

# **POSNER-SCHLOSSMAN SYNDROME IN AN ADULT NIGERIAN MALE**

\*OA DAWODU, Senior Lecturer/Consultant

Ophthalmology Department, University of Benin/University of Benin Teaching Hospital, P.M.B. 1111, Benin City, Edo State and Visiting Consultant, Irrua Specialist Teaching Hospital, P.M.B. 8, Irrua, Edo State

CU UKPONMWAN, Senior Lecturer/Consultant

Ophthalmology Department, University of Benin/University of Benin teaching Hospital, P.M.B. 1111, Benin City

## **SUMMARY**

A case of Posner-Schlossman syndrome in an adult Nigerian male is reported. The patient presented at the eye clinic of Irrua Specialist Teaching Hospital in March 1999 with blurring of vision, seeing halos around light, and redness of the right eye. The intraocular pressure in both eyes was high and there were fine keratic precipitates on the endothelium of the right eye, and glaucomatous optic nerve changes in both eyes. A diagnosis of Posner-Schlossman syndrome was made after repeated episodes of the above symptoms in either the right or the left eye. In the three years the patient was seen for follow up, he had multiple anti-glaucoma drug treatment and three surgeries – a trabeculectomy, a cataract extraction with a posterior chamber intraocular lens (IOL) implant and a pars plana vitrectomy (following complications from IOL surgery). In spite of aggressive management, visual acuity in both eyes dropped and cupping of the optic discs continued to increase insidiously.

**Key words:** Posner-Schlossman syndrome, Nigerian male

## **INTRODUCTION**

Posner-Schlossman syndrome also known as glaucomatocyclitic crisis was first observed by Terrien and Veil<sup>1</sup> in 1929. It was also reported by Knapp<sup>2</sup> in 1935, Kronfeld<sup>3</sup> in 1944 and categorized by Posner and Schlossman<sup>4</sup> in 1948 in an elaborate study of 9 cases. The syndrome usually occurs unilaterally in young or middle-aged people of either sex. However, bilateral involvement has been documented<sup>5</sup> and there has been a reported case in a 13-year-old child.<sup>6</sup> The syndrome is characterized by symptoms of subacute glaucoma associated with recurrent attacks of mild cyclitis. Ocular

tension is raised (usually between 40-60mmHg) sometimes to a considerable level (over 80mmHg). This gives rise to blurring, halos and ocular discomfort, but usually, there is no pain. Also, there is little or no congestion and the eye remains white. The symptoms mimic those of angle-closure glaucoma but the angle usually remains open.

The rise in intraocular pressure is accompanied by aqueous flare and fine precipitates. These precipitates tend to disappear within days or weeks after the intraocular pressure falls. The affected iris may become depigmented so that heterocromia results. Posner and Schlossman drew attention to the similarity between these symptoms and Fuchs heterocromic cyclitis.

The Posner-Schlossman syndrome, originally described in 1948 by Posner and Schlossman, is a self limiting and benign condition characterized by unilateral, recurrent attacks of mild non-granulomatous iritis, with elevated intraocular pressure during the acute attack, open angles, normal visual fields and optic discs. In between attacks, intraocular pressure, tonography and provocative tests are within normal limits.<sup>7</sup> Later studies showed an association between primary open-angle glaucoma and Posner-Schlossman syndrome, with as many as 45% of Posner-Schlossman syndrome patients having concomitant primary open-angle glaucoma.<sup>8,9</sup>

The case of a 45-year-old Nigerian male with Posner-Schlossman syndrome is presented here. This is probably the first time the occurrence of this disease in a Nigerian is being documented. Apart from being a rare disease, its management also poses a challenge, some of which are discussed in this paper.

## **CASE PRESENTATION**

A 45-year-old male presented at the eye clinic of Irrua Specialist Teaching Hospital, Irrua, Edo State, in March 1999. His major complaints were: blurring of vision,

\* Author for correspondence

seeing halos around light, and mild redness of the right eye over a period of one month. On examination, he was found to have a visual acuity of 6/6 in both eyes. The intraocular pressure in both eyes were elevated – 42mmHg in the right eye and 35mmHg in the left eye. There was a mild conjunctival infection in the right eye. On slit lamp examination, fine keratic precipitates were observed in the endothelium of the right eye. Gonioscopy showed open angles in both eyes and funduscopy showed glaucomatous cupping, with a cup to disc ratio of 0.8 OD and 0.6 OS. An automated visual field assessment showed an acute defect in the right eye.

