International Journal of Medical and Pharmaceutical Research

Online ISSN-2958-3683 | Print ISSN-2958-3675
Frequency: Bi-Monthly
Available online on: https://ijmpr.in/

Original Article

A Clinical and Etiological Evaluation of Congenital and Acquired Eyelid Malpositions in Patients of Various Age Groups Presenting To Tertiary Care Centre: A Prospective Observational Study

Dr Nidhi Darji[1], Dr Katthak Acharya[2], Dr Aashka Mehta[3], Dr Stuti Maithani[4]

[1,2]Senior Resident at M&J institute of ophthalmology Ahmedabad
[3]fellow at shri Santram eye hospital nadiad
[4]fellow at iCare Eye hospital Noida.

OPEN ACCESS

Corresponding Author:

Dr Nidhi Darji
Senior Resident at M&J institute of ophthalmology,civil Hospital, Ahmedabad

Received: 20-01-2026
Accepted: 15-04-2026
Available online: 19-05-2026

ABSTRACT

Background: Eyelid malpositions are common ophthalmic disorders that may be congenital or acquired and can significantly affect ocular protection, vision, and cosmetic appearance. Early identification of the etiological and clinical profile of these conditions is essential for timely management and prevention of ocular morbidity.
Aim: To evaluate the clinical and etiological profile of congenital and acquired eyelid malpositions in patients attending a tertiary care hospital.
Materials and Methods; This prospective observational study was conducted in the Department of Ophthalmology at a tertiary care hospital over a period of 12 months. A total of 105 patients with congenital or acquired eyelid malpositions were enrolled using purposive sampling. Detailed history taking and comprehensive ophthalmic examination including visual acuity assessment, slit-lamp examination, intraocular pressure measurement, fundus examination, ocular motility assessment, and specific eyelid evaluation were performed. Data regarding demographic profile, systemic illness, ocular surgery, type and severity of eyelid malposition, and associated ocular findings were recorded and analyzed using descriptive and inferential statistical methods.
Results: The majority of patients were above 50 years of age (51.4%) with a slight male predominance (54.3%). Most patients belonged to rural areas (65.7%). Systemic illnesses were present in 42.8% of patients. Acquired eyelid malpositions (76.2%) were more common than congenital malpositions (23.8%). Ptosis was the most common eyelid malposition observed (43.6%), followed by entropion (21.9%) and ectropion (17.1%). Mild ptosis was observed in 41.9% of cases, while moderate ptosis and severe ptosis accounted for the remaining patients.
Conclusion: In conclusion, acquired eyelid malpositions were more prevalent than congenital eyelid malpositions, particularly among elderly patients. Ptosis was the most commonly observed eyelid malposition. Early diagnosis and comprehensive clinical evaluation are essential for appropriate management and prevention of ocular complications.

Keywords*: Eyelid malpositions, ptosis, entropion, ectropion, congenital eyelid disorders, acquired eyelid disorders, tertiary care hospital.*

INTRODUCTION

Eyelid malpositions are a heterogeneous group of disorders characterized by abnormal positioning, movement, or structural deformity of the eyelids. These abnormalities may be congenital or acquired and can produce significant functional, cosmetic, and psychological morbidity. The eyelids are essential for maintaining ocular surface integrity by protecting the globe from trauma, regulating tear film distribution, reducing evaporation, and preventing corneal

exposure. Any disruption in eyelid anatomy or function may lead to ocular irritation, epiphora, keratopathy, corneal ulceration, amblyopia, and visual impairment (1).

Congenital eyelid malpositions arise due to developmental abnormalities involving the levator palpebrae superioris muscle, eyelid folds, canthal tendons, or periocular tissues during embryogenesis. Common congenital conditions include congenital ptosis, blepharophimosis syndrome, ankyloblepharon, lid coloboma, congenital entropion, and congenital ectropion. Congenital ptosis is among the most frequently encountered congenital eyelid disorders and is primarily caused by levator muscle dysgenesis. Severe congenital ptosis can obstruct the visual axis and may result in deprivation amblyopia if not treated promptly (2,3).

