Elevated intraocular pressure is a common complication of intraocular inflammation that may aggravate the prognosis and significantly complicate the therapeutic management of patients with uveitis. Several pathophysiological mechanisms may be the cause of ocular hypertension on eye inflammation.

Thus changes in the composition of the aqueous humor, such as increased protein and cellularity, the presence of prostaglandins, proinflammatory cytokines can stimulate the production of aqueous humor or reduce its resorption.

Also, the morphological changes of the iridocorneal angle contribute to reduce the evacuation of aqueous humor. In addition, corticosteroids used in the treatment of uveitis can induce resistance to the flow of aqueous humor by morphological and biochemical changes.

INTRODUCTION

To evaluate frequency of secondary glaucoma in uveitis

To analyze clinical forms of uveitis more frequently associated with glaucoma

To describe treatment

METHODS

Retrospective study conducted at the University Hospital of Bab el Oued in Algiers with 150 consecutive cases of uveitis, seen over a period of two years between September 2009 and September 2011.

The definitions used for the diagnosis of uveitis were that of International Uveitis Study Group. The intraocular pressure (IOP) was measured by applanation tonometry. The ocular hypertension was defined by IOP > 21 mm Hg. Gonioscopy was performed in all patients to detect the presence of peripheral anterior synechiae and the extent of angle closure.

For signs of glaucomatous optic neuropathy was made by analyzing the appearance of the disc when it was viewable and visual field.

RESULTS

Age-Sex

Mean age: 32 ± 2 years (17 years – 50 years)

9 women and 6 men

Frequency of ocular hypertension

Ocular hypertension was observed in 15 of 150 cases (10%)

Classification of uveitis

Anterior uveitis: 8 cases (53%)

Panuveitis: 7 cases (46%)

Etiology of uveitis

Anterior uveitis

• Herpetic keratouveitis: 4 cases (26.6%)

• Posner Schlossman syndrome: 2 cases (13.3%)

• Fuchs’ iridocyclitis: 1 case (6.6%)

• Arthritis-associated iridocyclitis: 1 case (6.6%)

Panuveitis

• Behcet disease: 3 cases (20%)

• Sarcoidosis: 2 cases (13.3%)

• Toxoplasmosis: 1 case (6.6%)

• Tuberculosis: 1 case (6.6%)

Treatment

All patients received medical treatment: beta blockers, a carbonic anhydrase inhibitors.

Yag laser iridotomy was performed in 2 cases with pupillary block.

Filtering surgery was performed in 1 case.

DISCUSSION

In our study 10% of uveits have ocular hypertension complicated. In the literature, data on the prevalence of glaucoma in uveits vary with different figures between 10 and 42% from all etiologies (1-9).

Several retrospective studies on the epidemiology of glaucoma in uveits with very heterogeneous inclusion criteria. Some authors are interested only in IOP, others to glaucomatous optic neuropathy or the necessary to establish treatment. Also, many investigators were heterogenous data were not considered (1-9).

As regards the etiologies, we data confirm that the anterior uveits are those most likely to be complicated by ocular hypertension.

In our study, herpetic anterior uveits is the most common cause of hypertensive uveits. In the literature, ocular hypertension is present in 28 to 54% of cases in herpetic uveits with progression to glaucoma in 12% of cases (10, 11, 12).

Other causes of anterior uveits in our study were Posner Schlossman syndrome, Fuchs’ iridocyclitis, and arthritis-associated iridocyclitis.

Increased intraocular pressure by definition is found in 100% of cases in Posner Schlossman syndrome (13, 14).

In Fuchs’ iridocyclitis, the ocular hypertension was found in 6.3% to 59% of cases (15, 16). This ocular hypertension is present in 15 to 38% of arthritis-associated iridocyclitis (17).

The most frequent panuveitis with raised intraocular pressure in our study was Behcet’s disease with 3 cases found. In the literature, glaucoma occurs in 10% of cases in Behcet’s disease (18).

2 cases of sarcoidosis with ocular hypertension were found in our study. In the literature the incidence of glaucoma in patients with ocular sarcoidosis is 9.3% to 25.5% according to studies (19, 20). Glaucoma being a major cause of poor visual prognosis with macular edema (20).

Toxoplasmosis is associated with ocular hypertension in 12 to 37% of cases. This ocular hypertension is generally transient inflammatory episode when (21).

One case of tuberculosis in our study. In the literature, there are few data on glaucoma in tuberculous uveits (5). We use 2 drugs, beta blockers and carbonic anhydrase inhibitors.

Beta blockers are a choice of treatment for raised IOP in patients with uveits glaucoma (22). Carbonic anhydrase inhibitors can be used when beta blockers are unable to control IOP or if they are contraindicated because of potential side effects (23).

The prostaglandin analogues are traditionally discouraged when a history of uveits. However the study of literature makes these relative contraindications because uveits induced by treatment with prostaglandin analogues is a rare side effect (24, 25).

In our study laser iridotomy was performed in 2 cases with pupillary block. In the literature, this technique is widely used by several authors, other prefer surgical iridectomy.

Filtering surgery with adjunctive antimetabolite therapy should be reserved for patients with medically incontrolled IOP (26, 27).

CONCLUSION

The ocular hypertension is a common and frequently serious complication of uveitis.

The major factor influencing the risk of raised intraocular pressure is the etiology of uveitis.

Medical and surgical treatment for reducing IOP should be especially aggressive in these patients.

REFERENCES