Journal of Population Therapeutics & Clinical Pharmacology

RESEARCH ARTICLE
DOI: 10.53555/hsvnn155

CLINICAL PROFILE OF PATIENTS WITH SQUINT IN OPHTHALMOLOGY GENERAL OPD

Dr. Balkiran V.[1], Dr. Raghavendra D.[2*]

[1]Assistant Professor, Department of Ophthalmology, Sri Chamundeshwari Medical College, Hospital & Research Institute, Channapatna, Ramanagara, Karnataka, India.
[2*]Assistant Professor, Department of Community Medicine, Sri Chamundeshwari Medical College, Hospital & Research Institute, Channapatna, Ramanagara, Karnataka, India.

***Corresponding Author:** Dr. Raghavendra D.
*Assistant Professor, Department of Community Medicine, Sri Chamundeshwari Medical College, Hospital & Research Institute, Channapatna, Ramanagara, Karnataka, India.

ABSTRACT

Aim

To Research the clinical and demographic traits of squint patients who come to the general outpatient department of ophthalmology.

Methods

The General Ophthalmology OPD of SCMCH & RI, Channapatna, was the site of this cross-sectional observational study. There were fifty squint-diagnosed patients in all. Comprehensive ophthalmic examinations, including fundus examination, cycloplegic refraction, cover tests, visual acuity testing, and ocular motility assessment, were conducted in addition to a thorough clinical history. Descriptive statistics were used to analyse the data.

Results

Of the 50 patients, 44% were female and 56% were male. Seventy percent of them were younger than fifteen. The most prevalent squint type was esotropia (50%) and exotropia (36%). 60% of patients had amblyopia, and 76% of cases had refractive errors. Compared to alternating squint (36%), unilateral squint was more prevalent (64%). Surgery was planned or carried out in 20% of patients, occlusion therapy in 24%, and spectacle correction in 68% of patients.

Conclusion

Children are primarily affected by squint, which is commonly linked to amblyopia and refractive errors. In the paediatric age group, esotropia continues to be the most prevalent presentation. Preventing long-term visual impairment and enhancing quality of life require early detection, suitable refractive correction, and amblyopia management.

Keywords: Ocular Motility, Amblyopia, Angle of Deviation, Binocular Vision.

INTRODUCTION

The condition known as squint, or strabismus, is characterised by the misalignment of the eyes' visual axes, which prevents both eyes from looking at the same object at the same time. It may manifest as hypertropia, hypotropia, exotropia, esotropia, or a mix of these abnormalities. Strabismus can be acquired or congenital, and it can show up continuously or sporadically. It has major psychosocial effects in addition to affecting stereopsis and binocular vision, especially in children. [1,2]

Depending on age, demographic, and diagnostic standards, the prevalence of strabismus in children varies from 1% to 5% worldwide.[3, 4] Untreated squint can result in amblyopia, cosmetic issues, poor academic performance, and low self-esteem, so early detection and prompt intervention are essential.[5,6] One of the biggest problems in India is delayed presentation brought on by ignorance, social stigma, or restricted access to specialised eye care.[7]

Strabismus has a complex aetiology that can include genetic predisposition, neurological disorders, trauma, and refractive errors, particularly hypermetropia.[8] Exotropia tends to become more common as people age, whereas accommodative esotropia is frequently linked to untreated hypermetropia in children.[9] To choose the best course of action, a thorough clinical evaluation that includes measurements of ocular alignment, motility, refraction, and binocular function is required.

Finding common patterns, risk factors, and weaknesses in the current management practices can be facilitated by knowing the clinical profile of squint patients who visit the Ophthalmology General OPD. Planning screening programs, enhancing early diagnosis, and maximising results with non-surgical and surgical treatment modalities all depend on this information.[10]

MATERIALS & METHODS

This was a cross-sectional observational study conducted to evaluate the clinical profile of patients diagnosed with squint attending the General Ophthalmology Outpatient Department. The study was carried out at the General Ophthalmology OPD of SCMCH & RI, Channapatna, to a diverse population. The study was conducted over a period of six months. A total of 50 patients clinically diagnosed with squint (strabismus) were included in the study.