He was placed on Gutt Timoptol 0.5% bd for both eyes, Acetazolamide tablets (250mg tds), and Gutt Fluorometholone tds for the right eye (this mild steroid was chosen because of its low propensity to increase intraocular pressure). The intraocular pressure reduced to 16mmHg in both eyes in 2 weeks. The patient presented within the next six months, with repeated episodes in either the right or the left eye similar to what was described above. On his third visit, a diagnosis of Posner-Schlossman syndrome was made having eliminated the common secondary causes of uveitis and glaucoma such as toxoplasmosis, tuberculosis, onchocerciasis, acquired immune deficiency syndrome (AIDS), pseudo-exfoliation and pigment dispersion.

A year after presentation, the patient had trauma to the right eye during a sporting activity. This led to a persistent rise in intraocular pressure in that eye which was difficult to control with drugs. An intraocular pressure as high as 60mmHg was sometimes recorded. Various pressure-lowering drugs were used in an attempt to control the elevated pressure. These included Acetazolamide tablets, Dichlor-phenamide tablets, Guttiae Timoptol 0.5%, Gutt Pilocarpine 4%, Gutt Dorzolamide 2% and Gutt Latanoprost. In view of the prolonged pressure rise and evidence of visual field loss in the right eye, a right trabeculectomy was done. This adequately controlled the intraocular pressure during the next six to seven months. Later, there was a gradual rise in pressure in the right eye which led to the reintroduction of drug therapy. Also, peripheral anterior synechiae and an anterior capsular cataract had developed which reduced the vision to 6/60.

About eighteen months after the trabeculectomy, the patient was referred for cataract extraction at a centre where facilities for phacoemulsification were available. A posterior chamber intraocular lens was implanted. Following complications during surgery (posterior capsule rupture and lens matter in the vitreous), a pars plana vitrectomy was done a few days later.

Vision improved to 6/18 in the right eye and 6/12 in the left eye. Early lens opacities had also developed in the left eye. The cup disc ratio in both eyes has continued to increase insidiously despite the intensive treatment, and presently the cup disc ratio in the right

eye is 0.9 and that in the left is 0.7 (compared to 0.8 and 0.6 respectively at initial presentation). The pressure in the right eye currently fluctuates between 25mmHg and 32mmHg, while that of the left has remained below 20 mmHg.

## DISCUSSION

Posner-Schlossman syndrome, originally described by Posner and Schlossman in 1948, is a self limiting and benign condition characterized by unilateral, recurrent attacks of mild, non granulomatous iritis with elevated intraocular pressure during the acute attack, open angle, normal visual fields and optic discs.<sup>7</sup> The patient in this report initially presented with typical signs and symptoms of Posner-Schlossman syndrome, although bilateral, but these were later complicated by trauma to the right eye. The difficulties encountered in the control of intraocular pressure in the patient may have been as a result of these complications as synechiae formation, which is rare in Posner-Schlossman syndrome, later developed in this patient. The persistently high intraocular pressure and progression of visual field changes in this patient despite adequate medical and surgical therapy may be due to the presence of other forms of glaucoma such as open-angle glaucoma. Different studies have shown an association between primary open-angle glaucoma and Posner-Schlossman syndrome, with as many as 45% of Posner-Schlossman patients having concomitant primary open-angle glaucoma.<sup>8,9</sup>

Glaucoma has been shown to be a more severe disease in people of Negroid descent than other races.<sup>10,2</sup> Apart from starting at an earlier age, it also runs a more severe course in blacks with a higher risk of blindness compared to whites.<sup>13-15</sup> Posner-Schlossman syndrome is a type of secondary glaucoma following repeated attacks of anterior uveitis accompanied by an increase in intraocular pressure. The inflammation particularly affects the trabecular meshwork (trabeculitis), and usually presents in patients between 20 and 60 years.<sup>5</sup> This patient first presented at the age of 45, which falls within the group. Jap et al.,<sup>7</sup> in a study on Posner-Schlossman syndrome in Chinese patients, found the risk of developing glaucoma to be associated with the duration of the disease. It is 2.8 times higher after 10 years or more of having the disease.

