FUCHS' HETEROCHROMIC IRIDOCYCLITIS COMPLICATED BY HYPERTONIA: A CASE REPORT

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ABSTRACT

Fuchs' heterochromic iridocyclitis or Fuchs' syndrome is a fairly common etiology of uveitis, but its pathophysiological mechanism remains poorly understood. The positive diagnosis remains clinical. Ocular hypertonia can complicate the disease, necessitating medical management and sometimes recourse to trabeculectomy. We report the case of a young patient with Fuchs heterochromia complicated by ocular hypertonia.

Keywords : *Heterochromic iridocyclitis -uveitis-hypertonia*

1. INTRODUCTION

Ocular hypertonia is a major complication of ocular inflammation, which can rapidly lead to blindness. Several pathophysiological mechanisms may be responsible, with Fuchs' heterochromic iridocyclitis representing one etiology of unilateral post-inflammatory hypertonia.

2. OBSERVATION

This is a 35-year-old patient with no notable pathological history, who consulted us for a progressive decrease in visual acuity in the left eye that had been evolving for more than six months, without pain or redness. Ophthalmological examination of the affected eye revealed finger-counting visual acuity, corrected eye tone of 27 mmHg, cornea with fine, whitish, stellate retrodescemetic precipitates (Figure 1), minimal Tyndall in the anterior chamber marked by a cross, diffuse iris atrophy giving a hypochromic appearance of the iris (Figure 2), dense subcapsular cataract (Figure 3), and the posterior pole was inaccessible. Examination of the adelpheye was unremarkable, with visual acuity of 10/10. Gonioscopy was performed, revealing a 360° open angle. Ocular ultrasound revealed hyalitis of the left eye with a flat retina.

The patient was treated locally with a non-steroidal anti-inflammatory agent and a hypnotic agent combining a carbonic anhydrase inhibitor and a beta-blocker. The course was marked by regression of the anterior segment inflammation and normalization of ocular tone.

Regular follow-up and postoperative functional and structural explorations of the optic nerve were requested, with no particular findings.

