Огляд літератури

Contact and atopic eyelid dermatitis: Differential diagnosis and treatment

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Контактний та атопічний дерматит повік: диференціальна діагностика та лікування

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Abstract

The aim of this study was to analyse the clinical features and treatment approaches for allergic conditions of the eyelids and periocular area, including contact and atopic dermatitis. The research was based on a comprehensive review of 45 recent publications from the last five years retrieved from PubMed, Scopus, Google Scholar, and the Cochrane Library, using bibliographic and bibliosemantic methods. Current therapeutic strategies are discussed, including topical corticosteroids, calcineurin inhibitors, systemic antihistamines, and advanced treatments such as biological agents (e.g., dupilumab) and allergen-specific immunotherapy. Special attention is paid to skin barrier restoration with emollients and the importance of allergen avoidance in long-term disease control. The diagnostic challenge of differentiating allergic contact dermatitis, atopic dermatitis, and irritant dermatitis of the eyelids is highlighted. Eyelid involvement may represent a manifestation of systemic atopic disease or result from hypersensitivity to external agents such as cosmetics, ophthalmic products, metals, fragrances, and preservatives. Patch testing remains the gold standard for identifying contact allergens, while atopy testing and serum IgE assessment have limited specificity. Overall, eyelid dermatitis requires an individualised, multidisciplinary approach combining modern pharmacological therapy with preventive strategies to improve clinical outcomes..

Keywords: *periocular inflammation, allergic conjunctivitis, patch testing, calcineurin inhibitors, glucocorticosteroids, allergen sensitisation.*

Резюме

Метою цього дослідження було проаналізувати клінічні особливості та підходи до лікування алергічних станів повік та періокулярної області, включаючи контактний та атопічний дерматит. Дослідження базувалося на комплексному огляді 45 нещодавніх публікацій за останні п'ять років, отриманих з PubMed, Scopus, Google Scholar та Cochrane Library, з використанням бібліографічних та бібліосемантичних методів. Обговорюються сучасні терапевтичні стратегії, включаючи місцеві кортикостероїди, інгібітори кальциневрину, системні антигістамінні препарати та передові методи лікування, такі як біологічні агенти (наприклад, дупілумаб) та алерген-специфічна імунотерапія. Особлива увага

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приділяється відновленню шкірного бар'єру за допомогою пом'якшувальних засобів та важливості уникнення алергенів у довгостроковому контролі захворювання. Виділено діагностичну проблему диференціації алергічного контактного дерматиту, атопічного дерматиту та подразнюючого дерматиту повік. Ураження повік може бути проявом системного атопічного захворювання або бути результатом гіперчутливості до зовнішніх агентів, таких як косметика, офтальмологічні продукти, метали, ароматизатори та консерванти. Патч-тест залишається золотим стандартом для виявлення контактних алергенів, тоді як тестування на атопію та оцінка сироваткового IgE мають обмежену специфічність. Загалом, дерматит повік вимагає індивідуального, міждисциплінарного підходу, що поєднує сучасну фармакологічну терапію з профілактичними стратегіями для покращення клінічних результатів.

Ключові слова: *періокулярне запалення, алергічний кон'юнктивіт, плацентне тестування, інгібітори кальциневрину, глюкокортикостероїди, сенсибілізація до алергенів.*

Introduction

Allergic conditions such as contact and atopic dermatitis are common inflammatory skin disorders with increasing clinical relevance. These conditions warrant particular attention when the allergic process involves the periocular region and eyelids. The growing incidence of periocular allergic conditions and the complexity of their differential diagnosis continue to present important clinical challenges.

E. Beltrami et al. [1] described itching as one of the frequent symptoms observed in allergic disorders affecting the skin and periocular region. In their study, ocular itch was reported in 29.5% of ophthalmic patients and was noted more often in women. Itching is frequently associated with allergic conditions, although similar manifestations can also occur in other inflammatory diseases affecting the periocular region. Such conditions include allergic conjunctivitis, contact dermatitis, atopic dermatitis, and xerosis. Comparable symptoms may also be seen in non-allergic disorders, including blepharitis, seborrheic dermatitis of the periorbital area, rosacea, lichen simplex, and psoriasis.

