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A Case study on Hypermetropia in North Uttar Pradesh Population

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Abstract: ***India has done a very much towards to become a developed country but still India is a part of developing countries and for this reason most of the factors are responsible and from these one of the factor is poverty and their index. Poverty index, directly affect the standard of living in a population , that why various major and minor diseases are occur in the various age groups of people, and Hypermetropia is one of these that can occur due to unhealthy life style. Hyperopia, also termed hypermetropia or farsightedness, is a common refractive error in children and adults. Its effect on an individual and the symptoms produced varies greatly, depending on the magnitude of hyperopia, the age of the individual, the status of the accommodative and convergence system, and the demands placed on the visual system. Individuals with uncorrected hyperopia may experience symptoms such as blurred vision, asthenopia (e.g., headaches and eyestrain) while reading, accommodative/binocular dysfunction, amblyopia, and/or strabismus. This article outlines several discussion points as related to hyperopia: definition and classifications, prevention, clinical presentations, importance of early detection, examination techniques, risks of uncorrected hyperopia, and management strategies.***

Keywords: ***Amblyopia, Hyperopia, Refractive error, Strabismus, Visual development.***

I. INTRODUCTION

The most common refractive error in childhood is hyperopia. The term hyperopia refers to the refractive condition of the eye where parallel light rays coming from the infinity are focused behind the neurosensory retina (after refraction through the ocular media) when accommodation is at rest. The spontaneous accommodative effort of the human eye, by increasing the anterior curvature and converging power of the crystalline lens, usually tries to overcome this situation. So, accommodative rest is mandatory to elicit total hyperopia, specifically in young individuals. Hyperopia is a very common refractive condition of childhood and adults. Proper assessment and treatment can prevent multiple complications in the future. Adult hyperopia is associated with some complications which must be assessed at regular interval. This activity reviews the evaluation and management of hyperopia with the prevention of long term complications. No definite cause of hyperopia is identified to date. Genetic predisposition, along with family history, plays an important role. Asthenopic symptoms must be emphasized and evaluated in children. Our main aim is to give good vision and optimal binocular vision to the patients. For children with refractive error only, proper refractive correction is indicated. If amblyopia development is suspected, orthoptic exercises and patching of eyes are used. Good interdepartmental coordination is necessary for regular follow-ups and proper rehabilitation. The development of the visual system is often affected by strabismus and amblyopia, which needs cycloplegic refraction and follow-ups. After proper preparation and counselling, it can be corrected with refractive surgery. Adult with hyperopia needs refractive support along with complication evaluation by gonioscopy and funduscopy. Follow your eye provider's directions on when to wear eyeglasses or contact lenses. You can help maintain eye health by eating well and protecting your eyes from the sun. It's also important to rest your eyes regularly, especially when reading or working on a computer. If you have blurry vision, squint a lot or get headaches when reading, talk to your healthcare provider. A few simple, painless tests can determine if you're farsighted. Treatment options range from eyeglasses and contact lenses to corrective surgery. With proper management from an eye specialist, you can see more clearly.

II. OBJECTIVE OF RESEARCH

A. Identify the aetiology of Hypermetropia and their associations
B. Review the process for performing an ocular evaluation of Hyperopia
C. To study the no. of Hypermetropic patients visit in Eye OPD.
D. Summarize the treatment options available for hyperopia according to age and degree of hyperopia
E. Describe some inter professional team strategies for improving care coordination and communication to treat hyperopia and improve outcomes.

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III. MATERIALS AND METHODS

A. Data Collection Plan

The methodology for data collection is based on the balance of primary and secondary sources.
Primary outcome based upon personal visits to the Eye OPD and Eye Camps database.
Secondary outcomes based upon the information collected through questionnaire survey in selected area.

