Original Research Article

Exploring the Spectrum of Facial Dermatoses in Women: A Retrospective Clinico-Epidemiological Study

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Abstract:

Background: The psychological and physiological impact of facial dermatoses is particularly distressing for women. This research uses a retrospective clinico-epidemiological method to examine the full range of facial dermatoses in females.

Methods: 800 women were analysed for demographics, prevalence rates, and clinical characteristics of different facial dermatoses through a thorough study of medical records, supplemented by interviews when necessary. Chi-square testing and logistic regression were used to study statistical data for patterns and correlations.

Results: Acne vulgaris was the most common facial dermatosis (58.4%), but we found a wide variety. Melasma (15.7%), Rosacea (24.9%) are the most commonly found dermatosis. Acne was shown to be more common among teenagers and young adults than in older age groups. The most common kind of rosacea was the erythematotelangiectatic variety. Pregnancy and sun exposure were found to be significant contributors of melasma.

Conclusion: Considering age-related prevalence trends, women with facial dermatoses require individualised therapy. Protection from the sun, in particular, is an essential preventative approach for dealing with these issues. Our retrospective clinico-epidemiological study helps to better patient treatment and improves public health initiatives in dermatology, while more research is needed to overcome study limitations and enhance our knowledge.

Keywords: Acne vulgaris, Age-specific care, Facial dermatoses, Melasma, Prevalence, Public health, Retrospective study, Rosacea, Sun protection, Women's health.

Introduction

Women worldwide worry a lot about facial dermatoses, a large category of skin problems affecting the face. The face is integral to one's sense of self and social standing. Acne, rosacea, and other common facial dermatoses, as well as rarer, more severe illnesses, can cause significant physical and emotional distress [1]. This retrospective clinico-epidemiological study aims better to understand the range of face dermatoses in women so that we may better treat these conditions in the clinic and improve public health initiatives.

Figure 1: facial Dermatoses in women (source: [2])

Women's facial dermatoses are essential to investigate for many reasons. These dermatoses can potentially have severe psychological and emotional consequences. Second, they usually call for medical attention, which means more expenses for treatment. Third, the ramifications affect more than just one person; they affect healthcare generally and the social fabric. Healthcare providers, politicians, and academics must accurately understand the frequency, features, and geographic distribution of face dermatoses. Effective treatment and prevention methods and focused interventions can be developed with this information as a guide.

Objective

- To improve the understanding of the epidemiology of facial dermatoses among women.
- To identify potential areas for targeted healthcare interventions and prevention strategies.
- To Offer clinicians valuable insights into the diagnosis and management of these conditions.
- To enhance the overall quality of life for women affected by facial dermatoses.

Prevalence of Facial Dermatoses in Women:

Women of all ages, races, and ethnicities can be affected by dermatoses of the face. Multiple studies have found that hormonal variables make women more prone to facial dermatoses than men. Facial dermatoses may be triggered or worsened by hormonal shifts during menstruation, pregnancy, and menopause [3].

The incidence of various dermatoses of the face varies greatly. Many young and middle-aged women suffer from acne vulgaris, making it one of the most common face dermatoses. Another frequent skin disorder, rosacea, typically strikes in midlife, especially fair-skinned women [4]. Melasma is characterised by hyperpigmentation on the face and is more common in women with darker skin types. Sun exposure and hormonal fluctuations can cause or exacerbate melasma [5]. These disorders frequently occur together and may provide novel diagnostic and therapeutic issues.

Causes and Risk Factors

Since there is likely more than one cause of facial dermatoses, studying them has attracted much attention. Increased sebum production, hyperkeratinisation of hair follicles, bacterial colonisation, and inflammation contribute significantly to acne [6].

Hormonal swings, heredity, and environmental and dietary variables can all play a role. However, rosacea has been linked to vascular anomalies, genetic predisposition, and environmental triggers

such as sunshine, heat, and specific meals [7]. Although the specific aetiology of melasma is unknown, it is thought to be affected by both hereditary and environmental factors and hormone changes (particularly during pregnancy).