In a review of allergic skin conditions of the eyelids, A. Hine et al. [2] noted that in addition to itching, symptoms may include tearing, erythema, and swelling of the affected skin. The review noted that contact and atopic dermatitis of the eyelids are reported more frequently in women. This distribution may partly reflect greater exposure to cosmetic and skincare products containing potential allergens. Researchers concluded that correct differentiation and appropriate care require not only understanding the symptoms but also detailed knowledge of the aetiological factors behind the allergic process.

According to J. Pyzia et al. [3], blepharitis is often associated with ocular irritation and inflammatory changes affecting the eyelids and ocular surface. Additionally, 42-81% of patients with blepharitis are affected by Demodex mites, which have been associated with inflammation and microbial colonisation. K. Szewczyk-Golec et al. [4] reported that exposure to chemical irritants may affect skin barrier function and inflammatory responses, while S. Doan et al. [5] described the frequent coexistence of eyelid irritation, tearing, and dry eye symptoms in inflammatory ophthalmological conditions. The authors emphasised that contact between irritants and the ocular surface or periocular skin may contribute to symptoms such as tearing and dry eye syndrome.

According to J. Sroka-Tomaszewska and M. Trzeciak [6], atopic dermatitis affects up to 20% of children and adolescents and is associated with immune dysregulation and allergen sensitisation. Moreover, the condition develops in 50-60% of cases during the first year of life, and in 90% of cases within the first five years. The authors also highlighted the role of genetic and epigenetic factors in the development of atopic and contact allergic diseases in both childhood and adulthood.

B. Nedoszytko et al. [7] similarly asserted that genetic predisposition is a key factor in allergic skin conditions, supporting a hereditary component in disease development. Despite the general similarity in treatment approaches for allergic conditions, the researchers pointed out persistent issues in treatment selection due to misinterpretation of symptoms and incorrect differential diagnoses. The authors also noted the limited understanding of the molecular mechanisms behind the development of atopic dermatitis.

M. Sandler [8] highlighted the significant role of chemical agents such as metals, fragrances, preservatives, medicines, and even materials used in jewellery. Given the above, key questions regarding proper differential diagnosis, effective treatment, and understanding of the causal relationships between aetiology, pathogenesis, and disease development remain unresolved. This review integrates dermatological and ophthalmological perspectives on periocular allergic disease and summarises recent evidence regarding differential diagnosis and contemporary treatment approaches.

The aim of this review was to characterise the clinical features, differential diagnosis, and treatment approaches for contact and atopic eyelid dermatitis. The objectives included: describing the clinical features of allergic conditions; characterising the aetiological factors and their roles in disease development; and presenting data on the challenges of differential diagnosis and treatment of atopic and contact dermatitis from both dermatological and ophthalmological perspectives.

Materials and methods

To achieve the study aim, a systematic literature search and critical analysis of contemporary scientific publications were conducted using PubMed, Scopus, Google Scholar, and the Cochrane Library. Sources used for data collection and systematisation included peer-reviewed medical journal articles, monographs, clinical guidelines, and recommendations issued by international and national dermatological and ophthalmological associations. In total, 80 sources were analysed, of which 45 publications were selected for final review based on their quality, thematic relevance, and recency.

Inclusion criteria for the scientific literature analysis were: availability of clinical or experimental studies describing the pathogenesis, diagnosis, and treatment of contact and atopic eyelid dermatitis; publications in peer-reviewed journals; studies containing statistical analysis of treatment efficacy; use of clearly defined search keywords; and modern medical literature from the past five years reflecting up-to-date approaches to the diagnosis, pharmacotherapy, and immunotherapy of allergic eyelid dermatitis. Exclusion criteria included: articles without full-text access; publications lacking clear methodological frameworks; and review papers that did not involve critical source analysis. All retrieved data were synthesised and analysed with attention to differential diagnosis and contemporary treatment approaches for contact and atopic eyelid dermatitis. The selected studies were analysed with attention to treatment approaches, safety profiles, and differential diagnostic features relevant to allergic eyelid dermatitis.

