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Case Report

Case Report: Bilateral Acute Anterior Uveitis with Hypopion in Children: About One Case at Yaounde Application and Reference of the Armed Forces Hospital

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Abstract

Introduction: Uveitis is defined as inflammation of the uveal tract which includes iris, ciliary body, and choroid. the presentation of uveitis in children is often "silent", with few warning signs, and few functional complaints on the part of the children, frequently leading to significant diagnostic delays causing poor vision or even blindness We report a case of recurrent bilateral acute anterior uveitis with hypopion in a young boy of 11-year-old that posing a problem of etiological diagnosis.

Medical Observation: The patient consulted for a reduced in bilateral visual acuity which had progressed for 5 days. He reported three past episodes of bilateral acute hypopion anterior uveitis separated by approximately 8 months each. On ophthalmologic examination far visual acuity was 4/10 in both eyes, mild conjunctival hyperemia, ciliary injection with fine retrodeskemetic precipitates not granulomatous, a hypopion and 3+ Tyndall in anterior chamber in both eyes. Intraocular pressure was normal (07 mmHg) in both eyes. After dilation, there was 2+ anterior hyalitis but the rest of the fundus was normal. The diagnosis of recurrent bilateral acute anterior uveitis with hypopion non-granulomatous and non-hypertensive was made. An aetiological assessment included infectious assessment and dosage of HLA B27 was done. No aetiology was found in this patient. Most uveitis in children are idiopathic but Juvenile idiopathic arthritis has been described as the primary aetiology of anterior uveitis in children.. The management of uveitis consisted of local and general steroidal anti-inflammatory drugs and cycloplegics. After a follow-up of six months, the evolution was favorable.

Conclusion: Uveitis are rare pathologies in children but not diagnosed and untreated, can cause serious sequelae such as blindness.

Keywords: Acute Anterior Uveitis; Hypopion

Introduction

Uveitis is intraocular inflammation specifically affecting one or more of the three parts of the eye that make up the uvea: the iris (the colored part of the eye), the ciliary body (behind the iris, responsible for manufacturing the fluid inside the eye) and the choroid (the vascular lining tissue underneath the retina). Uveitis might also be known as iritis or iridocyclitis, depending on which part of the eye is affected by inflammation The incidence and prevalence of uveitis are respectively 17-50/100,000 inhabitants and 35-204/100,000 inhabitants. Uveitis in children represents 5 to 10% of all uveitis [1,2]. In Cameroon, Bella., *et al.* found a low frequency of uveitis of 0.7% out of 5420 consultations with a predominance of male between 10 to 57 years old [3]. The causes of uveitis are extremely varied. The etiologies of uveitis are distinguished according to their infectious or inflammatory origin. They can be part of a systemic

disease or an isolated ocular disease. The particularity of uveitis in children comes from the specificity of certain aetiologies (juvenile idiopathic arthritis) and they are responsible for amblyopia (children <7 years). In our context, childhood uveitis poses a problem of aetiological diagnosis and management. The visual prognosis is often reserved. We present a case of recurrent bilateral anterior uveitis with hypopion in a young boy of 11-year-old.

Medical observation

We presented a young child of 11-year-old child, student, who came to consult for eye pain, redness and loss of bilateral visual acuity in far vision, evolving for five days. The onset of symptoms would go back to five days before the consultation by far blurred vision associated with slight eye pain and eye redness. Then the child would also noticed a whitish glow in both eyes on the mirror. His personal ophthalmological history was a current optical correction since one year (sphere + 0.50 in both eyes). He would have already been treated twice for acute hypopion anterior uveitis and an episode of bilateral panuveitis since april 2015 treated with antibiotics, antivirals, and steroidal anti-inflammatory drugs. In general, a notion of oral aphthosis two years ago. The ophthalmologic examination revealed a far visual acuity in the two eyes without optical correction of 5/10 and with optical correction of 4/10. In biomicroscopic examination, both eyes showed conjunctival hyperemia, a perilimbic collar, a transparent cornea with fine and non-granulomatous retrodeskemetic precipitates. In the anterior chamber, a 3+ protein tyndall was observed with a lower 1/3 hypopion (Figure 1), pigmentary discharge on the anterior crystalloid and posterior synechiae at 5h in right eye and 6h in left eye. Intraocular pressure was 07 mmhg in both eyes. After dilation, there was 2+ anterior hyalitis but the rest of the fundus was normal.

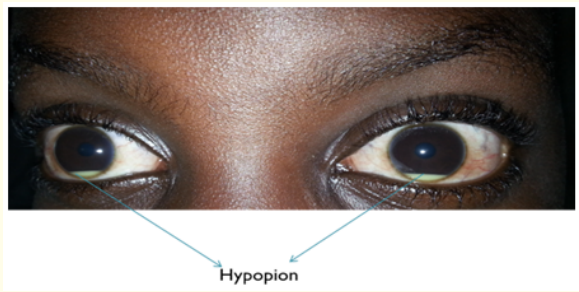

Figure 1: Bilateral hypopion and inflammatory signs in a 13-year-old child (photo taken at the Yaoundé Military Hospital).

