Original Article

Commitant Convergent Squint

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ABSTRACT

Objective: To estimate the frequency and Types of Commitant Convergent squint among patients attending EYE OPD at Mardan Medical Complex Teaching Hospital Mardan.

Study Design: Descriptive study

Place and Duration of Study: This study was conducted at the MMCTH Mardan from September 2016 to October 2016.

Materials and Methods: Fourteen Hundred and Two Patients were examined. Thirty Nine Patients were having Strabismus which were included in this study.

Results: Total numbers of patients were 39 with commitant convergent squint, in which 25 had Accommodative esotropia, 05 has infantile esotropia, 03 had Residual esotropia, and 03 had constant esotropia with amblyopia. 18 patients were male and 21 were female.29 patients needed glasses i.e squint associated with refractive error and 10 patients were refer for surgery.

Conclusion: The commonest type of squint is accommodative esotropia. Infantile type follows second. Most of the commitant convergent squint cases were children under 09 years of age.

Key Words: Strabismus (squint), commitant convergent squint (esotropia), Accommodative esotropia, infantile esotropia,

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INTRODUCTION

Strabismus is a condition in which the visual axes assume a position relative to each other different from normal physiological conformity. It is an imbalance of eye muscles where one eye cannot properly align on an object with the other eye [1]. It is a condition of crossed eyes in which the angle of squint is the same in all directions of gaze for a given testing distance [2].

Amblyopia may cause strabismus and vice versa. Strabismus starts in infancy and early childhood and if left untreated it can cause deep amblyopia and postural changes [3].

Strabismus affects 2 to 5% of children in Pakistan. The prevalence of squint is 5.4% in our country in which 2.5% of patients are under 5 years of age and 2.9% are over 5[4-5]. More than half of misaligned eyes are because of convergent squint in the United States and the prevalence of esotropia constituted 75% of the total [6]. In central Africa esotropia accounts for 80% of the total cases [7] .Esotropia was five times more common in the United Kingdom whereas exotropia to esotropia was 7:1 in singaporian children[8-9]. Accommodative esotropia is a form of strabismus caused by reflective error in one or both eyes.

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Other causes of squint are some genetics errors, measles or other viral illnesses, hydrocephalus or other neurological conditions and asymmetrical cataracts[10-11]. To achieve normal binocular vision for commitant esotropia early detection of convergent squint and treatment intervention are very important. If left untreated or delayed then complications do occur.

This study was planned to study the prevalence of commitant squint in Mardan and surrounding areas as we have studies only from Peshawar and other Provinces.

MATERIALS AND METHODS

It is a hospital based descriptive study in which we estimate the frequency and type of commitant conversion squint among all age group patients attending eye OPD in MMCTH Mardan. Patients having some mental disorders or with other associated systemic illness and old patients are excluded.

RESULTS

Total ophthalmic patients were 1402, out which 39 patients have commitant convergent squint. Among 39, 18 were male and 21 were female. 25 patients have accommodative esotropia, 05 have infantile esotropia and 03 have residual. 03 patients have acquired non-accommodative esotropia and 03 have constant esotropia with amblyopia. 29 patients need glasses and 10 need surgery.

Table No. 1: Patients with squients

Total Patient	Patients with squints	Percentage
1402	39	2.78%

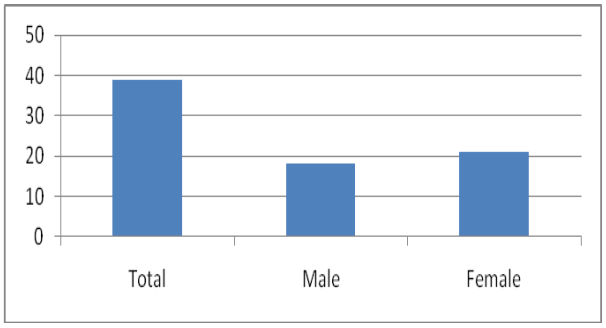

Figure No.1: Male and female patients ratio

Table No. 2: Esotropia types in patients

Types	No of patient	Percentage
Accommodative Esotropia	25	64.10%
Infantile Esotropia	5	12.82%
Residual	3	7.69%
Acquired Non-Accommodative Esotropia	3	7.69%
Constant Esotropia with Amblyopia	3	7.69%

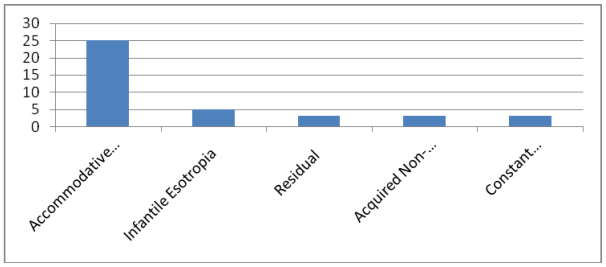

Figure No.2: Ratio of Esotropia

Table No. 3: Action needed on patients

Action needed	No of patient	Percentage
Glasses	29	74.35%
Surgery	10	25.64%

DISCUSSION

Male to female ratio in our study was 21 (53.84%): 18 (45.15%). Most frequently occurring defect was accommodative esotropia as a cause of comitant convergent squint. Sixty four percent patients were having accommodative esotopia. The defect of accommodative squint starts in infancy with an average age of 2-3 years[12]. Presentation of strabismus can some time be delayed upto 07 years of age [13]. Uncorrected refractive error is the basic mechanism or an abnormal accommodative convergence relationship. This is associated with hyperopia which reduces the angle and/ or frequency of esotropia when the hyperopic correction is worn[14].

Our study showed frequency of comitant convergent squint to be 2.5%. It is similar to the prevalence of strabismus in pakistan [15]. Infantile esotropia was present in 12.82% of cases and comes second in the list. Louwagie CR and Greenberg AE also published that accommodative esotropia and infantile esotropia are the commonest types of squints in their population based studies[16-17]. Etiology is not known but several factors can be involved including genetic predisposition, neurological disorders, prematurity, hydrocephalus, seizure disorders, family history of strabismus, excessive tonic convergence or uncorrected hyperopia. Most of the patients of comitant convergent squint were under 09 years of age [18]. If left untreated these squints in early years can cause amblyopia, refractive errors and postural changes.

CONCLUSION

Accomodative esotropia and infantile esotropia are the most common types of comitant convergent squints. As most of the patients are young, therefore early detection of strabismus can reduce the chances of constant esotropia, postural changes and deep amblyopia.

Author's Contribution:

Concept & Design of Study: Muhammad Tariq
Drafting: Muhammad Tariq
Data Analysis: Muhammad Tariq, Hira Ali
Revisiting Critically: Hira Ali
Final Approval of version: Muhammad Tariq

Conflict of Interest: The study has no conflict of interest to declare by any author.

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