

Prednisolone Neuroprotective Therapy in Age-Related Macular Degeneration

Božidar Vojniković¹ and Josip Španjol²

¹ Eye Polyclinic »Dr. B. Vojniković«, Rijeka, Croatia

² Department of Urology, Rijeka University Hospital, Rijeka, Croatia

ABSTRACT

134 patients with Age-related Macular Degeneration (AMD) (aging 47–75 years) were treated in therapy procedure with parabolbar injections of Methylprednisolone Acetate and Prednisolone Acetate. In the first group of patients with AMD (n=71 patients) were treated with Methylprednisolone acetate, and second group (n=63 patients) with Prednisolone acetate. Each patient was given doses of 60 mg, through two weeks, 10 mg every second day. It's estimated in all patients ameliorate in macular threshold, so that it's in the group with Methylprednisolone treatment, ameliorate effect begins after first week, than in second group, treated with Prednisolone, initial ameliorate effect is after second week. Complete effect in both groups is after 2 months. It can be concluded that the treatment of AMD with glucocorticoids has the ameliorate effect in vision loss and it is decided that earlier effect in the group treated with Methylprednisolone, is probably of higher affinity for glucocorticoid receptors.

Key words: macular degeneration, glucocorticoid therapy, neuroprotection

Introduction

In the clinical practice it is important that glucocorticoids can ameliorate in vision loss by patients with retinal damage induced with solar UV-radiation¹. The similar is glucocorticosteroide effect of ameliorate in retinal damage during laser photocoagulation treatment². In photooxidative stress the free radicals, especially Hydroxyl radical (OH), have the strong toxic effect leading to aging processes of retina^{3–7}. Glucocorticoids besides the immunosuppressive and antiinflammatory effect, have also the neuroprotective effect, that is very significant in ophthalmic pathology.

Patients and Methods

In the selected group of 134 patients with Age-Related Macular Degeneration (AMD), aging 47–75 years, we applied the glucocorticoids, as therapeutics treatment. The first group (n=71 patients) was applied parabolbar injection of Methylprednisolone acetate, and the second group (n=63 patients) was treated with parabolbar injections of Prednisolone acetate. Each patient was given 60 mg glucocorticoids through 2 weeks, 10 mg every

second day. All patients, beside usually examination: with slit lamp, intraocular pressure (IOP), fundus picture, vision, were tested in the perimetric analyse-isopters peripheric analyse and macular threshold, before and for times after therapy. Only 5 patients had a wet form of AMD.

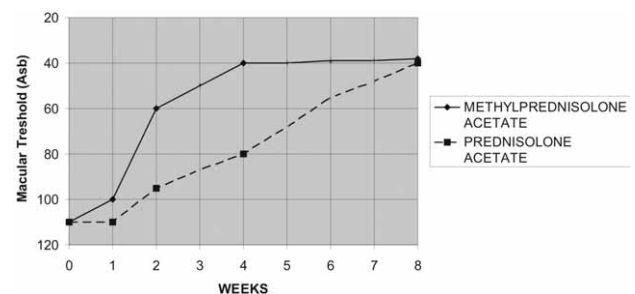


Fig. 1. Macular threshold after parabolbar prednisolone and methylprednisolone treatment in patients with age-related macular degeneration.

Results and Conclusion

In the first two weeks there is very low ameliorate of macular sensitivity in patients treated with Prednisolone, but in patients with treatment of Methylprednisolone the macular sensitivity is much higher (Figure 1). The highest ameliorate of macular sensitivity appeared after one month in group with Methylprednisolone treatment, and in patients treated with Prednisolone not ear-

lier than two months. The increasing of macular sensitivity after glucocorticosteroids parabolbar treatment present between 25 to 50 Asb, depended of stage processes in AMD.

The authors suggest that the earlier ameliorate in decreasing of macular sensitivity, in the group with Methylprednisolone treatment, is probably due to the higher affinity for glucocorticoid receptors.

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B. Vojniković

*Eye Polyclinic »Dr. B. Vojniković«, Antuna Barca 3B, 51000 Rijeka, Croatia
e-mail: decv@decv.com*

NEUROPROTEKTIVNA TERAPIJA PREDNIZOLONOM U BOLESNIKA S MAKULARNOM DEGENERACIJOM

SAŽETAK

U 134 bolesnika, starosti od 47–75 godina, s makularnom degeneracijom suhe forme, primijenila se terapija parabolbarnim depoima glukokortikoida. U prvoj skupini od 71 pacijenta dao se Methylprednisolon depo, dok se u drugoj skupini od 63 bolesnika dao Prednisolon depo. Svaki bolesnik primio je dozu od 60 mg, razvrstano po 10 mg u 6 obroka, svaki drugi dan. Pored uobičajenih pretraga očnog bolesnika, urađena je perimetrija periferije i makularni kvantitativni prag podražaja. Pretrage su rađene 4 puta u toku i iza terapije. Evidentno je došlo do povišenja osjetljivosti makularnog i šireg područja periferije u svih bolesnika za 25–50 Asb, odnosno poboljšanja visusa za 0.15–0.25. U bolesnika s Methylprednisolon depoima, do poboljšanja je došlo ranije, već nakon drugog tjedna, što se može pretpostaviti da je razlog u pojačanom afinitetu za glukokortikoidne receptore, u odnosu na Prednisolon u kojem je taj afinitet bitno niži.