The main search keywords included: "allergic eyelid dermatitis", "contact eyelid dermatitis", "atopic eyelid dermatitis", "periorbital dermatitis", "allergic conjunctivitis", "eyelid eczema", "contact sensitisation", "cosmetic allergens", "skin patch testing", "irritant contact dermatitis", "skin immune dysregulation", "topical glucocorticosteroids", "calcineurin inhibitors", "antihistamines", "allergen-specific immunotherapy", "skin barrier function", "emollients", and "ocular complications of dermatitis". In addition, selected classical publications relevant to the pathogenesis and clinical presentation of these disorders were also considered.

Results and discussion

Differential diagnosis of contact and atopic eyelid dermatitis and their distinction from other diseases

Contact and atopic dermatitis of the eyelids share similar clinical manifestations, which often complicates their differential diagnosis. However, a number of studies have demonstrated distinguishing features that may assist in establishing the correct diagnosis and selecting the optimal therapeutic strategy.

In their study, A. Darnall et al. [9] described a case involving a young female patient presenting with signs of an allergic reaction in the periorbital area. Based on clinical features and a history of recent use of new cosmetic products, a diagnosis of allergic contact dermatitis was initially made. The patient was advised to discontinue the use of the offending cosmetics and was prescribed topical corticosteroids. Despite adherence to these recommendations, her condition worsened. The symptoms persisted, and new features emerged, including facial erythema, proximal muscle weakness, and elevated serum levels of muscle enzymes. Further investigations, including skin and muscle biopsies, led to a diagnosis of dermatomyositis (Table 1).

The symptoms of dermatomyositis can mimic other dermatological conditions, including eyelid contact dermatitis, potentially leading to misdiagnosis and delays in initiating appropriate therapy. Early and accurate diagnosis of dermatomyositis is crucial to prevent severe complications, such as progressive muscle weakness and systemic involvement. Dermatomyositis and allergic eyelid dermatitis may be easily confused due to overlapping ophthalmological symptoms. In this case, the patient presented with marked hyperaemia of the ocular mucosa and surrounding skin, which could initially suggest an allergic origin. How-

Table 1. Differential diagnosis of contact dermatitis of the eyelids and dermatomyositis

Comparison criterion	Contact dermatitis of the eyelids	Dermatomyositis
Erythema (redness)	Pronounced, well-demarcated, especially at the site of contact	Symmetrical erythema on the eyelids (“heliotrope rash”)
Oedema	Moderate to severe, localised	Moderate, often with marked periorbital puffiness
Itching or burning	Intense, often accompanied by discomfort	Rarely intense itching; more often a sensation of tightness
Skin desquamation	Frequently present after the acute phase	May be present, especially in areas of erythema
Association with trigger	Contact with allergen or irritant	Autoimmune origin, unrelated to allergens
Systemic manifestations	Absent or minimal	Common (fatigue, muscle pain, dysphagia)
Associated lesions	Limited to eyelid skin and occasionally adjacent areas	Skin involvement on the face, joints, hands (“Gottron’s papules”), and muscle weakness

Source: compiled by the author based on [9, 10].

ever, through detailed differential diagnosis, dermatomyositis was ultimately identified.

