

17TH INTERNATIONAL CONFERENCE OF THE
RESEARCH INSTITUTE OF OPHTHALMOLOGY

RIO 2025

*Anterior Segment Eye Diseases
Current Status & Future Directions*

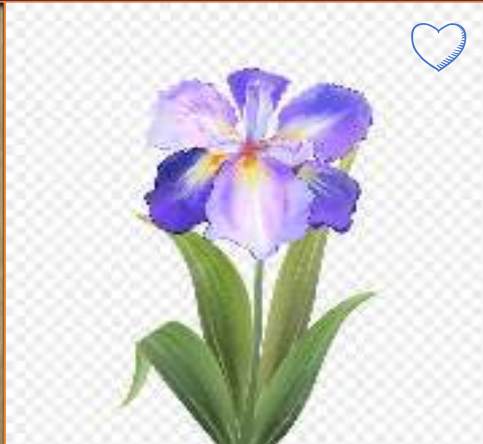


The Answer is in the Iris

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MSc. FICO. MRCS. Ed





Cost Structure

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Presentation:-

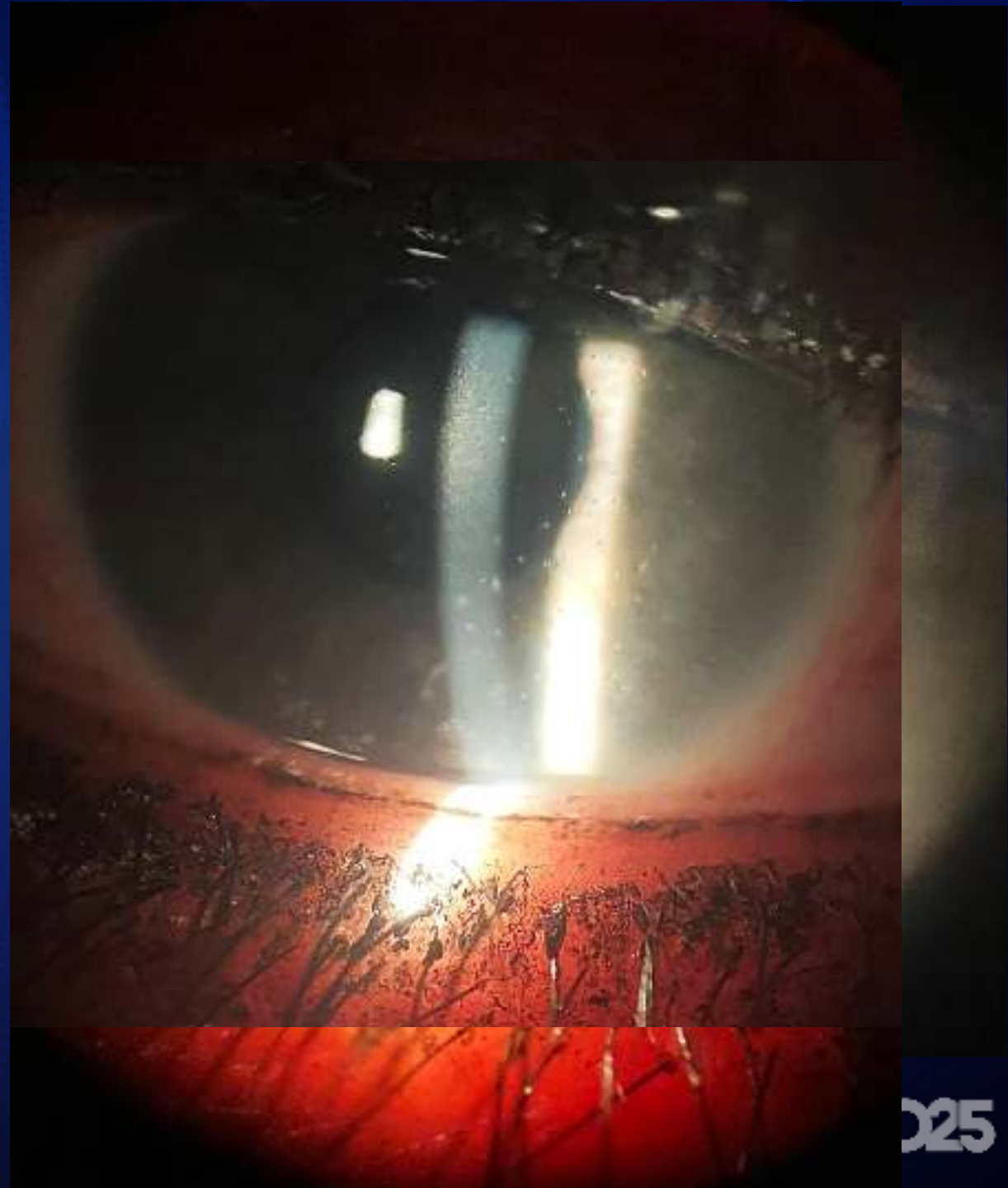
History:

