

**Sohag University**

**Faculty of Medicine**

**Department of Ophthalmology**

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**Long term evaluation of Primary Congenital  
Glaucoma Management in Sohag University  
Hospital**

**Presented by**

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**2021**

## **Introduction:**

Primary congenital glaucoma is the most frequent childhood glaucoma and an important cause of blindness(1), PCG due to genetically determined abnormalities in trabecular meshwork and anterior chamber angle in absence of other eye and systemic developmental problems, resulting in elevated intraocular pressure.(2)

Elevated IOP is associated with classic triad of symptoms (photophobia, epiphora and blepharospasm) which occur due to rapid expansion of the eye causing buphthalmos (Greek "ox eye"), corneal enlargement, horizontal or oblique breaks in Descemet membrane (Haabstriae) and subsequent corneal edema and opacification. If Haabstriae and buphthalmos are seen without elevated IOP, optic nerve cupping or corneal edema, then the patient has spontaneous arrested PCG.(2) PCG is bilateral in 65-80%. (3)

Genetic consanguinity is a risk factor. Parents of PCG patient should be aware that the chance of second child with PCG is small but real.(4)

The management of PCG is directed toward lowering and controlling the IOP and treating secondary complications such as refractive changes and amblyopia. If IOP controlled, vision in the better eye ultimately can be 20/60 or better.(5)

The treatment is surgical mainly and the medical therapy used as an adjunction to surgery, the primary goal of all surgical procedures is to eliminate the resistance to aqueous outflow caused by the anatomical anomaly in the anterior chamber angle.(6)

There are four major surgical options, angle surgeries aim to open up the drainage system of the eye either from inside (goniotomy), or the outside (trabeculotomy or viscocanalostomy). Filtrating surgeries involve making a new drainage pathway for the eye (trabeculectomy, deep sclerectomy and using glaucoma drainage devices). Cyclodestructive procedure and combined surgeries.(2)

The mainstay is angle surgery if not successful, trabeculectomy enhanced with mitomycin C or implant surgery.

Mitomycin C is an antimetabolite used during the initial stages of trabeculectomy to prevent excessive postoperative scarring and this reduces risk of failure.(7)

Ologen is a flexible bio-degradable collagen matrix of animal origin, efficacy seems to be at least similar to that of MMC with advantage of being removed in case of hypotonia and the filtration blebs are flat and vascularized without increasing risk of hypotonia, infection or bleb leak. (8)

The prognosis for children with PCG is quite variable, with some achieving good vision, while others go blind.(4) Vision loss secondary to corneal scarring or optic nerve damage, and often amblyopia in asymmetrical or unilateral cases.(9)

## **Aim of the work:**

The purpose of the present study is evaluation of management and success rate of the cases of primary congenital glaucoma in pediatric out patient clinics at Sohag university hospital.

## **Patient and methods:**

This is a retrospective, case series study of cases of primary congenital glaucoma presented to pediatric out patient clinics at Sohag university hospital for evaluation and management.

### **Inclusion criteria:**

-children with operated PCG >3 month of age

### **Exclusion criteria**

-other types of operated pediatric glaucoma

### **Reviewing each patient data sheet that includes :**

-detailed history : age , sex , onset and family history.

-examination under general anaesthesia including :

a-Anterior segment examination: transverse corneal diameter, corneal clarity, corneal edema and presence of Haab striae.

b-IOP measurement: the main diagnostic test, done under anaesthesia using Perkins tonometer .

c-Gonioscopy: detect angle abnormalities to exclude secondary glaucoma.

d-Cycloplegic refraction to look for myopia and astigmatism.

e-Axial length by A-scan ultrasonography.

f-optic nerve evaluation by direct or indirect ophthalmoscopy attention to cup to disc ratio.

g-B-scan if cornea does not allow fundus examination.

h-Informed consent will be taken from parents of these children .

i –Approval from the Health Research Ethics Committee in sohag faculty of medicine .

j –IOP followup and vision.

### **Follow-up regimen :**

At different follow up period was recorded .

### **List of abbreviations:**

PCG: primary congenital glaucoma.

IOP: intraocular pressure.

MMC : mitomycin C.

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