Y. Otsuka and M. Kishida [10] described infectious mononucleosis presenting with bilateral eyelid inflammation that initially mimicked an allergic periocular condition. Bilateral upper eyelid erythema was noted, initially resembling an allergic reaction; however, accompanying symptoms included tonsillitis and cervical lymphadenopathy. Leukocytosis with atypical lymphocytes and elevated enzyme levels suggested a systemic inflammatory process. Nevertheless, serological testing for Epstein-Barr virus confirmed a diagnosis of infectious mononucleosis. Hoagland's sign, characterised by bilateral upper eyelid inflammation, is considered an early marker of infectious mononucleosis and, according to the authors, has been reported in a proportion of patients with infectious mononucleosis. This sign often precedes other clinical features such as lymphadenopathy, tonsillitis, and splenomegaly. Eyelid swelling typically resolves spontaneously within a week without specific treatment. This case differs markedly from the previous one in that the cause of eyelid involvement in infectious mononucleosis is immune-mediated and viral in nature. In contrast, contact and atopic dermatitis are fundamentally allergic conditions unrelated to infection. Accordingly, the diseases differ in their clinical course and require different treatment approaches. However, they share overlapping symptoms, such as periorbital skin discolouration.

Similarly, H. Nakagawa et al. [11] described a comparable clinical case involving a patient with infectious mononucleosis who presented with petechiae on the eyelids and palatal mucosa. Classical symptoms included fever, pharyngitis, and lymphadenopathy. However, the clinical presentation was atypical, particularly concerning eyelid and oral cavity involvement, complicating the diagnostic process. In this case, the palpebral petechial rash could be misinterpreted as a manifestation of bacterial infection or other viral illnesses. While petechiae in the eyelid region may raise concerns about systemic disorders, the authors highlighted the importance of considering the variable manifestations of infectious mononucleosis during differential diagnosis when such signs are observed. Thus, infectious mononucleosis should be considered in the differential diagnosis of periocular inflammatory conditions.

M.L. Conti et al. [12] and E. Borzova et al. [13], independently of one another, described the clinical manifestations of eyelid involvement in sarcoidosis and eyelid dermatitis, emphasising the heterogeneity of periocular inflammatory presentations. Eyelid lesions in sarcoidosis may include inflammation, granuloma formation, erythema, and other periocular changes. Although sarcoidosis and allergic eyelid diseases differ in etiology and pathogenesis, they may exhibit some overlapping clinical features, including periorbital erythema and eyelid swelling (Table 2). Accurate diagnosis of these conditions is essential, as it directly influences therapeutic decisions and prognosis.

In their work, M. Turkiewicz et al. [14] described the causes, clinical manifestations, and treatment approaches for allergic contact dermatitis of the eyelids, emphasising the role of allergens such as cosmetics, medications, and heavy metals, as well as the importance of cooperation between dermatologists and ophthalmologists. The study also highlighted diagnostic difficulties and the role of allergen

Table 2. Diagnostic differences between allergic dermatitis of the eyelids and sarcoidosis

Criterion	Allergic dermatitis of the eyelids	Sarcoidosis of the eyelids
Etiology	Contact with allergens (cosmetics, medications, plants, chemicals)	Unclear, likely immune imbalance and genetic predisposition
Development mechanism	Type IV hypersensitivity (common reaction)	Granulomatous inflammation of unknown etiology
Onset of symptoms	Acute or subacute (within hours/days after contact with allergen)	Slow, gradual development (weeks to months)
Localisation	Both eyelids, mainly the upper one, symmetrical involvement	Any area of the eyelids, often with other skin or organ damage
Nature of lesions	Erythema, swelling, scaling, excoriations	Firm, painless nodules or plaques, possible blistering in lacrimal glands
Itching	Pronounced	Absent or minimal
Pain	Absent or mild	Absent
Additional systemic manifestations	Absent or minimal (local symptoms)	Possible sarcoidosis of other organs (lungs, lymph nodes, eyes)
Diagnostic methods	History, clinical manifestations, allergy test, elimination test	Biopsy (granulomas without necrosis), chest X-ray, angiotensin-converting enzyme level
Treatment	Elimination of allergen, topical corticosteroids, antihistamines	Corticosteroids, immunosuppressive therapy for systemic involvement

Source: compiled by the author based on [11-13].

avoidance combined with topical anti-inflammatory treatment.