- ❑ 45 years old female.
- ❑ Unilateral decreased vision of few months duration.
- ❑ Night sweats and rigors.
- ❑ Weight loss 12 kg in few months.

Presentation:-

Examination:

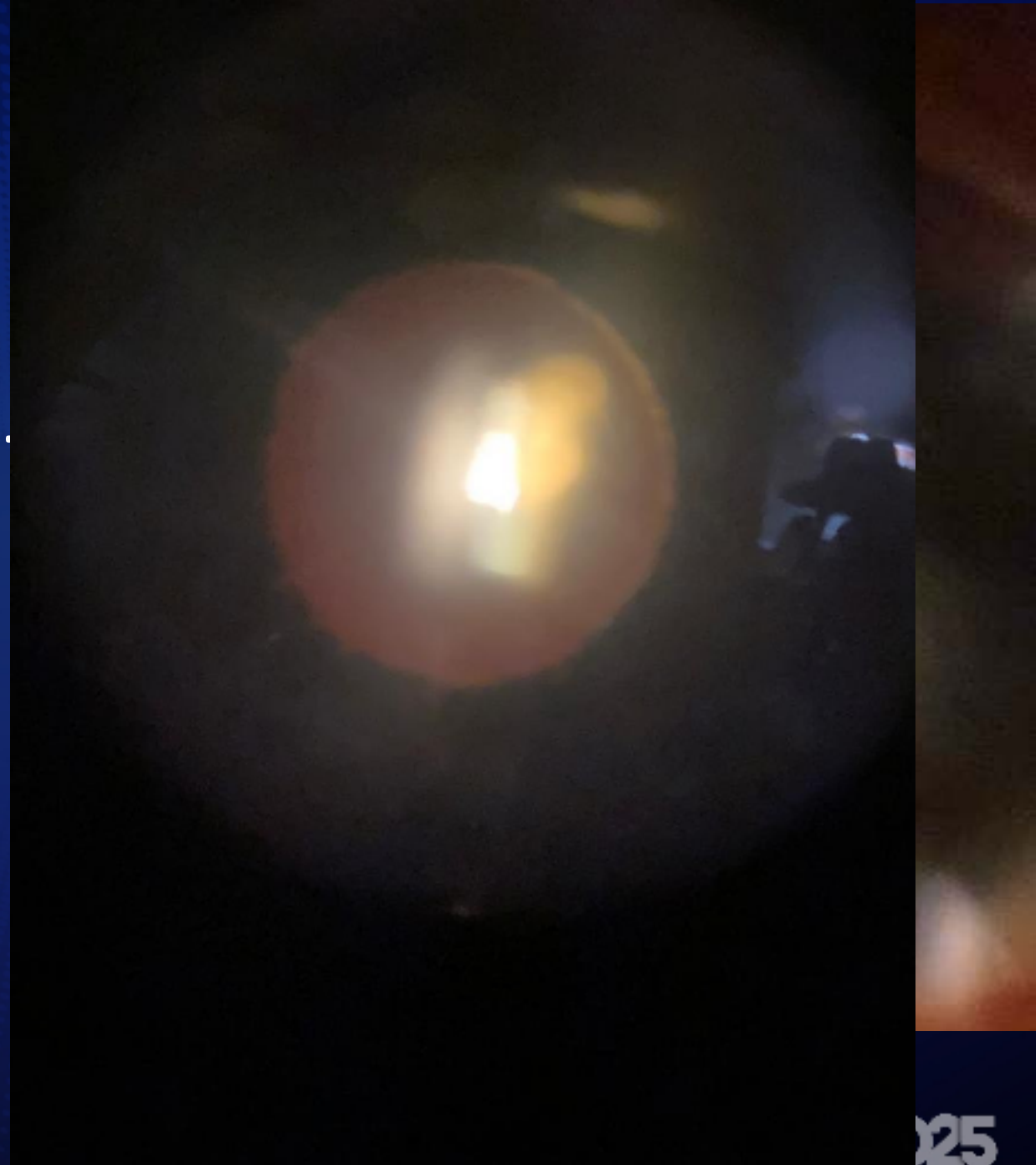
- ❑ Visual acuity Right eye 0.7 left eye 0.4.
- ❑ **Left** Medium sized Kps.
- ❑ Cells +1 Flare +1.