Figure 1: **Congenital Ptosis**

Figure 2: aquired ptosis

Figure 3; RE ectropion

Figure; 4 RE entropion

Acquired eyelid malpositions are more common in routine ophthalmic practice and usually occur secondary to aging, trauma, facial nerve palsy, inflammatory disorders, thyroid eye disease, tumors, or previous ocular surgeries. Involutional changes associated with aging are important etiological factors leading to aponeurotic ptosis, entropion, and ectropion. Age-related attenuation of connective tissue structures, horizontal eyelid laxity, and disinsertion of the levator aponeurosis contribute significantly to the pathogenesis of these disorders (4,5).

Ptosis refers to drooping of the upper eyelid and may be congenital or acquired. Acquired ptosis may be aponeurotic, neurogenic, myogenic, traumatic, or mechanical in origin. Patients with ptosis may present with reduced superior visual field, abnormal head posture, brow ache, and cosmetic concerns (6). Entropion is characterized by inward turning of the eyelid margin causing lashes to rub against the ocular surface, while ectropion involves outward turning of the eyelid margin resulting in exposure of the conjunctiva and epiphora. Both conditions are commonly observed in elderly individuals and can lead to chronic conjunctival inflammation and exposure keratopathy (7).

Certain systemic disorders are frequently associated with eyelid malpositions. Thyroid-associated orbitopathy commonly produces eyelid retraction and lagophthalmos due to fibrosis and sympathetic overactivity of the eyelid retractors (8). Facial nerve palsy may result in paralytic lagophthalmos and ectropion due to orbicularis muscle weakness. Similarly, diabetes mellitus and hypertension may contribute indirectly through neuropathic and vascular changes affecting periocular tissues (9).

The epidemiological distribution and etiological spectrum of eyelid malpositions vary according to age, gender, ethnicity, geographic location, and healthcare accessibility. In developing countries, delayed presentation is common, especially among rural populations with limited access to specialized ophthalmic care. Early recognition and detailed clinical

evaluation are essential to prevent vision-threatening complications and to plan appropriate medical or surgical management (10).

Despite the clinical importance of eyelid malpositions, limited prospective studies from tertiary care centers in India have comprehensively evaluated their demographic characteristics, etiological factors, and clinical presentations. Understanding the pattern of congenital and acquired eyelid malpositions can assist ophthalmologists in early diagnosis, timely intervention, and prevention of ocular morbidity. Therefore, the present study was undertaken to a clinical and etiological evaluation of congenital and acquired eyelid malpositions in patients attending a tertiary care hospital: a prospective observational study

MATERIALS AND METHODS

Study Design

This study focused on the demographic characteristics, clinical presentation, ocular findings, associated systemic conditions, and etiological distribution of congenital and acquired eyelid malpositions.

Study Setting

The study was carried out in the Department of Ophthalmology at LGH, a tertiary care teaching hospital equipped with specialised ophthalmic diagnostic and management facilities.

Study Duration

The study was conducted over a period of 12 months following approval from the Institutional Review Board (IRB). Patients were evaluated at baseline and followed up at scheduled intervals whenever required.

Study Population

Patients of all age groups presenting with congenital or acquired eyelid malpositions to the Ophthalmology Outpatient Department (OPD) during the study period were included.

Inclusion Criteria

1. Patients diagnosed with congenital or acquired eyelid malpositions.
2. Patients willing to provide written informed consent or assent.
3. Patients willing to undergo ophthalmic examination and required investigations.
4. Patients willing to participate in follow-up evaluation.

Exclusion Criteria

1. Patients unwilling to participate in the study.
2. Patients unable to comply with follow-up visits.
3. Patients with severe systemic illnesses interfering with evaluation.

Sampling Technique and Sample Size

Purposive sampling technique was used. A total of 105 patients fulfilling the inclusion criteria were enrolled during the study period.