A similar study by G. Rubegni et al. [15] analysed clinical data collected over a 25-year period at a single medical centre. The authors identified common allergens associated with eyelid dermatitis, particularly preservatives, dyes, and fragrances used in cosmetic products, and described long-term epidemiological trends of the condition.

D.A. Mouinga Abayi and E. Mvé Mengome [16] investigated allergic reactions associated with cosmetic products and noted that eyelid involvement often presented as contact dermatitis related to delayed hypersensitivity reactions. The authors recommended discontinuation of the suspected cosmetic product together with patch testing and topical anti-inflammatory therapy to reduce inflammatory symptoms.

Z. Baysal and H.H. Gobeka [17] described a distinct case of periocular inflammatory symptoms in a patient who developed eyelid dermatitis following the first dose of the Pfizer-BioNTech COVID-19 vaccine. In the reported case, the patient developed eyelid dermatitis a few days after vaccination. The authors discussed potential mechanisms, including individual sensitivity or an immune response to the vaccine. Such reactions were rare and generally mild. The case underscored the importance of careful clinical evaluation of periocular reactions occurring after vaccination.

In a study by E.M. Warshaw et al. [18], a retrospective analysis was conducted using data from the North American Contact Dermatitis Group from 1994 to 2016 to assess the prevalence and aetiology of eyelid dermatitis, with a focus on patch testing for allergic conditions. The results indicated that eyelid dermatitis was common among patients with contact, atopic, and allergic dermatitis. The most frequent allergens included nickel, fragrances, and preservatives. The study emphasised the importance of patch testing in the accurate diagnosis of eyelid dermatitis. Moreover, identifying specific allergens and creating individualised recommendations for avoidance were key to achieving effective treatment outcomes.

Eyelid dermatitis is a common pathological condition that can be triggered by various factors, including severe reactions to cosmetic and skincare products as well as other external irritants. Patch testing remains the standard diagnostic method for contact dermatitis, helping to identify specific allergens responsible for the reaction – particularly in allergic eyelid dermatitis. The findings highlighted the diagnostic complexity of allergic manifestations in the periocular region, which complicated both diagnosis and treatment planning.

In their study, D. Koumaki et al. [19] examined potential allergens causing eyelid dermatitis in patients in Greece. Unlike previous studies, they conducted patch testing not only for diagnostic purposes but also to expand the allergen dataset and identify correlations between allergen exposure and geographical location. The findings were useful for ophthalmologists and dermatologists in Greece and beyond in developing more effective prevention and treatment strategies for atopic eyelid dermatitis [20-22]. In addition, the researchers noted that cosmetic preservatives – even at minimal concentrations – could provoke allergic reactions.

The physiological properties of the tear film, conjunctiva, and skin around the eyes include numerous protective components that shield the eye from external irritants and infections. Disruption of their composition or function can lead to the development of allergic diseases and dry eye syndrome, which often accompanies ophthalmological conditions. The identification of specific biomarkers in tear fluid or ocular mucosa could contribute to the early diagnosis and monitoring of these conditions.

In their work, T. Suárez-Cortés et al. [23] examined several tear fluid biomarkers that may be used for the diagnosis and severity assessment of ocular allergies and dry eye syndrome. They analysed various molecules – such as cytokines, chemokines, and proteins – that change in response to these pathological conditions. The authors stressed that identifying such biomarkers could, in the future, improve the understanding of the pathophysiology of allergic eye diseases and periocular skin conditions, as well as support the development of new therapeutic approaches. Further research into tear biomarkers may improve the diagnosis and monitoring of ocular allergic diseases.

Eyelid oedema may accompany a range of ophthalmological and systemic conditions, including infections, inflammatory diseases, adverse drug reactions, and neoplastic processes. Careful clinical evaluation is therefore essential for accurate diagnosis and treatment selection. In this context, N. Wolkow et al. [24] described a case involving a 61-year-old man with marked oedema of the periorbital region and face. The clinical presentation initially raised concern for an inflammatory or allergic condition; however, further diagnostic assessment demonstrated the importance of broad differential diagnosis in patients presenting with periocular swelling. The authors emphasised that periorbital oedema may occur in various systemic and inflammatory disorders and requires careful clinical interpretation. Comparative diagnostic features are presented in Table 3.