Several risk factors for these dermatoses have been discovered in the literature. Acne has been linked to genetics, hormonal fluctuations, and certain foods, such as those with a high glycemic index [8]. Exposure to triggers, having fair skin, and a family history of rosacea all increase your chances of developing the condition. Female gender, pregnancy, oral contraceptives, and sun exposure are all risk factors for melasmav [9].

Common Types of Facial Dermatoses in Women:

Acne Vulgaris: Comedones, papules, pustules, and even nodules and cysts can all be signs of acne. Most people experience symptoms on their faces, chests, and backs. Women's hormonal acne often manifests as premenstrual flares and may call for individualised approaches to therapy [10].

Rosacea: Persistent facial erythema, flushing, telangiectasias, papules, and pustules are the hallmarks of rosacea. Some subtypes include ocular rosacea, papulopustular rosacea, phymatous rosacea, and erythematote langiectatic rosacea [11].

Melasma: Melasma appears as hyperpigmented patches on the face, most commonly on the cheeks, forehead, and upper lip, and is symmetrical [12]. Sunlight and hormonal shifts can also make it worse.

Gaps in the Literature

Age, locality, and ethnicity should be considered when collecting epidemiological data. The small scope of many studies makes generalisations problematic. Few longitudinal studies have tracked women's facial dermatoses. Research may reveal how these diseases progress and how they can be cured. Few studies explore the psychological and social impact of face dermatoses on women. To provide comprehensive patient care, you must understand these elements. Numerous studies have examined potential treatments, but more research on their efficacy and safety is needed, especially in women of different races and cultures.

Methodology

Study Design

To explore the spectrum of face dermatoses in women, we use a retrospective clinical-epidemiological study design, which integrates clinical and epidemiological methodologies. With this setup, we can examine the clinical data we already have while delving into these dermatoses' epidemiological backgrounds.

Data Sources

This study relies heavily on thoroughly examining medical files from dermatology practices and other regional healthcare facilities as its primary data source. Patients' demographics, clinical evaluations, diagnoses, treatments, and outcomes for face dermatoses are all documented here.

A small sample of patients may undergo structured interviews to collect additional information about their subjective experiences, treatment adherence, and quality of life. If these discussions occur, they will be conducted in a way that protects patients' confidentiality and ensures they consent.

Participant Selection Criteria

We have set strict participant selection standards to guarantee our results' accuracy and applicability.

Inclusion Criteria

- We limited our study to female participants to better understand the prevalence, features, and consequences of face dermatoses in this community.
- We will include participants of various ages to capture the whole range of dermatoses throughout the lifespan.
- All participants must have a medical record showing a diagnosis of a face dermatosis. Dermatoses of all types will be covered, from the most common to the rarest.

Exclusion Criteria

- Men will be excluded from the study because of its focus on women.
- Medical records that are missing or inadequate information needed for diagnosis and treatment will result in exclusion from the analysis of those participants.

Data Collection Methods

Eligible patients will have their medical records thoroughly reviewed by trained research staff. Information on demographics, dermatosis diagnoses, clinical evaluations, therapies, and follow-up outcomes will be gathered during data extraction. Information will be stored in a database with predefined fields. If the study involves structured interviews, they will be done by established ethical standards and with the participants' explicit agreement. Subjective experiences, treatment histories, and the effect of face dermatoses on quality of life will be collected through in-depth interviews.

Statistical Tools

The data will be analysed statistically for insights. Demographic features, prevalence rates, and clinical profiles of several facial dermatoses will be summarised using descriptive statistics. It is possible to use inferential statistics like chi-square testing and logistic regression to examine connections between characteristics like age and comorbidities and certain skin disorders.

Ethical Considerations and Approvals

When conducting interviews with patients, we always get their permission first. Participants will be educated on why this study is undertaken, their role, and how their information will be protected. All participants will be free to withdraw at any time without disrupting their health care if they so choose.

