Characteristics
Acne vulgaris	40	Comedones, papules, pustules, severity: mild (30%), moderate (60%), severe (10%)
Melasma	24	Epidermal type (80%), symmetrical distribution (forehead, cheeks, upper lip)
Rosacea	14	Erythematotelangiectatic (50%), papulopustular (40%), rhinophyma (10%)
Seborrheic dermatitis	10	Erythematous patches, greasy scales, distribution: nasolabial folds (80%), eyebrows (50%), scalp (30%)
Contact dermatitis	6	Variable clinical presentation depending on the allergen or irritant
Perioral dermatitis	4	Papular and pustular lesions around the mouth and nose
Atopic dermatitis	3	Pruritic, eczematous lesions
Photodermatoses	3	Variable clinical presentation depending on the specific condition

Classification and Distribution of Facial Dermatoses

60% of women with acne vulgaris exhibited moderate symptoms (n=120), followed by those with mild symptoms (n=60) and severe symptoms (n=20). Acne lesions primarily appeared on the face, particularly the cheeks and forehead. Eighty per cent of melasmatic women (n=96) had the epidermal type, while 20% had the mixed or dermal variety. Melasma patches were uniformly dispersed, appearing most frequently on the forehead, cheeks, and upper lip. The majority of women with rosacea (50%) had erythematotelangiectatic rosacea (n=35), followed by papulopustular rosacea (n=28) and, less frequently, phymatous and ophthalmic rosacea. The area most commonly afflicted by seborrheic dermatitis was the nasolabial folds (80%, n=40), followed by the eyebrows (50%) and the scalp (30%).

Different Types of Facial Dermatoses

Acne vulgaris was characterised by comedones, papules, pustules, and even nodules. Patients with severe conditions were more likely to display inflammatory lesions. The most noticeable symptom of melasma was brown hyperpigmented regions ranging in hue from light to dark brown. Wood's lamp analysis demonstrated that the epidermal type

possessed more pronounced pigmentation. Persistent facial erythema, flushing attacks, telangiectasia, and inflammatory papules or pustules characterised rosacea. In addition, skin hypertrophy and nose enlargement (rhinophyma) were observed in some individuals. Red, scaly regions distinguished seborrheic dermatitis. The most frequently reported symptoms included pruritus and moderate discomfort.

Association between Demographic Factors and Facial Dermatoses

Acne vulgaris was more prevalent in younger women. In contrast, melasma and rosacea were more prevalent in older age groups, indicating a significant correlation between age and the prevalence of facial dermatoses. Although there were disparities in prevalence between ethnic groups, neither ethnicity nor socioeconomic status demonstrated significant associations with specific facial dermatoses.

Discussion

The findings of this Study regarding the frequency and clinical characteristics of facial dermatoses in women are consistent with the literature to a substantial degree. The prevalence rates of acne vulgaris, melasma, rosacea, and seborrheic dermatitis are consistent with those reported in the medical litera-

ture. This consistency supports the generalizability of the findings and suggests that these facial dermatoses are prevalent in various female populations.

Research has revealed that these dermatoses exhibit consistent distribution patterns and clinical characteristics.

Table 2: Comparison of the Present Study's Findings with Previous Studies on Facial Dermatoses in Women

Facial Dermatoses	Acne vulgaris	Melasma	Rosacea	Seborrheic dermatitis	Contact dermatitis	Perioral dermatitis	Atopic dermatitis	Photodermatoses
Present Study (%)	40	24	14	10	6	4	3	3
[13]	38	22	16	9	5	3	4	2
[14]	42	26	12	11	7	5	2	4
[15]	35	20	15	8	4	2	3	1

Comparing the prevalence of various facial dermatoses among women, the present study's findings are consistent with those of previous research. Acne vulgaris prevalence was 40%, comparable to some earlier studies but higher than others. Studies found similar prevalence rates for melasma, rosacea, and seborrheic dermatitis, indicating that these conditions are prevalent among women. All studies discovered that the incidence of contact dermatitis, perioral dermatitis, atopic dermatitis, and photodermatoses was relatively stable. These findings highlight the need for clinical and public health initiatives that target these dermatoses, which contribute to the prevalence of facial dermatoses in women.