Clinical Evaluation

Detailed history regarding onset, duration, progression of symptoms, ocular trauma, previous ocular surgery, family history, and associated systemic illness was obtained.In congenial patients it is obtained from parents.

Patients who were appropriate for the examinations underwent:

- Best corrected visual acuity assessment
- Subjective refraction
- Slit-lamp biomicroscopy
- Intraocular pressure measurement
- Fundus examination
- Ocular movement assessment
- Ocular position evaluation

Specific eyelid examination included assessment of:

- Type of eyelid malposition
- Severity grading
- Laterality
- Associated ocular findings

Study Parameters
The following parameters were analyzed:

- Age
- Gender
- Residence
- Occupation
- Systemic illness
- Family history
- Ocular trauma
- Ocular surgery
- Duration of symptoms
- Type and severity of eyelid malposition
- Visual acuity
- Ocular motility
- Ocular alignment

Data Collection
Clinical findings and examination details were recorded in a predesigned proforma by trained ophthalmologists.

Statistical Analysis
Data were analyzed using descriptive and inferential statistical methods. Categorical variables were expressed as frequencies and percentages. Continuous variables were summarized as mean ± standard deviation. Chi-square test and t-test were used wherever applicable. A p-value <0.05 was considered statistically significant.

Ethical Considerations
Ethical approval was obtained from the Institutional Review Board of LGH. Written informed consent was obtained from all participants or guardians in pediatric cases. Confidentiality of patient data was maintained throughout the study.

RESULTS AND OBSERVATIONS

Table; 1 Age-wise Distribution

The majority of patients belonged to the geriatric age group (>50 years) accounting for 51.4% of cases.

Age Group	Frequency	Percentage
0–14 years	26	24.8%
14–18 years	5	4.07%
18–50 years	20	19.1%
>50 years	54	51.4%

Observation:
Eyelid malpositions were predominantly observed in elderly patients.

Table; 2 Gender Distribution

Gender	Frequency	Percentage
Male	57	54.3%
Female	48	45.7%

Observation:
A slight male predominance was observed.

Table; 3 Residence Distribution

Residence	Frequency	Percentage
Rural	69	65.7%
Urban	36	34.3%

Observation:
Most patients belonged to rural areas.

Table; 4 Presence of Systemic Illness

Systemic Illness	Frequency	Percentage
Present	45	42.8%

Absent	60	57.1%

Observation:
Systemic illnesses were present in a significant proportion of patients.

Table; 5 Types of Systemic Illness

Type	Frequency	Percentage
Hypertension	15	33.3%
Diabetes Mellitus	10	22.2%
HTN + IHD	7	15.5%
Thyroid Disease	3	6.6%

Table; 6 History of Ocular Surgery

History of Surgery	Frequency	Percentage
Yes	28	26.7%
No	77	73.3%

Table; 7 Types of Eyelid Malpositions

Type	Frequency	Percentage
Congenital	25	23.8%
Acquired	80	76.2%

Observation:
Acquired eyelid malpositions were more common than congenital malpositions.

Table; 8 Distribution of Specific Eyelid Malpositions

Type	Frequency	Percentage
Ptosis	46	43.6%
Entropion	23	21.9%
Ectropion	18	17.1%
Lid Retraction	5	4.7%
BPS	4	3.8%
Lagophthalmos	3	2.8%
Ankyloblepharon	1	0.9%
Lid Tumours	2	1.9%
Lid Coloboma	3	2.8%

Observation:
Ptosis was the most common eyelid malposition observed.

Table; 9 Severity of Eyelid Malpositions

Severity	Frequency	Percentage
Mild	44	41.9%
Moderate	21	20.0%
Severe	40	38.1%

Observation:
Mild eyelid malpositions were slightly more common.

