

# Anterior uveitis in Bantu children

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In a short-term study spanning a period of 8 months, 22 children suffering from anterior uveitis were seen. The study began as a result of the initiation of a uveitis survey at the St. John Eye Hospital, Baragwanath.

## Results

### *Age at onset*

The youngest patient seen was 3 years old and the oldest 16 years, which was also the age used as the cut-off point for the older end of the scale. Thirteen out of the 22 cases were 12 years old or younger. Thirteen were female and nine were male. Fifteen patients had bilateral involvement and seven unilateral.

### *Aetiology*

Most of the patients were admitted to hospital for diagnosis and treatment, and as a rule all those with bilateral involvement were admitted.

### *Laboratory investigations*

Full blood count and erythrocyte sedimentation rate, antistreptolysin titre, albumin/globulin ratio, blood sugar estimation, gonococcal complement-fixation test, Wassermann and *Treponema pallidum* immobilization tests, Waaler-Rose latex-fixation test, *Toxoplasma* complement-fixation test, Tine test, histoplasmosis complement-fixation test. Urine and stool examination for parasites and bacteria. X ray of the chest, teeth, sinuses, and lumbosacral spine. Lymphocytes from the peripheral blood were also cultured and grown and karyotyping done. Peripheral blood was also utilized in searching for antiuveal antibodies using the tanned red cell technique. Studies involving blast transformation in peripheral lymphocytes stimulated with uveal antigen was also begun in a few cases.

### *Clinical findings*

A characteristic finding was the severity of the disease. More than half the cases seen had either four-plus flare and cells in one or both eyes, or had dense posterior synechiae or a combination of these signs. In half the patients one or both fundi were not visualized owing to occlusion or seclusion pupillae or associated cataracts.

Bilateral macular oedema associated with the anterior uveitis was seen in only one case.

There was also one patient who had band keratopathy.

**A 10-year-old girl** showed band keratopathy in one eye with total posterior synechiae in that eye. The other eye was phthisical. The erythrocyte sedimentation rate was 38 mm./1st hr when she was first seen. There was no associated arthritis or splenomegaly. Lymphadenopathy was also absent.

As ocular features may precede arthritic manifestations, a presumptive diagnosis of Still's disease was made.

There were two cases of sympathetic ophthalmitis in the series. One of these proved to be a very interesting case.

**A 15-year-old girl** had received a stab wound into the left eye, resulting in a prolapse of uveal tissue. The eye having no perception of light and being disorganized was removed 7 days after the initial injury. At the time of removal suppuration was present in the injured eye. Five days after the injury the right eye began to worry the patient. Cells were present in the anterior chamber. The visual acuity deteriorated rapidly and oedema of the posterior pole occurred. The eye then developed a typical granulomatous uveitis with large mutton-fat keratic precipitates, numerous cells in the vitreous, posterior and anterior synechiae, and slight hypertension. High doses of systemic steroids, 120 mg. prednisolone daily, plus local mydriatics and steroids, were used over a period of several weeks. The patient developed side-effects from the steroids, including a severe otitis media and deafness; systemic steroids were stopped, and the activity was controlled by retrobulbar injections of Depo-medrol. However, despite intensive therapy, the uveitis has smouldered along and at the present time visual acuity is hand movements at 0.5 metre, the eye being grossly scarred and vascularized. Histology of the enucleated eye showed features consistent with those of sympathetic ophthalmitis.

No typical cases of chronic cyclitis were seen in this series, even though this tends to be more commonly found in younger people. As would be expected, the lens changes were mostly posterior subcapsular opacities of the complicated variety with polychromasia although total lens opacities were also seen. In these cases the vitreous, when visualized, contained cells. Glaucoma was an infrequent finding. Only the patient with sympathetic ophthalmitis showed hypertensive phases in her remaining eye.

Four of the patients showed hypotony in one or both eyes. One showed the presence of a non-rhegmatogenous detachment in one eye associated with uveitis. This was presumed to be a secondary detachment. Only one case of keratouveitis was seen.

The low visual acuity bears witness to the severity and morbidity of the disease in the group under survey. Of the 22 patients, eight had only perception of light or no perception of light in both eyes. The reduction of vision in most cases was due to what appeared to be a combination of causes, mainly posterior synechiae, lens changes, vitreous opacities, and retinal oedema.