Inclusion Criteria

- Patients of all age groups presenting with any form of manifest squint (esotropia, exotropia, hypertropia, hypotropia).
- Patients willing to give informed consent (or assent with guardian consent in case of minors).

Exclusion Criteria

- Patients with a history of previous squint surgery.
- Patients with pseudo strabismus or nystagmus without associated squint.
- Incomplete clinical data or those unwilling to participate.

After obtaining informed consent, each patient underwent a comprehensive ophthalmic evaluation, including: Detailed history (onset, duration, family history, and associated symptoms)., Visual acuity assessment using Snellen's or age-appropriate charts, Hirschberg's test for corneal light reflex assessment, Ocular motility examination to detect any restrictive or paralytic component.

- Cycloplegic refraction using retinoscopy or autorefractometry
- Slit-lamp anterior segment examination.
- Fundus examination using direct/indirect ophthalmoscopy.
- Assessment for amblyopia and binocular function

Ethical Considerations

Ethical clearance was obtained from the Institutional Ethics Committee (IEC) prior to the commencement of the study. Written informed consent was obtained from all adult participants and from parents/guardians in the case of minors.

RESULTS

A total of 50 patients diagnosed with squint were evaluated during the study period. The demographic and clinical profile of these patients is summarized below.

Parameter	Category	Number (n)	Percentage (%)
Age Group	< 5 years	15	30%
	6–15 years	20	40%
	> 15 years	15	30%
Gender	Male	28	56%
	Female	22	44%
Type of Squint	Esotropia	25	50%
	Exotropia	18	36%
	Vertical Deviations	4	8%
	Combined/Other	3	6%
Laterality	Unilateral	32	64%
	Alternating	18	36%
Onset	Congenital	20	40%
	Acquired	30	60%
Refractive Error	Present	38	76%
	Absent	12	24%
Amblyopia in Affected Eye	Present	30	60%
	Absent	20	40%
Treatment Advised/Received	Spectacles	34	68%
	Occlusion Therapy	12	24%
	Surgery Planned/Done	10	20%

Table 1: Demographic and Clinical Profile of Patients with Squint (n = 50)

Type of Squint	< 5 years (n=15)	6–15 years (n=20)	> 15 years (n=15)	Total
Esotropia	10	10	5	25
Exotropia	3	7	8	18
Vertical Deviations	1	2	1	4
Combined/Other	1	1	1	3

Table 2: Distribution of Type of Squint by Age Group (n = 50)

Type of Squint	With Refractive Error	Without Refractive Error	Total
Esotropia	22	3	25
Exotropia	12	6	18
Vertical Deviations	3	1	4
Combined/Other	1	2	3

Table 3: Association between Type of Squint and Refractive Error (n = 50)

Type of Squint	Amblyopia Present	Amblyopia Absent	Total
Esotropia	20	5	25
Exotropia	7	11	18
Vertical Deviations	2	2	4
Combined/Other	1	2	3

Table 4: Amblyopia Status by Type of Squint (n = 50)

Management Option	Number of Patients (n)	Percentage (%)
Corrective Spectacles	34	68%
Occlusion Therapy (Patching)	12	24%
Orthoptic Exercises	6	12%
Surgery Recommended/Done	10	20%
No Intervention Yet	8	16%

Table 5: Management Modality Used (n = 50)

DISCUSSION

The clinical characteristics of fifty squint patients were assessed in this study at a general ophthalmology tertiary care OPD. The results highlight a number of age- and region-specific observations in addition to reflecting established patterns in the prevalence, types, and related characteristics of strabismus.