The presumptive diagnosis evoked was recurrent acute bilateral anterior uveitis with hypopion non-hypertensive and non-granulomatous. The probable aetiologies were inflammatory and infectious. The assessments done are grouped together in table 1. No aetiology was found in this patient. The working diagnosis retained was recurrent acute bilateral anterior uveitis with hypopion with undetermined aetiology. The management consisted of local steroidal anti-inflammatory eyedrops (dexamethasone and neomycin), general steroidal anti-inflammatory drugs (prednisone 20 mg tab) in decreasing doses and cycloplegics (atropine 1% eye drops). The evolution is marked on the 7th day by the disappearance of the hypopion and inflammatory signs in both eyes (Figure 2). After 21 days, the visual acuity was in RE 6/10 and in LE 9/10, after six months of follow-up we noted 10/10 in both eyes. A check-up was carried out every three months after total regression of the signs.

Biology report	Results
Blood count	Red blood cells increased: 5 millions 800/mm^3, leukocyte formula inversion
VS	H1: 10 mm (N<10 mm), H2: 22 mm (N<20 mm)
VDRL/TPHA	Negative
Total proteins	91.75 g/l (N: 60-80)
HIV serology (1,2,0)	negative
toxoplasmosis serology	IgM negative, IgG positive (240.30 IU/ml)
Rubella serology	IgM negative, IgG 4599 IU/ml
CMV serology	IgM negative, IgG 27 IU/ml
Herpes II serology	IgG negative
Herpes I serology	IgG positive
ECBU	Negative
ANA	Absence
Angiotensin converting enzyme	40 IU/l (normal)
Ag HLA B27 research	Negative
Rheumatology consultation	Absence of inflammatory joint pathology
Chest x-ray	Normal

Table 1: Results of additional examinations requested for the etiological diagnosis of bilateral uveitis.

Figure 2: Evolution on the 7th day: absence of hypopion and inflammatory signs in both eyes (photo taken at the Yaoundé Military Hospital).

Discussion

Childhood uveitis is rare and represents between 2-13% of uveitis. Most often bilateral than that of adults (70 to 80% against 30 to 60%) [4]. The female predominance has been reported (53-55%), the mean age at diagnosis of 12.5 years [4]. In Tunisia, the mean age of patients was 12.6 ± 3.05 years with a predominance of male, uveitis was bilateral in 13% of cases [6]. Our patient was a young boy of 11 years old and presented with bilateral involvement. The International Uveitis Study Group [7] classifies uveitis into four groups : anterior uveitis (30-40%), posterior uveitis (40-50%), intermediate uveitis (10-20%) and panuveitis (5-10%). The diagnostic process is guided by the presentation of the uveitis, characterized by: its location (initial and main site of intraocular inflammation); its presentation: acute or chronic, granulomatous or not, depending on the existence of retinal foci or chorioretinal and depending on response to treatment.

The aetiologies of uveitis in children found by Khalil and S in Morocco are : 33.5% idiopathic, 24.5% Behcet, 12% Juvenile idiopathic arthritis [5]. Chebil., *et al*. in Tunisia found 57.2% idiopathic, 14.1% infectious (toxoplasmosis and toxocariasis) and associated with systemic disease in 22.5%, with juvenile idiopathic arthritis (JIA) in 6.2% of cases [8]. We did not find any aetiology in our patient.

Juvenile idiopathic arthritis (JIA) is the main etiology of anterior uveitis in children [1,2]. The Edmonton International Meeting in 2001 clarified the criteria for each of the six diseases grouped under the name JIA: systemic arthritis; oligoarthritis most common form; polyarthritis with rheumatoid factor; polyarthritis without rheumatoid factor; arthritis and enthesitis; Psoriatic arthritis [9]. Oligoarthritis, the most frequent (50% of JIA), early onset (2-4 years) and predominant in female, is characterized by the frequency of antinuclear antibodies (70% of cases) and the risk of iridocyclitis (30% cases) [9]. JIA-related uveitis is a silent disease and delayed diagnosis is largely responsible for blindness (estimated at 5-6% of cases). It is an anterior, chronic uveitis, begins in one eye and becomes bilateral in 75% of cases in the following year, without symptoms, not granulomatous, with fibrin in the anterior chamber and/or in the vitreous (moderate hyalitis).

The treatment of uveitis depends on the extent of the inflammation: local corticosteroids (with possible periocular injections), local mydriatics to prevent the formation of synechiae and for analgesic effect, hypotensive treatment if necessary. Systemic corticosteroid therapy associated with methotrexate, anti-TNF alpha, immunomodulators can be used if corticosteroid dependence or resistance. The surgery is reserved for complications. The possible complications are the formation of iridocrystalline synechiae, strip keratitis, cataracts, secondary glaucoma, reduced visual acuity or amblyopia. Posterior damage (hyalitis, papillitis, macular edema) has been noted [8,10]. The follow-up of these children should be regular every three months on average to look for recurrences.

Conclusion

Childhood uveitis is a rare, undiagnosed and untreated condition that can lead to serious sequelae such as blindness. Usually there is no etiology found after investigations but juvenile idiopathic arthritis is the first cause of anterior uveitis in children.

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Conflict of Interest

This work does not present any conflict of interest.

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