## **Treatment**

### **MEDICAL**

It was found in this series that children with bilateral disease responded poorly to topical therapy, steroids, and mydriatics alone. This was found even in relatively mild cases and systemic steroids had to be used as well. In combination the effects of therapy tended to be better in controlling the inflammation. When using systemic steroids, usually in a dose ranging from 60 to 90 mg. prednisolone used on alternate days, isoniazide 300 mg. daily was also used. This was done because of the intense reaction in most of the cases to the Tine test. As mentioned above, the complications of systemic steroid therapy was seen in only one child.

### **SURGERY**

Two cases with complicated cataracts were operated on. This was carried out when the eye was quiet. Aqueous removed for cytology did not show the presence of cells. In

one child an attempted needling and aspiration, done on two occasions, failed to remove the lens matter, even though clinically the cataract looked mature. A linear extraction was subsequently performed. In an older patient, aged 16 years, an extracapsular extraction was performed. This was associated with a broad iridectomy and multiple inferior sphincterotomies. Previous experience showed that total failure to perform the sphincterotomies and broad iridectomy resulted in a bound-down miotic pupil even with the use of strong mydriatics. Both cases did badly, one of the complications being a persistent hyphaema resulting from disruption of dilated iris vessels.

### **Comment**

This would appear to be the first report on uveitis in Negro children. Although only 22 patients are reviewed, they did not include any referrals and were obtained from the general eye clinic over a period of 8 months. As compared to surveys of children with uveitis done elsewhere, a few similar as well as dissimilar features are noted. No specific aetiology apart from sympathetic ophthalmitis was found. No case of sarcoid which appears to be common in the American Negro was found. Karotyping showed the normal chromosome pattern. Band keratopathy, unlike the majority of cases reported by Giles (1963), occurred in only one case. Chronic cyclitis, noted to be common in other surveys (Kimura and Hogan, 1964), was not seen specifically in this series. It has been found to be more prevalent in a Caucasoid group of patients also surveyed by our Department. The morbidity of uveitis, as emphasized by the poor visual results in the majority of patients in this survey, would seem to be consistent with the findings of other surveys (Giles, 1963; Kimura and Hogan, 1964; Cross, 1965) and points to the testimony of uveitis being a serious childhood ocular disease.

Sympathetic ophthalmitis is more common in children (Duke-Elder, 1966a) and the one case presented was unique in certain respects as described. Sympathetic ophthalmitis was said to be rare in the Negro population, but this has not been our finding. Apart from the above two cases, a further four adult Negro patients with sympathetic ophthalmitis have been seen in our uveitis clinic over a period of one year. The general severity of uveitis as seen in our Bantu-speaking Negroes would seem to correlate with the presence of sympathetic ophthalmitis as found by us. There appears to be only one other case in which sympathetic ophthalmitis appeared 5 days after the original injury (Duke-Elder, 1966b).

We have noted the presence of non-rhegmatogenous detachments in some of our adult Negro patients attending the uveitis clinic, which appear to be similar to the one juvenile case seen in this survey. These detachments often do not settle spontaneously and surgery has to be performed. The absence of light perception precluded us from surgical intervention in our juvenile case.

As a general rule we like to treat children who have bilateral uveitis with systemic steroids, using high dose alternate-day therapy, over a short period of time, to minimize side-effects.

It would seem that uveitis in our Bantu-speaking Negroes, both adults and children, appears to be more severe than in the Caucasoids. The reason for this is as yet undetermined, but probably includes a multiplicity of factors. We hope that, by further studying uveitis in the Bantu-speaking Negroes and our Caucasoid population, some answers may emerge in the future.

### Summary

An analysis of anterior uveitis in 22 Bantu children is presented. The aetiology remains obscure in all except one. A unique case of sympathetic ophthalmitis occurred in one patient. The disease appears to have a high morbidity resulting in poor visual acuity. Complications include cataract and retinal detachment. In this series, systemic steroids together with topical steroids and mydriatics were favoured for patients with both eyes involved. No cases of chronic cyclitis were seen. The surgical management of two cases had a poor final result.

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