According to multiple Indian and international studies, strabismus is primarily a paediatric condition, and the majority of patients (70%) were under the age of 15, with the highest incidence in the 6–15 age group.[11] Parents and educators are often aware of early-onset squint, especially esotropia, which allows for prompt presentation. Adult cases were also noted, though, and were frequently linked to neurological causes, trauma, or decompensated phorias.[12] Particularly in children under ten, esotropia (50%) was the most prevalent type of strabismus, whereas exotropia increased in frequency as people aged. The results of Sharma et al. and others, who observed a comparable change in the trend of strabismus types with age, are consistent with this pattern.[13] The significance of early refraction and spectacle correction is highlighted by the high percentage of refractive error (76%), particularly hypermetropia in isotropic patients. In both Indian and Western populations, comparable correlations have been documented.[14]

60 percent of patients had amblyopia at presentation, which was primarily linked to esotropia. This highlights the need for early intervention and the visual morbidity of untreated squint. Strabismic amblyopia, especially in isotopes, continues to be a major cause of unilateral visual impairment in children, according to multiple studies.[15]

In the majority of cases, non-surgical techniques like occlusion therapy and spectacle correction were the first line of treatment. In keeping with current guidelines that support conservative management in early or accommodative squints, only 20% were scheduled for surgery.[16] To improve results, access to orthoptic services and prompt referral to paediatric ophthalmologists are still crucial.

CONCLUSION

According to this study, esotropia is the most prevalent presentation of squint, especially in younger children, and it is primarily a paediatric condition. Esotropia was found to be strongly associated with refractive errors, particularly hypermetropia. Additionally, amblyopia was very common, highlighting the significance of early detection and treatment. A smaller percentage of patients needed surgery, but non-surgical management—such as occlusion therapy and spectacle correction—formed the foundation of initial treatment. In order to guarantee prompt referral to ophthalmology services, these findings support the necessity of routine vision screening in early childhood as well as raised awareness among parents and primary care physicians. For patients with strabismus, a thorough diagnostic process that includes amblyopia screening and refractive evaluation is crucial to maximising visual outcomes and avoiding permanent visual impairment.

REFERENCES

[1] Mohney BG. Common forms of childhood strabismus in an incidence cohort. Am J Ophthalmol 2007;144(3):465-7.
[2] Menon V, Saha J, Tandon R, et al. Study of the psychosocial aspects of strabismus. J Pediatr Ophthalmology Strabismus 2002;39(4):203-8.
[3] Simons K. Preschool vision screening: rationale, methodology and outcome. Surv Ophthalmol 1996;41(1):3-30.
[4] Hashemi H, Pakzad R, Yekta A, et al. Global and regional prevalence of strabismus: a comprehensive systematic review and meta-analysis. Strabismus 2019;27(2):54-65.
[5] Holmes JM, Clarke MP. Amblyopia. Lancet 2006;367(9519):1343-51.
[6] Kothari M. Strabismus and stereoacuity in school children in India. J Pediatr Ophthalmol Strabismus 2007;44(3):157-8.
[7] Gogate P, Kalua K, Courtright P. Blindness in childhood in developing countries: time for a reassessment? PLoS Med 2009;6(12):e1000177.

[8] Von Noorden GK, Campos EC. Binocular vision and ocular motility: theory and management of strabismus. 6th edn. St. Louis: Mosby 2002.
[9] Chia A, Dirani M, Chan YH, et al. Prevalence of amblyopia and strabismus in young Singaporean children. Invest Ophthalmology Vis Sci 2010;51(7):3411-7.
[10] Sharma P, Gaur N, Verma L. Profile of strabismus in a tertiary care hospital in North India. Indian J Clin Exp Ophthalmol 2017;3(3):300-4.
[11] Kaur S, Yadav S, Sachdeva S. Clinical profile of strabismus in a tertiary care hospital in North India. Delhi J Ophthalmol 2020;30(3):47-51.
[12] Akpe BA, Dawodu OA. Pattern of presentation of strabismus in a Nigerian tertiary hospital. Niger J Ophthalmol 2015;23(1):13-7.
[13] Sharma P, Gaur N, Verma L. Profile of strabismus in a tertiary care hospital in North India. Indian J Clin Exp Ophthalmol 2017;3(3):300-4.
[14] Priya A, Senthilkumar D, Thomas PA, et al. Refractive errors and strabismus in children with developmental delay. Indian J Ophthalmol 2004;52(2):129-34.
[15] Holmes JM, Mutyala S, Maus TL, et al. Paediatric amblyopia treatment: current trends and future prospects. Br J Ophthalmol 2003;87(8):933-8.
[16] von Noorden GK, Campos EC. Binocular vision and ocular motility: theory and management of strabismus. 6th edn. Mosby 2002.