DISCUSSION

The present prospective observational study evaluated the clinical and etiological characteristics of congenital and acquired eyelid malpositions among patients attending a tertiary care hospital. Eyelid malpositions represent an important group of ophthalmic disorders because of their impact on ocular surface protection, visual function, and cosmetic appearance. The study demonstrated that acquired eyelid malpositions were considerably more common than congenital abnormalities, with ptosis being the most prevalent condition observed.

In the present study, the majority of patients belonged to the geriatric age group (>50 years), accounting for 51.4% of cases. This finding is consistent with previous studies demonstrating an increased prevalence of involutional eyelid abnormalities in elderly individuals due to age-related degeneration of connective tissues, horizontal lid laxity, and

levator aponeurosis disinsertion (11). Involutional ptosis, entropion, and ectropion are known to occur more frequently with advancing age owing to weakening of periocular supporting structures (12).

A slight male predominance (54.3%) was observed in the present study. Similar observations have been reported in earlier hospital-based studies where males constituted a higher proportion of patients, possibly due to greater occupational exposure, trauma risk, and healthcare-seeking behavior (13). However, some authors have reported nearly equal gender distribution, suggesting that eyelid malpositions affect both sexes depending upon demographic and etiological factors (14).

Most patients in the study were from rural areas (65.7%). This may reflect reduced access to specialized ophthalmic care in rural populations, resulting in delayed presentation and progression of disease severity before seeking medical attention. Similar findings have been reported in studies conducted in developing regions where rural patients often present late with advanced ocular conditions (15).

Systemic illnesses were present in 42.8% of patients, with hypertension and diabetes mellitus being the most common associated disorders. Chronic systemic diseases may contribute indirectly to eyelid abnormalities through vascular insufficiency, neuropathy, and connective tissue degeneration (16). Thyroid disease was identified in a smaller proportion of patients and was associated mainly with lid retraction and lagophthalmos, which is consistent with the known manifestations of thyroid-associated orbitopathy (17).

A history of previous ocular surgery was noted in 26.7% of patients. Surgical interventions involving the eyelids and ocular adnexa may alter normal eyelid anatomy and function, leading to postoperative ptosis, cicatricial ectropion, or lid retraction. Cataract surgery has particularly been associated with aponeurotic ptosis due to levator aponeurosis stretching or disinsertion (18).

The study revealed that acquired eyelid malpositions (76.2%) were significantly more common than congenital malpositions (23.8%). This observation is in accordance with previous literature indicating that involutional, traumatic, paralytic, and postoperative etiologies are more frequently encountered in ophthalmic practice than congenital anomalies (19). Congenital eyelid malpositions, though less common, remain clinically significant because of their potential association with amblyopia and facial developmental abnormalities in children.

Ptosis was the most common eyelid malposition observed in the present study, accounting for 43.6% of cases. Similar findings have been documented by Beard and Finsterer, who reported ptosis as one of the most prevalent eyelid disorders encountered in ophthalmic and oculoplastic practice (20,21). Congenital ptosis in younger patients was largely attributed to levator muscle dysgenesis, whereas acquired ptosis in older patients was predominantly aponeurotic in origin.

Entropion and ectropion accounted for 21.9% and 17.1% of cases respectively. These conditions were more commonly seen in elderly patients due to involutional changes affecting the lower eyelid. Chronic irritation, watering, foreign body sensation, and exposure keratopathy were common presenting symptoms. Similar prevalence patterns have been reported in previous studies on involutional eyelid malpositions (22).

Less common conditions observed in the present study included lid retraction, blepharophimosis syndrome, lagophthalmos, ankyloblepharon, lid coloboma, and eyelid tumors. Although these constituted a smaller proportion of cases, they are clinically important because of their association with ocular surface disease, cosmetic deformity, and visual impairment. Early diagnosis and multidisciplinary management are often required in such cases (23).

Regarding severity distribution, mild eyelid malpositions were slightly more common (41.9%) compared to severe cases (38.1%). However, a substantial proportion of patients presented with severe disease, possibly reflecting delayed healthcare access, poor awareness, and chronic progression before consultation. Severe eyelid malpositions are associated with increased risk of exposure keratitis, corneal ulceration, and visual compromise (24).

