



Myopia Among Children – A Short Review

KEYWORDS

children , myopia

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ABSTRACT

Normal range of myopia does not lead to serious problems but moderate and high myopia sometimes will lead to problems related to vision-threatening side effects. Therefore, the community especially, young parents should be able to recognise early signs of myopia disorder in order to prevent further progressive of myopia. This review involves the causes, symptoms, treatments and diagnosis of myopia disease.

INTRODUCTION

Myopia is the commonest human vision refractive disorder [1]. It has become the norm in the United States and many other countries for being short sightedness with rates as high as 60% [2] in young adults and approximately 80-90% for the school leavers in East Asia [3]. Generally speaking , myopia is much more higher in industrialized countries and in cities compared to rural areas [4]. Nowadays , myopia can be regarded as one of the major factors which can caused loss of vision among children [5].

Myopia that develops among children is commonly known as youth or juvenile onset myopia [6]. It is categorized under simple myopia and once it develops in a child , it almost will increase in severity [7]. Usually, the progression of myopia among children will slow down in the middle to late teenagers [8] .

Myopia can give negative impacts towards childrens' school performance , reduce employability and productivity , and it will also negatively impair quality life of the children [9]. Provision of appropriate spectacles is one of the ways to correct myopia . Most of the parents used this way to overcome myopia among their children because it is one of the simplest and effective ways compared to others [10]. Other than that, contact lens and refractive surgery can also be done to correct the refractive errors [11].

Increasing in the prevalence of myopia over the past few decades caused the concern among the public and scientific community to increase as well [12]. Myopia among children has become a significant problem due to their ability in visual morbidity as well as the risk for vision threatening conditions like myopic macular degeneration, cataract, glaucoma and retinal detachment. Apart from that, uncorrected myopia among children can also cause difficulties to see distant objects clearly especially to see blackboard during learning process in class [13].

CAUSES OF MYOPIA AMONG CHILDREN

One of the causes of myopia disease is due to genetic factor. Parents with myopia tend to influence their children to have myopia too [14]. The chance of the children to develop myopia is higher with two parents with myopia compared to children with only one parent with myopia [15].

Other than that, near work involving reading, writing , use

of computer and playing video games showed strong association with the development of myopia among children [16]. Children that suffer myopia usually spend their time more on reading, homework , using computer and attending more classes compared to those who have lower myopia or nonmyopes. Children that spend time less for outdoor activity also tend to be a myopic [17].

COMMON SIGNS, SYMPTOMS AND COMPLICATIONS

The commonest symptom for myopia is by having blurred distance vision [18]. Children that suffers simple myopia are usually not realised that they have reduced distance vision until they aware that other children can see better than them. For example, many school children may have difficulty on reading the chalkboard when compared to their other friends. For some children, poor distance vision is first detected either during vision screening or vision examination [18]. Reduced unaided distance visual acuity became the primary sign of myopia which can be corrected to standard levels based on suitable power optical correction [19]. A child with short sightedness may also complain about having headaches, eyestrain and fatigue when they need to focus on something more than a metre. They will also need to move closer to the objects to see them more clearly [20].

DIAGNOSIS OF MYOPIA AMONG CHILDREN

Diagnosis of myopia disease among children can be examined based on a child's unaided vision and it is confirmed by some techniques. Additional testing is required to determine type and extent of myopia among children. The test involves examination of the child's binocular vision , movement of the eye, his capability to converge and focus on object in a close distance as well as his ocular health. The dilation of the eye is required to determine for the complications of diabetes or degenerative myopia. Other than that, examination on the dilation of the eye is needed to confirm whether the child really suffer myopia or not since children are capable of over focusing [21].

TREATMENT OF MYOPIA AMONG CHILDREN

Optical Correction

Optical correction can be either in form of wearing spectacles or contact lens. Both methods can provide a clear distance vision. Wearing spectacle is more preferable compared to wear lens for a child with myopia because spectacles can provide some eye safety. In addition, spectacles need less accommodation compared to using lens [18].

CONCLUSION

In conclusion, myopia disease is common disease among children due to various factors.. There are many symptoms that can be seen when the children suffer this disease . Therefore, early diagnosis and treatment should be now strongly advocated in order to reduce the complications towards the children. Other than that , the children may also develop better quality of life if it is cured at early stage.

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