Filtering surgery with anti-metabolites was successful in preventing intraocular pressure spikes in most of the patients (80%),<sup>7</sup> but this was not the case in the patient described in this report. This was probably because of the trauma to the right eye and the co-existence of other types of glaucoma.

Glaucoma is now the second most common cause of blindness following cataract.<sup>16</sup> Secondary glaucomas account for about 25-30% of all glaucoma and eyes with secondary glaucoma are also more likely to become

blind than those with primary open-angle glaucoma.<sup>16</sup> In particular, complicated cataract, macula oedema and media haze contribute to ocular morbidity, apart from glaucomatous optic nerve damage.<sup>17</sup> In the patient described above, it is possible that the rapid progression of the cataract in the right eye was as a result of the previous trabeculectomy and trauma.

It is surprising that this patient still requires about three different pressure lowering drugs in the right eye after undergoing trabeculectomy. This may be due to fibrosis around the filtering bleb and the fact that glaucoma in this patient was complicated by synechiae formation and other forms of glaucoma such as open-angle glaucoma.

Close cooperation between the ophthalmologist and the patient is essential for good results. It is hoped that rapid progress will be made by researchers in the near future which will at least provide better control, if not a cure, for the various forms of glaucoma. This case report illustrates the problems encountered in the management of a Nigerian patient with a rare type of secondary glaucoma – Posner-Schlossman syndrome, especially when it is complicated by trauma and open-angle glaucoma.

**REFERENCES**

1. Terrien, Veil. *Bull Soc Franc Ophthal* 1929; **42**: 349.
2. Knapp. *Klin Mbl Augenheilk* 1935; **94**: 748. Quoted in Duke-Elder S, *System of Ophthalmology. Diseases of the uveal tract*. Henry Kimpton, London; 1966 (9): 202-218.
3. Kronfeld. *Arch Ophthal* 1944; **32**: 447. Quoted in Duke-Elder S, *System of Ophthalmology. Diseases of the uveal tract*. Henry Kimpton, London; 1966 (9): 202-218.
4. Posner A, Schlossman A. Syndrome of unilateral recurrent attacks of glaucoma with cyclitic symptoms. *Arch Ophthalmol* 1948.
5. Kanski JJ *Clinical Ophthalmology. A systematic approach* 3<sup>rd</sup> edition. Butterworth Heinemann 1994: pp. 196, 250.
6. Burnstein Y, Shelton K, Higginbotham EJ. Glaucomocyclitic crisis in a child. *Am J Ophthal* 1998; **126**(1): 136-7.
7. Jap A, Sivakumar M, Chee S. Is Posner Schlossman Syndrome benign? *Ophthalmology* 2001; **108**(5): 913-918.
8. Raitta C, Vannas A. Glaucomatocyclitic crisis. *Arch Ophthalmol* 1977; **95**: 608-12.
9. Kass MA, Becker B, Kolker AE. Glaucomatocyclitic crisis and primary open angle glaucoma (Case report). *Am J Ophthalmol* 1973; **75**: 668-7.
10. David R, Livingston DC, Luntz MH. Ocular hypertension: A comparative follow-up of black and white patients. *Br J Ophthalmol* 1998; **61**: 668.
11. Tielsch JM, Sommer A, Katz J, Royall RM, Quigley HA, Javitt J. Racial variations in the prevalence of open angle glaucoma. The Baltimore Eye Survey. *JAMA* 1991; **266**: 369.
12. Wilson MR, Hertzmark E, Walker AM et al. A case-control study of risk factors in open angle glaucoma. *Arch Ophthalmol* 1987; **105**: 1066.
13. Wilensky JT, Gandhi N, Pam T. Racial influences in open angle glaucoma. *Ann Ophthalmol* 1978; **10**: 1398.
14. Olurin O. Primary glaucoma in Nigeria. *E Afr Med J* 1972 **49**: 725.
15. Sandford-Smith J. *Eye Disease in Hot Climates*. 2<sup>nd</sup> edition. Wright, London 1990; 161-172.
16. Johnson GJ. Editorial: The adult glaucomas. *Community Eye Health* 2001; **14**: 33-34.
17. Krishnadas R, Ramakrishnan. Secondary glaucomas: The tasks ahead. *Community Eye Health* 2001; **14**: 40-42.