Presentation:-

Examination:

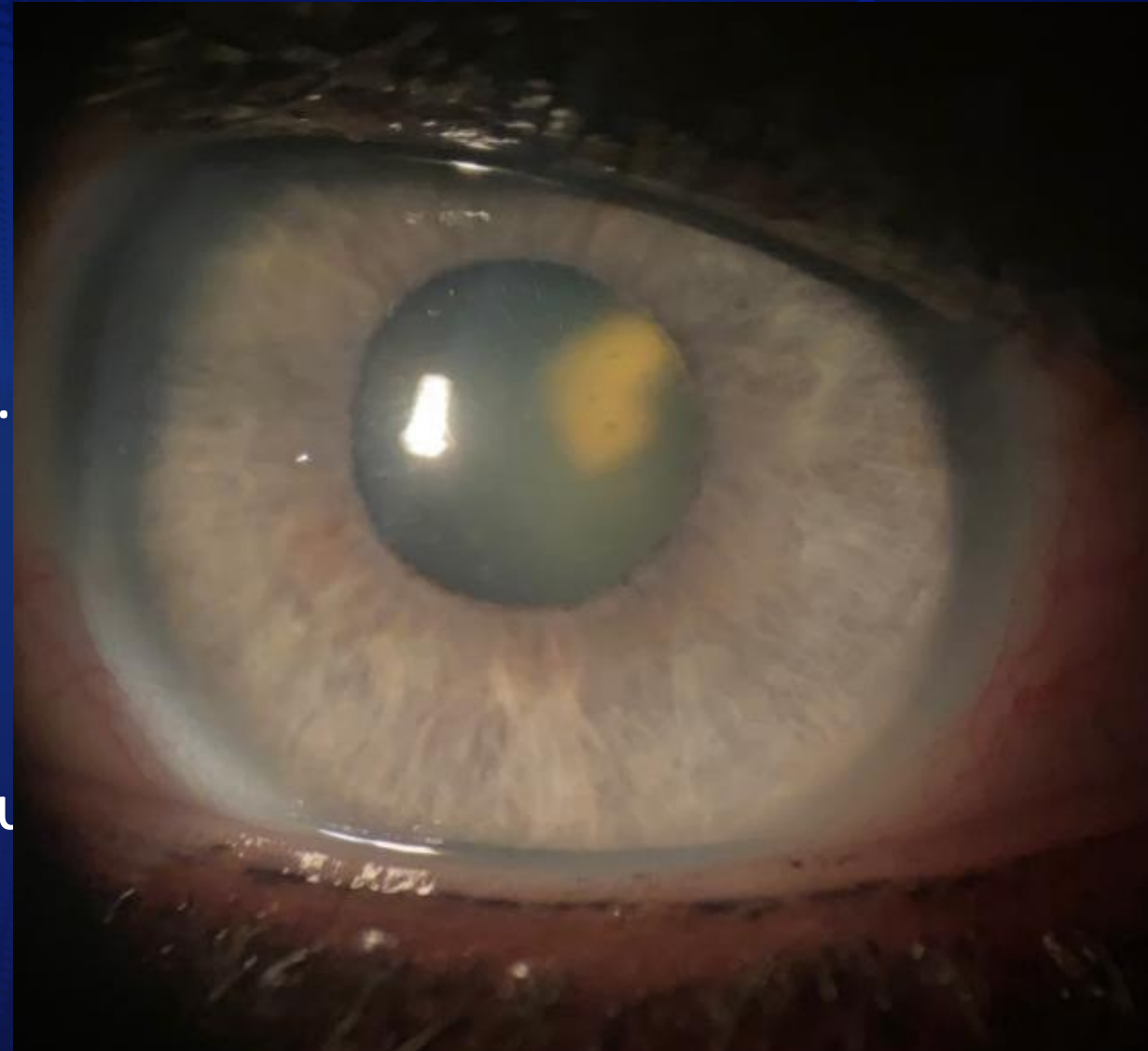
- ❑ Visual acuity Right eye 0.7 left eye 0.
- ❑ **Left** Medium sized Kps.
- ❑ Cells +1 Flare +1.
- ❑ Atrophic iris margins.