CONCLUSION

Acquired eyelid malpositions were more prevalent than congenital eyelid malpositions, particularly among elderly patients. Ptosis was the most commonly observed eyelid malposition. Systemic illnesses such as hypertension and diabetes mellitus were commonly associated with these conditions. Early diagnosis and comprehensive clinical evaluation are essential for appropriate management, prevention of ocular complications, preservation of visual function, and improvement of cosmetic and functional outcomes.

REFERENCES

1. Kanski JJ, Bowling B. Clinical Ophthalmology: A Systematic Approach. 8th ed. Philadelphia: Elsevier; 2016.

2. Beard C. Ptosis. 3rd ed. St Louis: CV Mosby; 1981.
3. Duke-Elder S. System of Ophthalmology. Vol. 13. St Louis: CV Mosby; 1974.
4. Nerad JA. Oculoplastic Surgery: The Requisites in Ophthalmology. 2nd ed. Philadelphia: Elsevier; 2010.
5. Collin JRO. A Manual of Systematic Eyelid Surgery. 3rd ed. Oxford: Butterworth-Heinemann; 2006.
6. Finsterer J. Ptosis: causes, presentation, and management. Aesthetic Plast Surg. 2003;27(3):193-204.
7. Tse DT. Management of involutional entropion and ectropion. Ophthalmol Clin North Am. 1991;4(1):69-84.
8. Bartley GB. The epidemiologic characteristics and clinical course of ophthalmopathy associated with autoimmune thyroid disease in Olmsted County, Minnesota. Trans Am Ophthalmol Soc. 1994;92:477-588.
9. American Academy of Ophthalmology. Basic and Clinical Science Course: Orbit, Eyelids and Lacrimal System. San Francisco: AAO; 2020.
10. Holds JB, McLeish WM, Anderson RL. Eyelid malpositions and corneal disease. Surv Ophthalmol. 1992;36(4):247-252.
11. Jones LT, Quickert MH, Wobig JL. The Cure of Ptosis by Aponeurotic Repair. Arch Ophthalmol. 1975;93(8):629-634.
12. Carter SR, Chang J, Aguilar GL. Involutional entropion and ectropion. Int Ophthalmol Clin. 1995;35(1):1-16.
13. Anderson RL, Gordy DD. The tarsal strip procedure. Arch Ophthalmol. 1979;97(11):2192-2196.
14. Kersten RC, Kulwin DR. Blepharoptosis and aging. Ophthalmology. 1990;97(9):1126-1132.
15. Murthy GVS, Gupta SK, Bachani D. Current estimates of blindness in India. Br J Ophthalmol. 2005;89(3):257-260.
16. McCord CD Jr, Tanenbaum M, Nunery WR. Oculoplastic Surgery. 3rd ed. New York: Raven Press; 1987.
17. Bartley GB, Fatourechi V, Kadrmas EF. Clinical features of Graves ophthalmopathy in an incidence cohort. Am J Ophthalmol. 1996;121(3):284-290.
18. Beard C. Ptosis surgery. St Louis: CV Mosby; 1976.
19. Collin JRO. A Manual of Systematic Eyelid Surgery. 3rd ed. Oxford: Butterworth-Heinemann; 2006.
20. Beard C. A new classification of blepharoptosis. Int Ophthalmol Clin. 1989;29(4):214-216.
21. Older JJ. Levator aponeurosis surgery for the correction of acquired ptosis. Ophthalmology. 1978;85(8):826-831.
22. Dortzbach RK. Eyelid malpositions and their management. Int Ophthalmol Clin. 1989;29(4):181-189.
23. Smith BC, Nesi FA. Ophthalmic Plastic and Reconstructive Surgery. 2nd ed. St Louis: Mosby; 1998.
24. Levine MR. Manual of Oculoplastic Surgery. 4th ed. New York: Springer; 2010.