



Aniridia

• *Traumatic Aniridia* .

• *Congenital Aniridia* :-

- Bilateral
- Total or partial iris tissue hypoplasia
- May be associated with other ocular defects
- May have life-threatening associations .



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Classification of congenital aniridia

1. AN-1 is AD , 65% of cases , associated with mutations in PAX6 located on chromosome 11p13 ,associated with other ocular manifestations.
2. AN-2 (Miller Syndrome) is *sporadic* ,30% of cases, have the WAGR association of *Wilms tumor* (nephroblastoma) , Aniridia , Genitourinary abnormalities, and mental Retardation.
3. AN-3 (Gillespie syndrome) is AR , associated with mental handicap, cerebellar ataxia.

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Patient presentation

- Photophobia.
- Rapid involuntary movement of the eyeball.
- Reduced visual acuity.
- Ocular discomfort and pain.
- Life quality .



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Clinical features

- Iris hypoplasia (variable in severity)
- Cornea:
 - keratopathy(AAK) due to limbal stem cell deficiency(90% of cases)
 - increase central corneal thickness, superficial vascularization, Progressive opacification.
 - other lesions: microcornea , epibulbar dermoids ,sclerocornea.



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Clinical features

- **LENS:**
 - 50-85% develop cataract by early adulthood.
 - Subluxation due to weak zonules (usually superior).
 - Congenital aphakia , persistent pupillary membrane
- **Fundus:**
 - Foveal hypoplasia (90% of cases, poor VA, nystagmus)
 - Optic nerve hypoplasia in about 10% of cases.



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Clinical features

- **Glaucoma**
is common due to angle abnormalities. gonioscopic examinations found that initially the stroma of the iris extends onto the trabecular meshwork forming synechia-like attachments, followed by a more homogeneous sheet, eventually resulting in angle closure.



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How to manage ?

Objective target

- Overcome the photophobia.
- Correct the refractive error.
- Remove the cataract (up to 85% of cases).
- Leave the angle undisturbed

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Refractive options:

- **Lens in Place:**
 - In-the-bag lens implantation in cases without lens dislocation
 - Use of opaque intracapsular rings to produce an artificial pupil or use of a large intraocular lens with a clear central optic and an opaque periphery
- **Lens mildly displaced:**
 - In-the-bag IOL placement with intracapsular rings.
- **Grossly dislocated:**
 - Lens extraction followed by artificial pupil scleral-fixated posterior chamber lens
 - Lens extraction followed by contact lens correction



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Morcher Rings:

- ❖ Morcher Aniridia Implants are used to treat Aniridia and can be implanted in the bag.
- ❖ **There are 4 types of these implant:**



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Traumatic Aniridia



Congenital Aniridia



In the bag implantation Allows in the bag IOL implantation and Does not disturb the angle components when implanted successfully

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Post Op:

Traumatic Aniridia

- UCVA 6/9 (1/60 pre-op).
- IOP 14 mmHg on the 30th day follow up.



Congenital Aniridia

- UCVA 6/18 (2/60 pre-op).
- Nystagmus abolished.
- Photophobia dramatically improved (corneal component must be addressed).
- IOP 18 mmHg on the 30th day follow up.



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Thank You

• *Engy Abd El-Malak*

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