Presentation:-

Examination:

- ❑ Visual acuity Right eye 0.7 left eye 0.
- ❑ **Left** Medium sized Kps.
- ❑ Cells +1 Flare +1.
- ❑ Atrophic iris margins.
- ❑ Nuclear cataract +Posterior subcapsular
- ❑ IOP:12 and 14 mmHG



Presentation:-

Examination:

- ❑ Visual acuity Right eye 0.7 left eye 0.4.
- ❑ **Left** Medium sized Kps.
- ❑ Cells +1 Flare +1.
- ❑ Atrophic iris margins.
- ❑ Nuclear cataract +Posterior subcapsula
- ❑ IOP:12 and 14 mmHg.
- ❑ Fundus examination NAD.



Presentation

Summary

	Right	Left
VA	0.7	0.4
Anterior Segment		
Cornea	NAD	Medium sized and stellate diffuse KPs
AC	No cells or flare	+1
Iris and pupil	RRR	Atrophic iris margins no synechiae
Lens	clear	Nuclear and posterior subcapsular cataract
Posterior Segment		
Vitreous	clear	No cells
Retina	NAD	NAD
Optic nerve	Peripapillary atrophy	Peripapillary atrophy

Investigations

CBC	ESR	CRP	kidney and liver functions	ACE.	QuantiFERON TB Gold test	CT chest
• Normal	• First hour 40 • Second hour 80	• Normal	• Normal	• Normal	• Negative	• shows mild bilateral gravitational lung changes but otherwise no abnormality detected.

A picture is worth a thousand words



Differential Diagnosis

- Other causes of anterior uveitis should be ruled out if possible
- uveitis associated with herpes infection.
- Posner-Schlossman Syndrome (glaucomatocyclitic crisis)
- Other causes of heterochromia :
 - congenital Horner's syndrome.
 - Waardenburg's syndrome.
 - congenital iris heterochromia.
 - oculodermal melanosis.
 - diffuse iris melanoma.
 - siderosis.
 - extensive rubeosis.

Fuchs Uveitis

Classification Criteria for Fuchs Uveitis Syndrome

THE STANDARDIZATION OF UVEITIS NOMENCLATURE (SUN) WORKING GROUP^{1,2,3,*}

Classification Criteria for Fuchs Uveitis Syndrome

THE STANDARDIZATION OF UVEITIS NOMINCLATURE (SUN) WORKING GROUP^{1,2,3,4}

Classification Criteria for Fuchs Uveitis Syndrome

Criteria

1. Evidence of anterior uveitis
 - a. anterior chamber cells
 - b. if vitreous cells are present, anterior chamber inflammation also should be present
 - c. no evidence of active retinitis

AND

2. Unilateral uveitis

AND

3. Evidence of Fuchs uveitis syndrome
 - a. heterochromia OR
 - b. unilateral diffuse iris atrophy AND stellate keratic precipitates