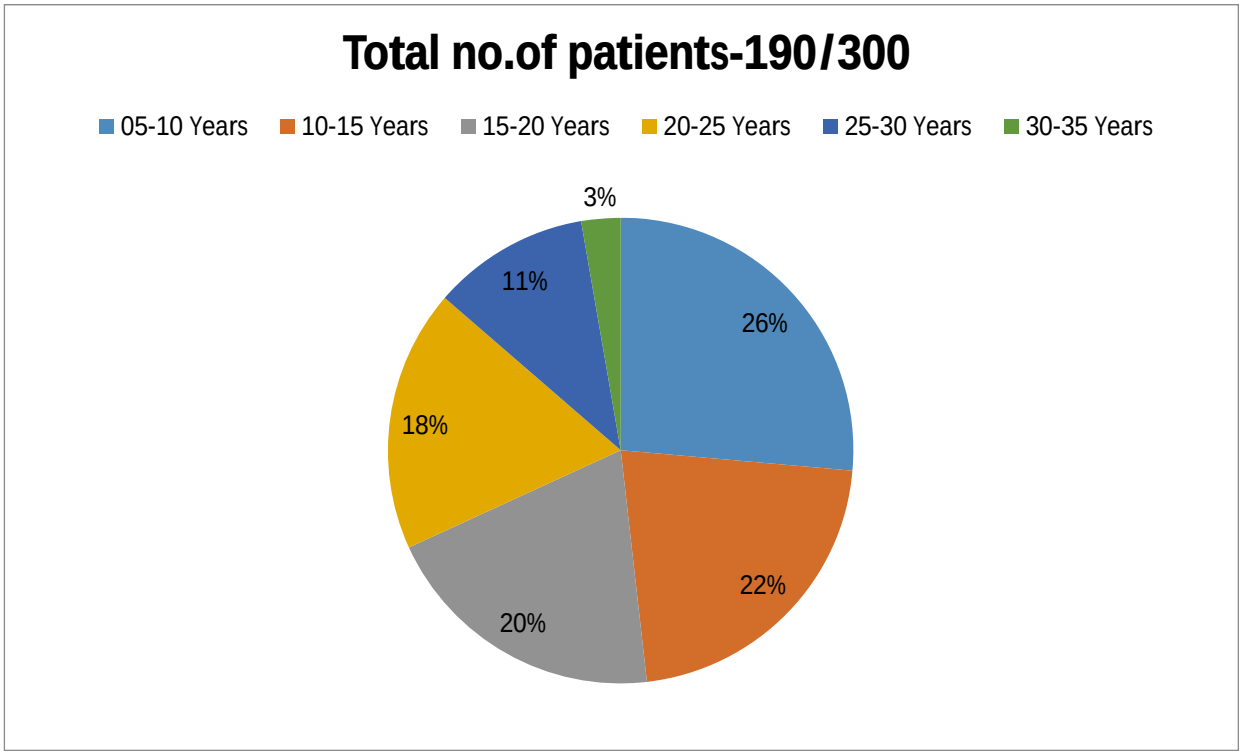
IV. METHOD

This is a transversal descriptive study conducted over three (03) months from September 1st to November 30, 2021 in the Eye Clinic and Eye Camp. Patients aged 5 to 30 years who underwent cycloplegic refraction with transparent ocular media and a spherical equivalent ≥ 0.5 diopter at least one eye after cycloplegic automatic refraction were included. Verbal informed consent was obtained in all patients (For children, it was the parents who agreed). All the patients included benefited according to a pre-established protocol: an interrogation which specified: the age, the sex, the literacy, the use of screen of display (Computer, Cell phone, Television) the existence of family ametropia; an ophthalmological examination and Retinoscopy without and with cycloplegic.