Periorbital xanthogranuloma is a rare non-neoplastic condition frequently associated with adult-onset asthma. It presents with lesions affecting the eyelids and periorbital region, which may lead to functional, structural, and aesthetic complications. Treatment of this condition includes both medical and surgical approaches. For instance, in a case study described by M.C. Santos et al. [25], an adult patient with asthma and pathological changes in the periorbital region required surgical intervention due to progressive periocular lesions. The importance of an individualised approach and multidisciplinary collaboration was emphasised for achieving optimal treatment outcomes. This case demonstrated that surgical intervention could be an effective treatment for eyelid involvement in periorbital xanthogranuloma, particularly when conservative therapy

Table 3. Comparative characteristics of allergic dermatitis of the eyelids and angioneurotic edema

Criterion	Allergic dermatitis of the eyelids	Angioneurotic edema (Quincke's edema)
Etiology	Contact with allergen (cosmetics, medications, plants, chemicals)	Type I hypersensitivity reactions (foods, medications)
Development mechanism	Type IV hypersensitivity reaction (common immune response)	Type I hypersensitivity reaction (histamine release, increased vascular permeability)
Onset of symptoms	Gradual (several hours or days after contact with allergen)	Sudden, within minutes or hours
Localisation	Both eyelids, mainly the upper one, symmetrical involvement	Any area of the face, including eyelids, lips, tongue, asymmetrical syndrome
Nature of lesions	Localised, erythematous (redness), with skin scaling	Deep, pale or bluish, firm, without redness
Itching	Pronounced, possible burning sensation	Absent or minimal
Pain	None or mild	Absent

Source: compiled by the author based on [22-24].

was ineffective. However, further research is needed to determine the best treatment strategies for this rare condition.

Contact dermatitis of the eyelids is typically caused by a delayed-type allergic reaction triggered by contact with external agents such as cosmetics, eye drops, skincare products, or even the materials used in contact lenses [26, 27]. Common clinical signs include erythema, swelling, itching, scaling, and sometimes vesicular eruptions. Prolonged exposure to allergens may lead to chronic inflammation, skin thickening, and lichenification. According to current research [28, 29], patch testing may help identify contact allergens associated with eyelid dermatitis. Atopic dermatitis of the eyelids is a manifestation of atopic dermatitis in general and is characterised by a chronic, relapsing course. It is associated with impaired skin barrier function and immune system hyperreactivity. Patients often have comorbid allergic conditions (e.g., asthma, allergic rhinitis). Primary symptoms include severe skin dryness, erythema, fissures, itching, and hyperpigmentation around the eyes, especially during prolonged inflammation [30].

Management of allergic diseases of the eyes and periorbital area

Treatment of allergic diseases of the eyes and periorbital area should focus on reducing inflammation and restoring the skin barrier. Topical corticosteroids or calcineurin inhibitors are commonly used together with emollients to reduce irritation and support skin hydration [31]. Additionally, antihistamines help relieve itching. In severe cases, systemic treatment, including monoclonal antibodies (e.g., dupilumab), may be considered.

The primary principle of treatment is allergen elimination. According to several studies, many cases of eyelid dermatitis have been associated with the use of cosmetics, ocular medications (especially eye drops), and environmental allergens such as pollen, dust, and animal dander [32, 33]. Avoiding allergen exposure is key to achieving remission.

A. Leonardi et al. [34] described ocular and periorbital allergic diseases as seasonal, with allergic conjunctivitis being the most notable example. Treatment of these conditions involves anti-inflammatory and anti-allergic medications, applicable to both conjunctivitis and eyelid dermatitis. The authors reported the use of antihistamines such as bilastine, cetirizine, emedastine, levocabastine, and dual-action agents like alcaftadine, azelastine, epinastine, and ketotifen.