AND

4. Neither endophthalmitis nor nodular, coin-shaped endothelial lesions

Exclusions

1. Positive serology for syphilis using a treponemal test
2. Evidence of sarcoidosis (either bilateral hilar adenopathy on chest imaging or tissue biopsy demonstrating non-caseating granulomata)
3. Aqueous specimen PCR⁺ positive for cytomegalovirus, herpes simplex virus or varicella zoster virus



Table Differences among the revised diagnostic criteria (RDC), the La Hey criteria and the SUN classification criteria for Fuchs' uveitis syndrome

	The RDC*	The SUN classification criteria	The La Hey criteria†
The change of iris	Diffuse iris depigmentation‡	Heterochromia OR Unilateral diffuse iris atrophy	Diffuse iris stromal atrophy‡ Iris posterior pigment epithelium atrophy§ Heterochromia§
Synechiae	Absence of posterior synechiae‡	—	Absence of synechiae‡
Anterior inflammation	Stellate or medium-sized keratic precipitates OR Minimal cells and flare in the aqueous (1+ or 2+)‡	Stellate keratic precipitates Anterior chamber cells If vitreous cells are present, anterior chamber inflammation also should be present	Characteristic keratic precipitates and/or minimal cells and flare in the aqueous (1+ or 2+)‡
Symptoms	Absence of acute symptoms, generally presenting without severe redness§	—	Absence of acute symptoms (severe redness, pain and photophobia)‡
Vitreous opacities	Vitreous opacities§	—	Vitreous opacities§
Cataract	Cataract§	—	Subcapsular cataract§
Involvement	Mostly unilateral Involvement§	Unilateral uveitis	Unilaterality of the uveitis§
Iris nodule	Characteristic iris nodule§	—	—
Intraocular pressure	—	—	Elevated intraocular pressure§
Fundus	—	No evidence of active retinitis	Chorioretinal lesions§
Others	—	Neither endotheliitis nor nodular, coin-shaped endothelial lesions	—

*All essential findings were required for the diagnosis of Fuchs' uveitis syndrome, and were strengthened by the presence of associated findings in revised diagnosis criteria.