Interpretation of the Results

Changes in hormone levels during adolescence and early adulthood likely contribute to the increased prevalence of acne vulgaris among young women. The cumulative effects of UV exposure and the hormonal changes during pregnancy and menopause make melasma more prevalent in the elderly. Age-related physiological changes and environmental factors play a role in the aetiology of face dermatoses. The documented clinical characteristics of each dermatosis lend credence to the unique pathophysiological mechanisms underlying them and cast light on the onset and severity of each disease.

Observed Patterns or Associations

The correlation between age and the incidence of face dermatoses may be influenced by hormonal factors, increased sebum secretion, and alterations in skin barrier function. Possible causes of the disparities in incidence between races include genetics, lifestyle decisions, and photosensitivity. Even though there was no statistically significant association between socioeconomic status and disease incidence or severity in this Study, socioeconomic status may play a role in aspects such as healthcare access and treatment adherence.

Limitations of the Study

Due to several limitations, the results of this investigation should be interpreted with caution. The

Study employed a convenience sample, which could introduce selection bias and reduce the generalizability of the results to the entire population. The cross-sectional design hindered the ability to establish causal relationships and investigate the temporal characteristics of dermatoses. Thirdly, recall bias in questionnaire responses and reliance on self-reported data may compromise the accuracy and dependability of the obtained information. Because only women seeking dermatological care were included in the Study, it is possible that the prevalence and characteristics of facial dermatoses in the general population needed to be accurately reflected.

Implications for Clinical Practice and Public Health

This Study suggests significant implications for clinical practice and public health measures. The findings have important therapeutic implications as they cast light on the frequency, clinical characteristics, and risk factors associated with female facial dermatoses. This information can help dermatologists improve patient care, increase treatment success, and enhance patient satisfaction.

To devise effective strategies for prevention and education, it is crucial from a public health perspective to gain insight into the prevalence of facial dermatoses among women. Public health initiatives can encourage sun protection, excellent skincare practices, and early detection of facial dermatoses. By focusing on the cultural, social, and hormonal factors associated with facial dermatoses, disparities in disease prevalence and general skin condition can be reduced and improved among women.

Conclusion

In this clinical-epidemiological study, the prevalence, clinical features, and associated factors of female facial dermatoses were investigated. According to primary data, acne vulgaris, melasma, rosacea, and seborrheic dermatitis are more prevalent in women than in males. The study emphasises the importance of understanding these disorders because a greater understanding will lead to improved patient diagnosis, treatment, and outcomes.

Efforts to raise awareness, promote prevention, and address the problem of facial dermatoses in women are also highlighted.

This study is significant because it increases our knowledge of female facial dermatoses. Doctors will be better equipped to assist their patients if they have a greater understanding of the symptoms and signs of these conditions. These findings, which have significant implications for public health activities, emphasise the importance of education and awareness campaigns to promote healthy skin practises and early diagnosis.

Recommendation

Several prospective directions for future studies are proposed. For tracing the growth and long-term consequences of female facial dermatoses, longitudinal studies of the same group of women are essential. Research examining the effect of cultural and socioeconomic factors on the prevalence of diseases and treatment would significantly advance our understanding of these conditions. Evidence-based clinical practise could also benefit from research on the efficacy and impact of various treatment modalities on patient outcomes.

This clinical epidemiological investigation seeks to gain a deeper understanding of the prevalence, clinical characteristics, and contributing factors of female facial dermatoses. In light of these findings, it is evident that accurate diagnosis, individualised treatment strategies, and public health initiatives designed to mitigate the effects of these diseases are of the uttermost importance. Future research should focus on longitudinal studies, the effect of cultural and socioeconomic factors, and therapeutic efficacy to improve our understanding and clinical outcomes in the treatment of facial dermatoses in women.

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