OPEN ACCESS Freely available online

ISSN: 2684-1622
Journal of Eye Diseases and Disorders

Perspective

Comprehensive Management of Pediatric Glaucoma

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DESCRIPTION

Pediatric glaucoma is a rare but significant ocular condition that affects children and adolescents. It is characterized by increased Intraocular Pressure (IOP) and can lead to irreversible vision loss if left untreated. While the management of the affected eye is crucial, understanding the role and implications of fellow eyes in pediatric glaucoma is equally important. In this article, we will delve into the concept of fellow eyes, explore their characteristics and challenges, and discuss the implications for diagnosis, treatment, and long-term management of pediatric glaucoma. Fellow eyes refer to the eyes that are not primarily affected by glaucoma but exist in the same individual with pediatric glaucoma. They may appear healthy or show signs of subclinical disease, making their evaluation critical for comprehensive management. Fellow eyes are at an increased risk of developing glaucoma due to shared genetic, anatomical, and physiological factors. Pediatric glaucoma often presents with significant asymmetry between the affected and fellow eyes. The fellow eye may have normal IOP, normal optic nerve appearance, and visual field function, making it challenging to identify subtle changes that could indicate subclinical disease progression. Several risk factors increase the likelihood of fellow eye involvement in pediatric glaucoma. These include genetic predisposition, anatomical abnormalities, family history of glaucoma, and the presence of certain syndromes or systemic conditions. Close monitoring of fellow eyes is necessary to detect early signs of glaucoma development. Amblyopia is a common concern in pediatric glaucoma. The fellow eye may develop amblyopia due to sensory deprivation caused by the affected eye's high IOP or other factors such as anisometropia (difference in refractive error between the two eyes). Early detection and prompt treatment of amblyopia are vital for maximizing visual potential in the fellow eye. A thorough ophthalmic examination, including visual acuity assessment, IOP measurement, gonioscopy, optic nerve evaluation, and visual field testing, should be performed in both the affected and fellow eyes. This allows for a baseline assessment and helps identify any abnormalities or signs of glaucoma progression. Imaging modalities such as Optical Coherence Tomography (OCT) and optic disc photography aid in evaluating the optic nerve and retinal nerve fiber layer thickness. These non-invasive techniques provide objective measurements, aiding in the detection and monitoring of subtle changes in the fellow eye. In some cases, medical therapy may be initiated in the fellow eye to prevent or delay the onset of glaucoma. Medications such as topical prostaglandin analogs or carbonic anhydrase inhibitors may be prescribed to lower IOP and reduce the risk of disease progression. Fellow eyes with subclinical disease or progressive glaucoma may require surgical intervention to control IOP and preserve vision. Procedures such as trabeculectomy, tube shunt implantation, or Minimally Invasive Glaucoma Surgery (MIGS) can be considered depending on the specific clinical situation. Regular follow-up visits are crucial for monitoring the fellow eye in pediatric glaucoma. The frequency and intensity of follow-up may vary based on the individual's age, severity of glaucoma, and the presence of associated conditions. Serial assessments of IOP, optic nerve appearance, visual field testing, and imaging are essential for early detection of changes and appropriate intervention.

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Received: 15-May-2023, Manuscript No. JEDD-23-21860; **Editor assigned:** 18-May-2023, Pre QC No. JEDD-23-21860 (PQ); **Reviewed:** 01-Jun-2023, QC No JEDD-23-21860; **Revised:** 08-Jun-2023, Manuscript No. JEDD-23-21860 (R); **Published:** 15-Jun-2023, DOI: 10.35248/2684-1622.23.8.202

Citation: Wulandari C (2023) Comprehensive Management of Pediatric Glaucoma. J Eye Dis Disord. 8:202.