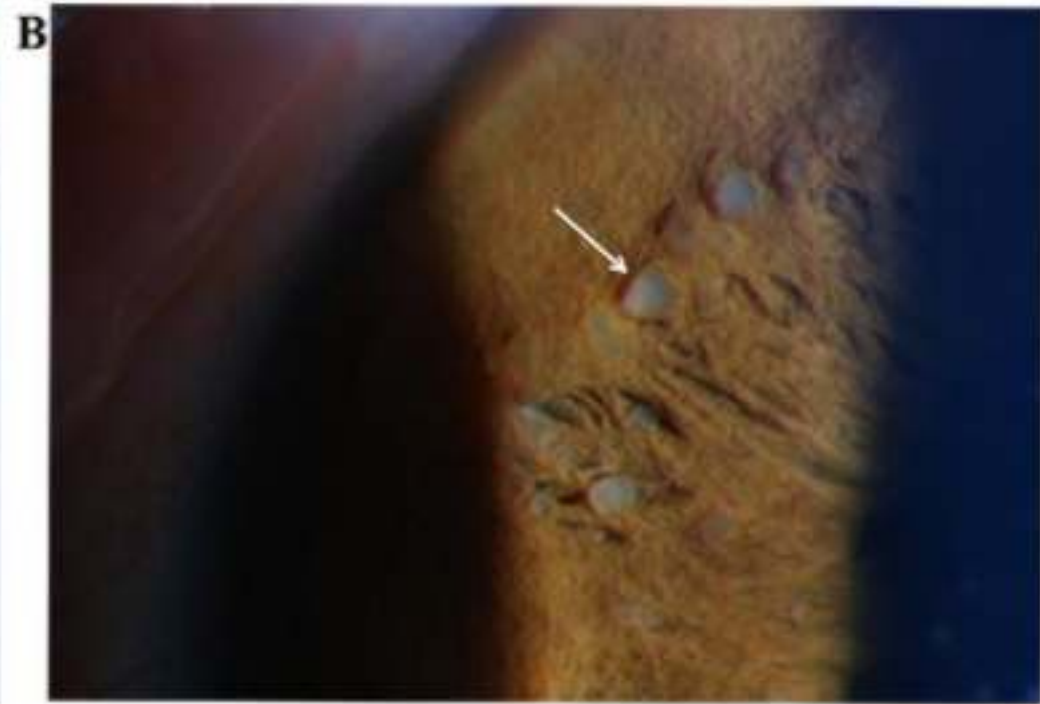
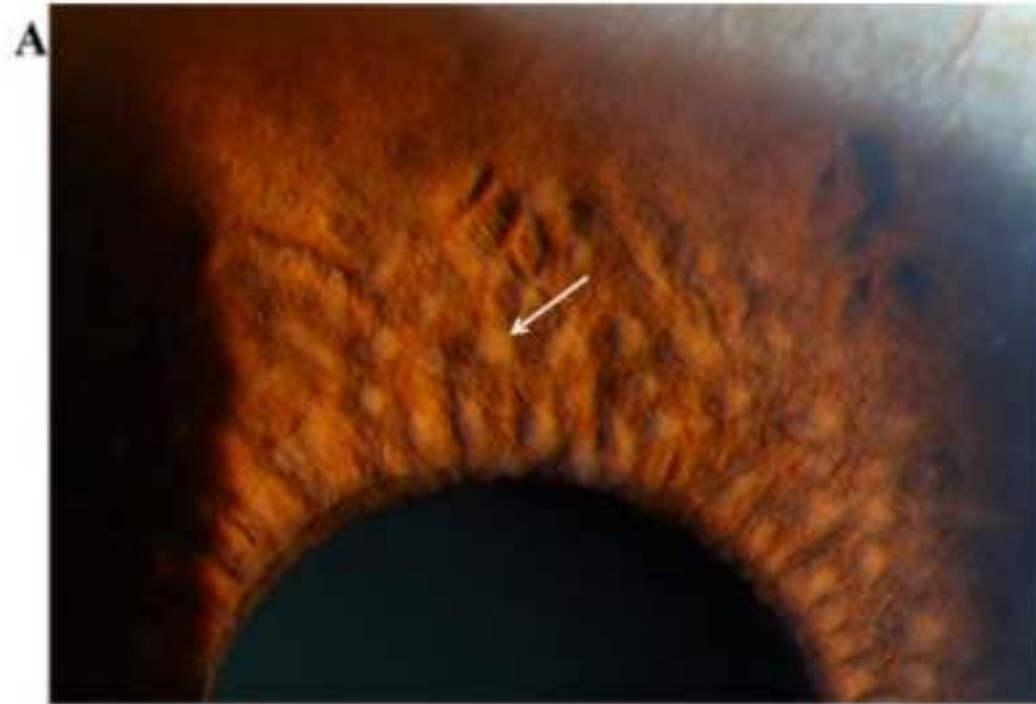
†All essential findings and at least two associated findings must be present in the La Hey criteria.

‡Essential findings in the criteria.

§Associated findings in the criteria.

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Uveitis



Busacca nodules observed in Fuchs' uveitis syndrome

Busacca nodules observed in Fuchs' uveitis syndrome (A) are different from those noted in granulomatous inflammation (B).

Management

Inflammation:

Most cases do not require therapy
good prognosis
No posterior synechiae or persistent
cystoid macular edema
a short-course of topical steroids to
differentiate
long-term steroids are not indicated.

Cataract:

better visual results compared to other forms
of chronic uveitis.
phacoemulsification with PCIOL
The peri-operative management of
inflammation.
Markers of severe disease has a more guarded
post-operative prognosis.

Vitreous opacification:

(PPV) better results in than in those with
other forms of uveitis.

Glaucoma

References

1. <https://doi.org/10.1016/j.ajo.2021.03.052>
2. https://eyewiki.aao.org/Fuchs_Heterochromic_Iridocyclitis
3. Yang P, Zhang W, Chen Z, et al. Br J Ophthalmol Epub ahead of print: doi:10.1136/ bjophthalmol-2021-319343

Thank you