Contemporaneous Concept of Anti Aging Therapy as New Valuable Paradigm on Ocular Blood Flow Enhancement in Glaucoma

Abstract

Background: To focus and to evaluate the effects of antiaging therapy (AATH), regenerative and food supplements on ocular perfusion pressure (OPP) in glaucoma.

Method: In retrospective meta-analysis 81 subjects with glaucoma enrolled , 20 not treated in control group,30 under eye drops anti-glaucoma selective therapy (EAGTH) Cosopt PF, Brimonidine, Xalatan, 31 under EAGTH and anti-aging therapy(AATH) Ginkgo Biloba 150 mgr. Nilvadipin 60 mgr, Visionace Plus, Bilberry, Omega 3-fat, Lecithin, Curcumin, follow-up 2010-2015. A baseline glaucoma examination performed included OBFA monitoring, PA, OPP, RNFL. The area under ROC curve was 0,773(0,669-0,866). T-test and linear regressions using for statistical analysis.

Results: We identified that in EAGTH group IOP reduction was 31,2%, OBF enhanced 34,2%, PA improved 22,7%, OPP increased 27,5% demonstrated interaction between them P<0,001. Statistically RNFL 0,775m remained stable. In EAGTH/AATH group had further reduction IOP 1,2%, further enhanced OBF 6,3% , further improved PA 2,2%, OPP further increased 7,6% without fluctuations P<0,01. RNFL showed further increased 4,5(5,2%) statistically significantly associated P<0,001. The OBF and PA impact reflected to RNFL increased , expressed the important role of complex therapy. The regression coefficient was negative indicating that IOP decreased corresponding with OBF and OPP increased respectively, P<0,001 (info graphic).

Conclusion: Anti-aging therapy could be useful tool contributing to the glaucoma control, improving the ocular microcirculation. Multiple of vascular dysregulation promote complex therapeutic approach, more effective for IOP lowering, OBF improved and neuroprotective effect. Anti-aging therapy outcomes include functional and structural effects show the rate of glaucoma stability, improved the life quality.

Keywords: Anti aging therapy; Ocular blood flow; Neuroprotection; Ocular perfusion pressure; Ocular microcirculation; Vascular dysregulation; Complex therapy

Research Article

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Abbreviations: AATH: Anti Aging Therapy; OPP: Ocular Perfusion Pressure; EAGTH: Anti-glaucoma Selective Therapy; PA: Pulse Amplitude

Introduction

The dilemma for Glaucoma remains "open", it's neurodegenerative disease [1-3], progressive optic neuropathy [2,3], neuroptic disease, neuroangiopathy or multifactorial disease [2,4,5] that advised complex therapy. The glaucoma updates challenged the misconception that "glaucoma is well defined condition" suggested a new therapeutic strategy.

Materials and Methods

Purpose: To focus and to evaluate the effects of anti-aging therapy (AATH), regenerative and food supplements on ocular perfusion pressure (OPP) in glaucoma, blending of conventional and alternative modern therapies (neuroprotective agents, Ca2+ channel blockers, flavonoids), presenting our over decade experience at this point.

Method: In retrospective meta-analysis 81 subjects with glaucoma enrolled, 20 not treated in control group, 30 under eye drops anti-glaucoma selective therapy (EAGTH) Cosopt PF, Brimonidine, Xalatan ,31 under EAGTH and anti-aging therapy (AATH) Ginkgo Biloba 150 mgr. Nilvadipin 60 mgr, Visionace Plus, Omega 3-fat, Lecithin, Curcumin , multiple indications for a single drug ,with interdisciplinary cooperation, in follow-up 2010-2015. A baseline glaucoma examination performed included OBFA monitoring, PA, OPP (according to the formula), RNFL. The area under ROC curve was 0,773(0,669-0,866). T-test and linear regressions using for statistical analysis

Results

We identified that in EAGTH group IOP reduction was 31,2%, OBF enhanced 34,2%, PA improved 22,7%, OPP increased 27,5% co adaptable, compared to control group, demonstrated interaction between them P<0,001. Statistically RNFL 0,775m remained stable. In EAGTH/AATH group had further reduction IOP 1,2%, further enhanced OBF 6,3% , further improved PA 2,2%, OPP further increased 7,6% without fluctuations P<0,01. RNFL showed further increased 4,5(5,2%) statistically significantly associated P<0,001. The OBF and PA impact reflected to RNFL increased , expressed the important role of complex therapy, improved the choroidal perfusion .The regression coefficient was negative indicating that IOP decreased corresponding with OBF and OPP increased respectively , P<0,001 (infographic).

Discussion

Glaucoma as degenerative optic neuropathy [2] associated with visual impairment and alterations of life quality [5]. Clinical assessment and analysis are very important in the management of glaucoma. Vascular theory [6-8,4] changed the treatment strategy. Decreased of ocular perfusion pressure and increased of vascular resistance of the choroidal vessels [9] is the vascular factor for structural and functional changes [7,8]. We detected statistically significant decrease of ocular blood flow (OBF), of pulse amplitude (PA), of ocular perfusion pressure (OPP) with important fluctuation correlated with vascular dysregulation. Anatomopathologic studies and magnetic resonance imaging identified alterations involving well beyond visual system similar with them to Alzheimer's and cerebral degenerative disease [5]. Glaucoma research is looking for to prevent "apoptosis " of nerve cells, controlled individually the intraocular pressure, improved ocular blood flow and ocular perfusion pressure, blocked risk factors and vascular dysregulation. This demands new model complex therapy. Based in protocols and experience concluded in our scheme with anti-glaucoma selective fixed combination or switch therapy combined with antioxidant neuroprotective agents and anti-aging therapy addition. This is a valuable tool of benefit to glaucoma as well. Anti-aging therapy is a new modern therapy of particular interest. The polymorphism and variability of the vascular factor in Glaucoma require a strong interdisciplinary cooperation and careful observation [10,11].

Conclusion

Anti aging rejuvenation therapy, attenuating the effects of free radical could be in contest useful tool contributing to the glaucoma control, improving the choroidal perfusion, ocular microcirculation and neuroprotection. Multiple of vascular dysregulation promote complex potent therapeutic approach, more effective for IOP lowering, OBF enhanced and neuroprotective effect. Anti aging therapy outcomes includes functional and structural counterpart effects show the rate of glaucoma stability, improved the life quality and converted stress. A integrated approach appears to be a important milestone for the future, changing perceptions. It's a exciting time in anti aging ocular research.

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