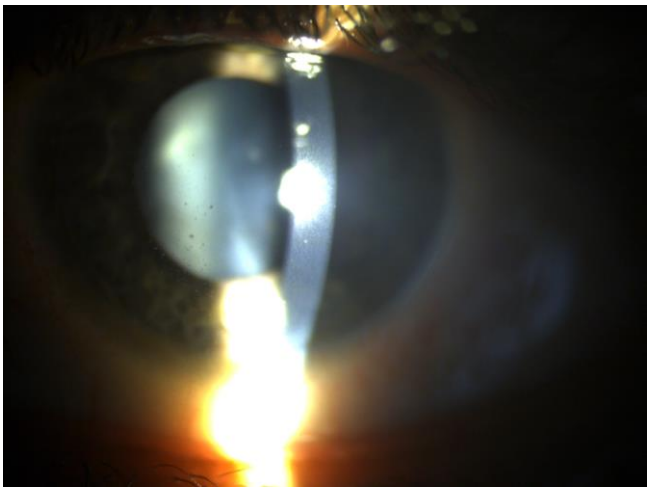

Figure 1. cornea with fine, stellate retro-descemetic precipitates

Figure 2. slit lamp image of posterior subcapsular cataract

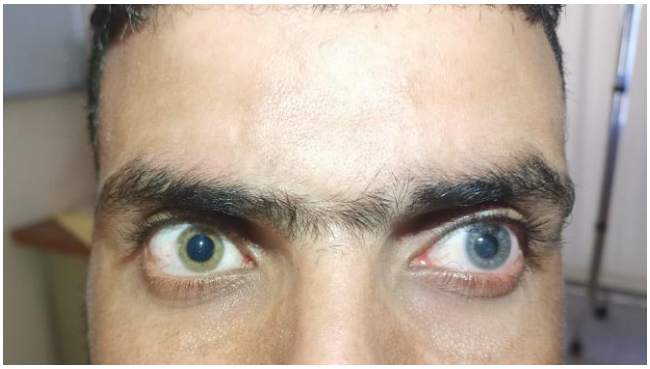

Figure 3. diffuse iris atrophy of the left eye

3. DISCUSSION

Fuchs' heterochromic uveitis or Fuchs' heterochromic iridocyclitis, or Fuchs' syndrome (as heterochromia is not always present), is a fairly frequent etiology of uveitis. Its frequency in hypertensive uveitis varies from 1.1% to 6.2%, with a slight male predominance [1]. The pathogenesis is still unclear, and several theories exist, none of which fully explains the cause: genetic, traumatic, neurological, parasitic (toxoplasmosis, toxocariasis), viral (HSV, rubella, CMV) factors [2-3-4-5-6]. The disease begins insidiously between the ages of 10 and 20, but symptoms appear late (generally between 30 and 40), with constant and variable signs.

Constant signs or major criteria are the chronicity of clinical signs, stellate retro-corneal precipitates (RCPs), moderate anterior chamber inflammation, absence of ocular redness, posterior synechiae, response to local corticosteroid therapy, and known systemic diseases [7-8]. Unilateral involvement (84-96%) is one of the variable signs or minor criteria [9-10-11].

The examination is carried out on undilated pupils, in ideal daylight or near-light conditions, and the iris heterochromia is variable (40-100%) and characterized by progressive, global iris atrophy. Comparing photographs of the iris can be helpful, with the brighter photograph indicating the affected eye [9-10].

- Irial nodules are present in 20-30% of patients. In the initial phase of the disease, they are often small and transparent. Koeppe's pseudo-nodules may appear at the edge of the pupil, and Busacca's pseudo-nodules on the anterior surface of the iris [12-13-14].

Retrocorneal precipitates are distributed over the entire surface of the corneal endothelium in two types: fine dendritic or stellate, and very fine filaments between them [8-15].

- The cataract is of late onset, of the posterior subcapsular type, characterized by the absence of inflammatory rebound post-surgery [16].

- Vitreous opacities are not very numerous, especially in the anterior vitreous, but they can be troublesome for the patient. In such cases, vitrectomy is not recommended, but there is no inflammatory rebound after surgery [17].

Amsler's sign is a hyphema caused by bleeding from the vessels of the iris or ciliary body after paracentesis (cataract surgery or trabeculectomy) but can also appear after minimal trauma, applanation tonometry, peribulbar anesthesia, or spontaneously. Its cause remains unknown [18]. Diagnosis of Fuchs syndrome is purely clinical, and no specific tests exist.

Fuchs' heterochromic iridocyclitis is a chronic disease with no cure (no corticosteroid or cycloplegic therapy). Topical NSAIDs are not very effective; hypotensive agents are prescribed. Cataracts are operated on by phacoemulsification with mini-incision (to avoid Amsler sign). In the case of glaucoma uncontrolled by medical treatment, filtering surgery using 5FU or mitomycin becomes necessary.

Given the minimal intensity of inflammation, disease progression is extremely slow. Six-monthly follow-up is usually sufficient, particularly to monitor eye pressure. In 40% of patients, the visual acuity (VA) is maintained at over 5/10 [19]. Causes of reduced visual acuity include cataracts, vitreous floaters, and secondary open-angle glaucoma.

It is important to note that the majority of cases of Fuchs' heterochromic iridocyclitis do not require anti-inflammatory treatment. Local corticosteroid therapy does not resolve the inflammation. Surgical management of cataracts poses no particular problems.

4. CONCLUSION

It is important to note that the majority of cases of Fuchs' heterochromic iridocyclitis do not require anti-inflammatory treatment. Local corticosteroid therapy does not resolve the inflammation. Surgical management of cataracts poses no particular problems.

CONFLICTS OF INTEREST

All authors declare that they have no conflicts of interest.

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