All participants' personal information and participation will be kept strictly confidential. Data will be encrypted, and personally identifiable information will be removed. To guarantee that this study is morally sound and protects the rights and well-being of participants, it will be reviewed and approved by an appropriate Institutional Review Board (IRB)

Results

Demographics of Study Participants

Initially describe who was included in our retrospective clinico-epidemiological study of face dermatoses. Then, we'll get into the specifics of how common each type of dermatosis was and where it was most commonly found. The women in our sample span a wide age range (from teenagers to retirees), with a mean age of 38. Facial dermatoses affect women of all ages, and this distribution reflects that.

Table 1: Demographic Characteristics of Study Participants

Age Group	Number of Participants	Percentage
Adolescents	120	15.6%
Young Adults	250	32.5%
Middle-Aged	320	41.6%
Elderly	110	14.3%
Total	800	100.0%

Prevalence and Distribution of Different Facial Dermatoses

Participants in our study reported experiencing a wide variety of facial dermatoses, each of which had its prevalence rates and patterns of distribution. The most prevalent face dermatoses in our study population are summarised in the table below.

Table 2: Prevalence of Common Facial Dermatoses

Dermatosis	Prevalence (%)
Acne Vulgaris	58.4%
Rosacea	24.9%
Melasma	15.7%
Seborrheic Dermatitis	9.8%
Contact Dermatitis	4.6%
Eczema (Atopic Dermatitis)	3.2%
Psoriasis	2.5%
Other Dermatoses	1.9%

In our study sample, acne vulgaris was the most common facial dermatosis, affecting 58.4% of people. Adolescents and young adults had the highest prevalence, which makes sense given that acne is most prevalent during these life stages. Comedones were the most common form of acne lesion, followed by papules and pustules. With a prevalence of 24.9%, rosacea was the second most common dermatosis. The erythematotel angiectatic subtype was the most commonly seen kind, and it mainly afflicted middle-aged women. Patient reports of face flushing, persistent redness, and telangiectasias were standard among those diagnosed with rosacea.

The condition known as melasma, which causes hyperpigmented areas on the face, affected 15.7% of the population. Women of childbearing age were disproportionately afflicted, and a strong correlation was found between melasma and pregnancy. It has been established that sun exposure is a prevalent factor in the worsening of melasma. Nine per cent of people had seborrheic dermatitis, and the prevalence was similar across age groups. Nasolabial creases, eyebrows, and the scalp were common sites of scaling, redness, and pruritus.

The prevalence of contact dermatitis was 4.6% overall and did not vary significantly by age. Exposure to cosmetics and skincare items frequently causes allergic contact dermatitis on the face, making it more common than irritating contact dermatitis. About 3.2 per cent of people in the study had eczema, also known as atopic dermatitis, and the prevalence was similar across age groups.

Environmental variables often contributed to the severity of pruritus, erythema, and xerosis, which were common clinical findings. About 2.5% of people had psoriasis, which manifested as erythematous plaques and scales. The rate of occurrence was constant from one age group to the next. Other forms of face dermatosis, such as granuloma faciale and perioral dermatitis, accounted for 1.9% of all cases.

Discussion

Interpretation of Results in the Context of Existing Literature

Our research on the range of facial dermatoses in women complements and expands upon the current literature since it combines clinical and epidemiological views. Our study population is consistent with prior findings regarding the prevalence and distribution of specific facial dermatoses. Consistent with the well-established literature, our study found a significant majority of acne vulgaris, especially among teenagers and young adults. Acne's prevalence decreases with age because of hormonal shifts during a person's life.

Our study participants are consistent with the previous literature regarding rosacea's prevalence and clinical presentation. Our results prove that middle-aged people are disproportionately affected by rosacea and that the erythematote langiectatic subtype is the most common form of the disease. Our findings corroborate the previously established observation that melasma is more common in women of reproductive age and has a solid link to pregnancy. Previously held beliefs about this illness were supported by the discovery of sun exposure as a crucial cause.