V. FINDING

Table 1-Total No.1 of patients-190/300

	Male	**Female**
05-10 Years	29	26
10-15 Years	24	19
15-20 Years	22	16
20-25 Years	20	11
25-30 Years	12	7
30-35 Years	3	1

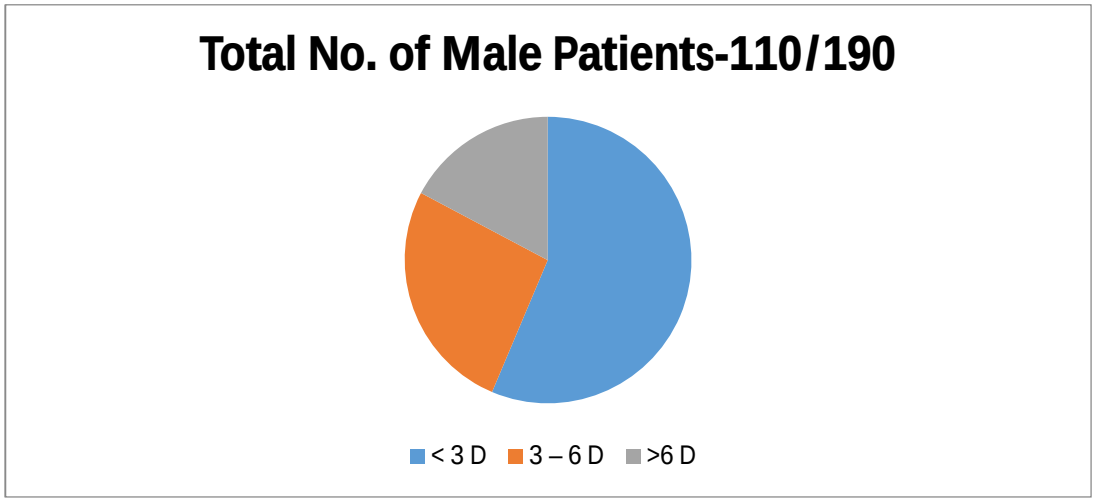


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A. Hypermetropic Male

Total Male Patients: 110/190

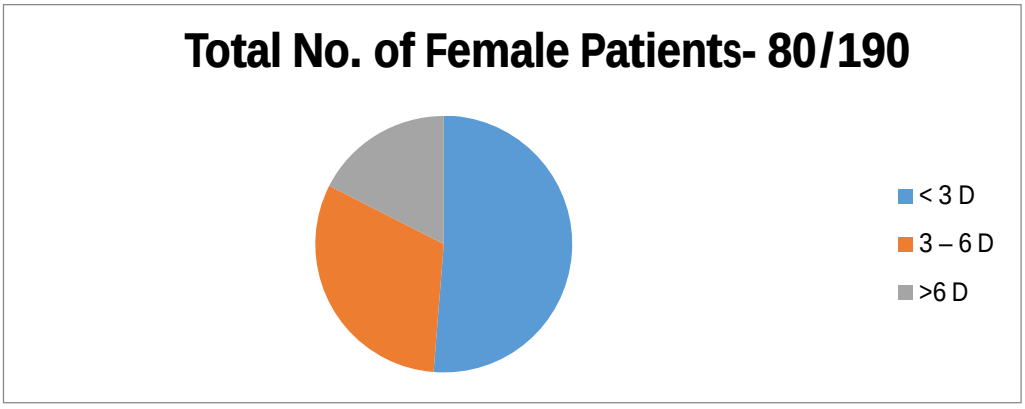
POWER	< 3 D	3 – 6 D	>6 D
TOTAL	62	29	19



B. Hypermetropic Female

Total Female Patients: - 80/190

POWER	< 3 D	3 – 6 D	>6 D
TOTAL	41	25	14



VI. CONCLUSION

A. Optical Correction

