

Special Issue on

Myopia: Risk Factors, Disease Mechanisms, Diagnostic Modalities, and Therapeutic Options 2019

CALL FOR PAPERS

Myopia is a global problem, being particularly prevalent in the urban areas of east and southeast Asia. It is estimated that 2.5 billion people will be affected by myopia within the next decade. In addition to the economic and social burdens, associated ocular complications may lead to visual impairment. Myopia has a diverse etiology, with both environmental and genetic factors believed to be involved in the myopia's development and progression. Genetic linkage studies have mapped the dozen loci, while association studies have found more than 70 different genes. Many of these genes are involved in common biological pathways to known to mediate extracellular matrix composition and regulate connective tissue remodelling. Other associated genomic regions suggest novel mechanisms in the etiology of high myopia, such as mitochondrial-mediated cell death and photoreceptor-mediated visual signal transmission. The environmental factors implicated in myopia include near work, light exposure, lack of physical activity, diet, a higher level of education, and urbanization. The interactions between genes and environmental factors may be significant in determining individual risks of high myopia and may help explain the pathogenetic mechanisms of myopia in human population.

In the past years, various techniques had been used to study ocular blood in myopia, such as fluorescein angiography (FA), indocyanine green angiography (ICGA), color Doppler imaging (CDI), optical coherence tomography (OCT), and optical coherence tomography angiography (OCTA). These tools provide a noninvasive and quantitative approach for monitoring choroidal and retinal changes in pathologic myopia. OCTA especially is an imaging technique that enables high-speed, high-resolution, and depth-resolved imaging of the retinal and choroidal vasculatures in myopia related complications diagnosis such as chorioretinal atrophy and choroidal neovascularization (CNV).

Most nearsighted patients see marked improvement with treatment including corrective lenses, corneal refractive therapy, and refractive surgery. Early treatment of myopia can prevent social and academic difficulties that can accompany poor vision.

We invite investigators to contribute high quality research papers as well as review articles addressing recent advances on risk factors, disease mechanisms, diagnostic modalities, and therapeutic options in myopia.

Potential topics include but are not limited to the following:

- ▶ Genetic and environmental factor in myopia
- ▶ Pathogenetic mechanisms in the development of myopia
- ▶ New insight on diagnostic modalities
- ▶ Myopic tractional maculopathy including foveoschisis, lamellar macular hole, and macular retinal detachment
- ▶ Ocular blood flow parameters in myopia
- ▶ Myopic choroidal neovascularization
- ▶ Advances in prevention of myopia
- ▶ Insight on surgical and nonsurgical techniques for treatment of myopia
- ▶ Current approaches to refractive corrections of myopia

Authors can submit their manuscripts through the Manuscript Tracking System at <https://mts.hindawi.com/submit/journals/joph/mrdto19/>.

Papers are published upon acceptance, regardless of the Special Issue publication date.

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