Screening Of Refractive Errors In Primary School Children

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Introduction

In children and adolescents around the world, refractive errors (RE) are the most frequent cause of visual impairment and disability. Blurred vision is caused by refractive errors, which are a mismatch between the axial length and optical power of the eye. There are three primary categories of refractive errors: astigmatism, which is associated with an optical asymmetry, and hyperopia and myopia, which are referred to as spherical errors. Astigmatism is regarded as a separate category, yet it can be a characteristic of both myopic and hyperopic eyes.

Aim of the work

To perform a screening for refractive errors among primary school children in Alexandria, Egypt.

Patients and methods

Measuring monocular uncorrected (UCVA) and best-corrected visual acuity (BCVA) with glasses for students wearing glasses using a Landolt broken ring self-illuminated chart at six meters in a semi-dark room for children ranging in age from 6 to 12 years old.

Children with visual impairment in either eye were referred for:

Detailed slit lamp ophthalmic evaluation, pupillary light reflex, ocular motility examination, ocular alignment was evaluated using the Hirschberg, cover-uncover, and alternate-cover tests. Cycloplegic refraction was assessed by an autorefractometer.

Results

Table (1) :Prevalence and distribution of uncorrected, presenting visual acuity among children.

Visual acuity	Uncorrected visual acuity		Wearing glasses	
	N	%	N	%
≥6/9 in both eyes	893	89.3%	0	0
≥6/9 in one eye only	8	0.8%	0	0
≤6/12 to 6/18 in the better eye	58	5.8%	7	0.7%
≤6/24 to 6/36 in the better eye	35	3.5%	10	1%
≤6/60 in the better eye	4	0.4%	3	0.3%
Total	998	100%	20	2%

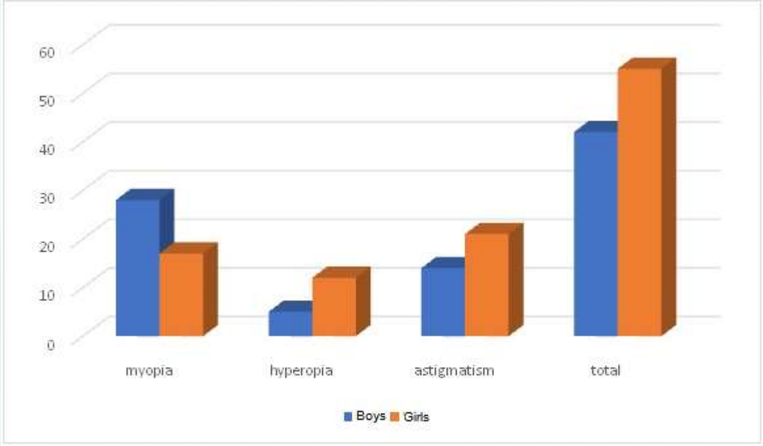

Figure (1): Distribution of refractive errors by gender

Conclusion

Screening of refractive errors is very important and should be carried out at the early age of school children as early detection of any type of refractive error would help the children themselves, their parents, and even the whole government to achieve a better life.

Children with anisometropia should be identified and managed as early as possible because any delay could lead to the development of amblyopia also Children who have strabismus should receive treatment either by wearing glasses or attending follow-up appointments with a paediatric strabismologist.