Prescribe convex lenses, contact lenses

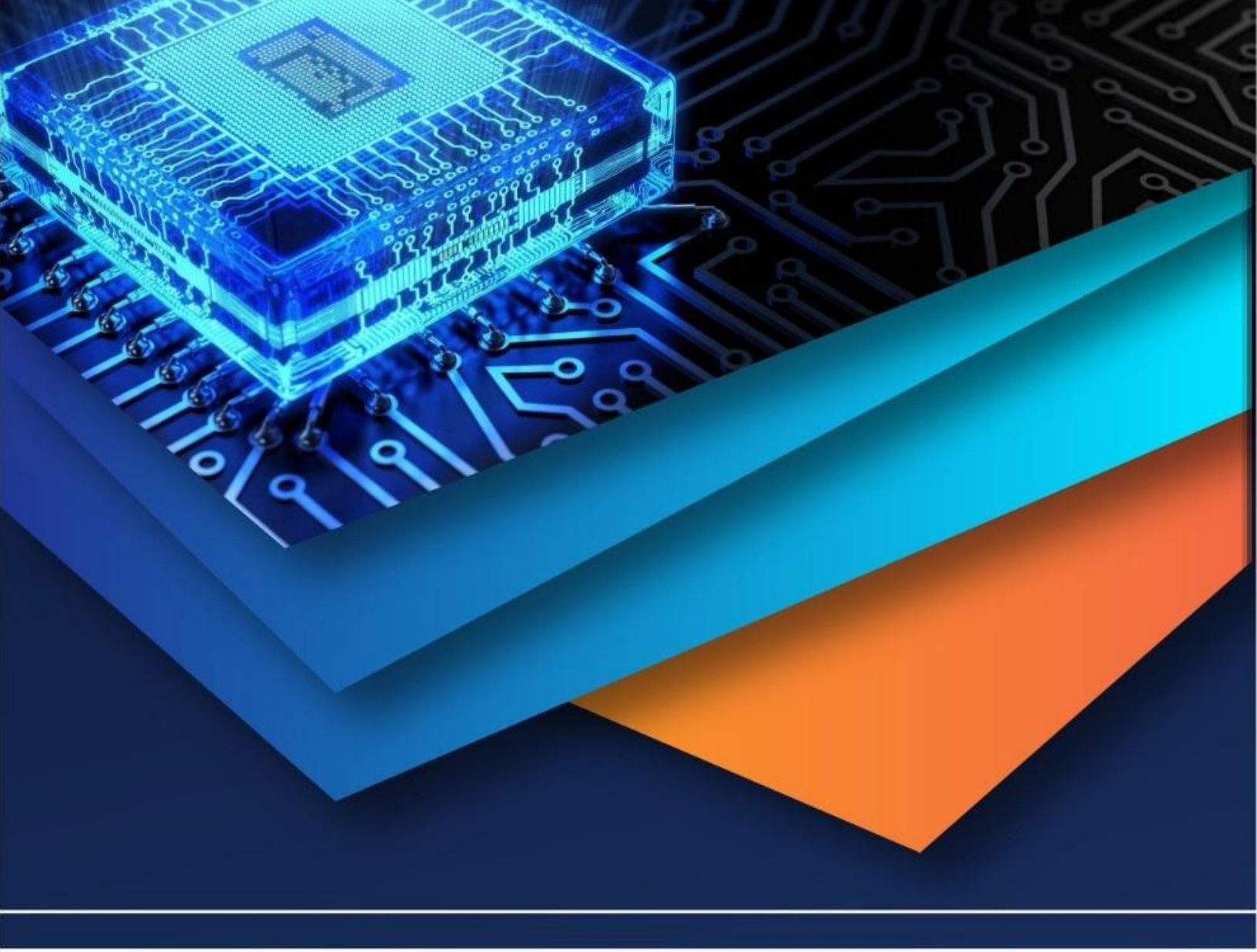
B. Rules

1) Total amount of error should be discover under complete cycloplegics
2) Astigmatism should be giving fully correction.
3) Less than 4 years give the full cycloplegic correction.
4) If there is Exophoria, the hypermetropia should be under corrected 1-2 D.
5) In the presence of accommodative convergent squint, full correction should be given.
6) If there is associated amblyopia, full correction with occlusion therapy should be started.

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