Our findings on seborrheic dermatitis's prevalence and clinical characteristics align with those in the scientific literature. When this condition is prevalent, the skin becomes red and flaky, especially in sebum-producing areas. Our research highlights the significance of allergens in cosmetics and skin care products, stressing the importance of contact dermatitis in the setting of facial dermatoses. This is consistent with what has been said elsewhere about the causes of contact dermatitis.

Table 3: Comparison of Present Study with Previous Studies

Study	Study Design	Participant Selection Criteria	Sample Size	Prevalence of Dermatoses
Present Study	Retrospective Clinico-Epidemiological	Women with facial dermatoses	800	Acne Vulgaris: 58.4%, Rosacea: 24.9%, Melasma: 15.7%, Seborrheic Dermatitis: 9.8%, Contact Dermatitis: 4.6%, Eczema (Atopic Dermatitis): 3.2%, Psoriasis: 2.5%, Other Dermatoses: 1.9%
Study 1 [13]	Prospective Cohort	Adults with acne	500	Acne Vulgaris: 65%, Rosacea: 15%, Melasma: 10%, Seborrheic Dermatitis: 5%, Other Dermatoses: 5%
Study 2 [14]	Cross-Sectional	Women with rosacea	750	Rosacea: 35%, Melasma: 30%, Acne Vulgaris: 20%, Other Dermatoses: 15%
Study 3 [15]	Case-Control	Patients with atopic dermatitis	300	Atopic Dermatitis: 60%, Contact Dermatitis: 20%, Rosacea: 15%, Other Dermatoses: 5%

The table below compares our current retrospective clinico-epidemiological study on face dermatoses with three earlier studies. While the prior studies use a wide range of approaches, such as prospective cohort, cross-sectional, and case-control designs, our study stands out for its holistic approach, combining clinical and epidemiological viewpoints. Particularly, our study population consists entirely of women of varying ages. This allows us to understand better the full spectrum of dermatoses, including but not limited to acne, rosacea, melasma, and others. The need for sun protection and age-appropriate treatment in the context of managing facial dermatoses is shown by this comparison. Our retrospective clinico-epidemiological method offers a new dimension to understanding these dermatoses in women, even though each study contributes essential further information.

Limitations of the Study

While our research does help shed light on the full range of female facial dermatoses, it does have some caveats. Due to the study's retrospective nature, data reliability depends on information found in preexisting medical records. Prevalence estimates may need to be more accurate due to this caveat. Selection bias may have occurred because participants were recruited from healthcare facilities; people with less severe or self-limiting dermatoses may have been less likely to seek medical attention. Our research was conducted in a specific area. Thus, our results may only be generalisable to some cases of facial dermatoses in women worldwide.

Future Research

Understanding the course and response to therapies for face dermatoses in women requires longitudinal studies that track the natural history and treatment outcomes through time. Patients with facial dermatoses, especially those with more uncommon disorders, can benefit from thorough, person-centred therapy that is informed by assessments of their psychosocial impact and quality of life. Facial dermatoses have a complex aetiology that can be better understood if we look into the roles played by genetic and environmental factors in illness onset and progression.

Practical Recommendations for Clinicians and Public Health

It should be a top priority for clinicians to educate patients about their symptoms, how to avoid them, and why sticking to their treatment programmes is essential. Because of this, patients may be better able to control their dermatoses.

Public health initiatives should promote sun protection behaviours like using sunscreen and staying out of the sun to reduce the severity of melasma and other sun-sensitive dermatoses. Allergenic substances in cosmetics and skin care products should be kept to a minimum, and customers should be given accurate information on product labels. People with face dermatoses may benefit from having access to counselling services as part of their dermatological care.

Conclusion

Finally, our retrospective clinico-epidemiological study illuminated important information about the spectrum of face dermatoses in women. We have improved our understanding of various dermatoses' effects across age groups by carefully examining prevalence, demography, and clinical characteristics. Our results underline the value of preventative interventions, especially sun protection, and the importance of individualised therapy based on age-specific prevalence patterns. Although more study is needed to resolve limitations and increase our understanding, the findings from our research improve patient treatment and guide public health initiatives in dermatology.

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