Topical glucocorticoids remain an important component of symptomatic treatment during flare-ups. Low-potency formulations (e.g., hydrocortisone 0.5-1%) are recommended for short-term use (up to 5-7 days) on the eyelid area [35]. A study by A. Wollenberg et al. [36] reported that short courses of topical steroids may reduce inflammation and itching in most patients. However, prolonged steroid use on the eyelids may increase the risk of glaucoma, cataracts, and skin atrophy, necessitating alternative approaches.

Calcineurin inhibitors, such as tacrolimus and pimecrolimus, are considered effective and safe alternatives to steroids, especially in chronic or recurrent cases. Topical tacrolimus has been used in the management of periocular dermatitis, particularly when prolonged corticosteroid use is undesirable. According to A. Salava et al. [37], topical tacrolimus treatment was generally well tolerated during long-term follow-up in pediatric patients with atopic dermatitis. Oral second-generation antihistamines are commonly used to relieve itching and ocular discomfort in patients with allergic periocular conditions [34]. When eyelid dermatitis occurs together with allergic conjunctivitis, ophthalmic antihistamines such as olopatadine, ketotifen, and azelastine can be prescribed. Skin hydration should also be maintained, particularly during anti-inflammatory treatment. Hypoallergenic emollients free of fragrances and preservatives are often recommended to support the skin barrier and reduce irritation [38].

In severe or persistent cases, systemic therapy may be considered under specialist supervision. Recent studies have also explored systemic immunomodulatory and biologic therapies for severe atopic dermatitis [39]. Allergen-specific immunotherapy has long been used in the treatment of IgE-mediated allergic diseases such as allergic rhinitis, allergic conjunctivitis, and bronchial asthma. Recent studies have also explored its potential role as an adjunctive therapeutic approach in selected patients with atopic dermatitis and confirmed allergen sensitisation [40, 41]. Current evidence suggests that allergen immunotherapy may improve disease severity and quality of life in some patients; however, its effectiveness in eyelid-localised atopic dermatitis remains insufficiently established and requires further investigation.

The reviewed studies demonstrate that periocular inflammatory disorders often share overlapping clinical manifestations despite substantial differences in etiology and pathogenesis. This creates important diagnostic challenges requiring combined dermatological and ophthalmological assessment.

Conclusions

Contact and atopic eyelid dermatitis are two clinically similar but pathogenetically distinct conditions that require careful differential diagnosis. Contact dermatitis is more often caused by exposure to external allergens and irritants, whereas atopic dermatitis is associated with systemic immune dysregulation. The primary diagnostic approaches include clinical evaluation, patch testing, and assessment of allergen sensitisation when clinically indicated.

Treatment of both conditions involves the elimination of triggering factors, the use of anti-inflammatory agents, restoration of the skin barrier, and management of comorbidities. Contemporary therapeutic approaches, particularly topical calcineurin inhibitors and, in selected severe cases of atopic dermatitis, biologic agents, have expanded available treatment options and improved symptom control. Continued investigation may help refine diagnostic and therapeutic strategies and improve the quality of life of patients with eyelid dermatitis.

The limitations of this study include the potential restrictiveness of the selected literature and insufficient coverage of studies focused on novel treatment methods for allergic eyelid dermatitis. Future research should aim to expand the sample of clinical studies and evaluate the effectiveness of new biologic agents and innovative therapies, taking into account individual patient characteristics.

Authors' contributions

M.Z.L. and J.L. contributed to the design and implementation of the research, to the analysis of the results and to the writing of the manuscript.

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IRB Ethical approval statement

All procedures performed in the study were in accordance with the ethical standards of the institutional research committee and with the 1964 Helsinki Declaration and its later amendments. A study was approved by the Ethics Commission of the National Medical Institute of the Ministry of the Interior and Administration, No. 876522.

Conflict of Interest

The author declare that they have no conflicts of interest related to this work.

Artificial Intelligence (AI) – Assisted Technology

N/A

Data Availability Statement

The data that support the findings of this study are available on request from the corresponding author.

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