IJCMBS
THE INTERNATIONAL JOURNAL OF
CURRENT MEDICAL AND BIOLOGICAL SCIENCES

e-ISSN: 2791-8815

Case Report

RETINITIS PIGMENTOSA AND ACUPUNCTURE. WHY NOT!

RETINITIS PIGMENTOSA VE AKUPUNKTUR. NEDEN OLMASIN!

Ayşegül Elbir Şahin[1,2], Çetin Göktaş[1,3], Rümeysa Karaçuha Sürücü[2] İsmail Şen[1], Onur Öztürk[1,4]

[1] UHS Samsun Education and Research Hospital, Traditional and Complementary Medicine Center, Samsun, Turkey
[2] UHS Samsun Education and Research Hospital, Clinic of Anesthesiology and Reanimation
[3] UHS Samsun Education and Research Hospital, Clinic of Ophthalmology
[4] UHS Samsun Education and Research Hospital, Department of Family Medicine

Corresponding author:

Dr. Onur ÖZTÜRK, M.D, Assoc. Prof.

Adress: Department of Family Medicine Head of Traditional and Complementary Medicine Center UHS Samsun Education and Research Hospital, Samsun, Turkey

Tel: +90 (554) 7536566

Email: dr.onurozturk@yahoo.com

Received: 21.01.2022

Accepted: 03.02.2022

Cited as: Ayşegül Elbir Şahin, Çetin Göktaş, Rümeysa Karaçuha Sürücü İsmail Şen, Onur Öztürk RETINITIS PIGMENTOSA AND ACUPUNCTURE. WHY NOT! IJCMBS 2022;2(1):78-81 doi.org/ 10.5281/zenodo.6203818

Abstract:

Retinitis pigmentosa (RP) is the most common hereditary retinal degeneration. Complaints of night blindness and peripheral visual field loss are felt in the foreground. Examination findings, radiological evaluations and satisfaction in our case suggest that acupuncture can also be used in the treatment of RP disease.

Keywords: Retinitis pigmentosa, Acupuncture

Öz

Retinitis pigmentosa (RP) en sık görülen kalıtsal retina dejenerasyonudur. Gece körlüğü ve periferik görme alanı kaybı şikayetleri ön planda hissedilmektedir. Vakamızdaki muayene bulguları, radyolojik değerlendirmeler ve memnuniyet RP hastalığı tedavisinde akupunkturdan da yararlanılabileceğini düşündürmektedir.

Anahtar Kelimeler: Retinitis pigmentosa, Akupunktur

Introduction

Retinitis pigmentosa (RP) is the most common hereditary retinal degeneration. It seriously reduces the quality of life. Its prevalence is around 1/4000 on average (1). The factors affecting the development of RP have not been fully defined, but it is generally believed that genetics is the most important factor (2). Rod and then cone photoreceptors are affected first. RP is manifested by night blindness and peripheral visual field loss reflecting rod photoreceptor dysfunction. Loss of central visual acuity is seen in the last period of cone function loss. The classic triad of RP disease is thinning of the retinal vessels, bony spicule-like pigmentations in the retina, and pallor of the optic disc in the form of wax. Photoreceptor responses evaluated by electroretinography are decreased or unrecorded (3,4).

In this case report, the path that a patient with retinitis pigmentosa, who is a difficult-to-treat pathology, traveled from integrative medicine applications with acupuncture was mentioned.

Presentation of the case

A forty-eight-year-old male patient was admitted to our integrative medicine clinic with complaints of decreased vision when he moved from a sunny, open area to a closed area, and dark vision as if he were wearing sunglasses. It has been learned that his complaints have been present since childhood, and his vision has gradually decreased in the last 20 years. There is no history of any other chronic disease. He worked as a taxi driver for twenty years. He had cataract surgery on both eyes when he was forty-two years old, and after the operation he started to use close glasses. It was learned that her mother had a diagnosis of RP.

The patient could not make eye contact at the first interview and could not see the place shown to sit. In the eye examination, visual acuity was evaluated as 1/10 in both eyes, both eye pressure was determined as 15 mm Hg, and both eyes have intraocular lenses. On fundus examination, pigment changes in the form of diffuse bone corpuscle were observed in the retina. Pre-treatment optical coherence tomography image is shown in **Figure 1**. The findings were evaluated in favor of RP. Other systemic examinations are normal. Complete blood count, liver and kidney function tests, fasting blood sugar and HbA1C level, cholesterol panel, vitamin B12 level, iron panel, electrolyte values and electrocardiography are normal.

In the first session, the patient for whom we recommended acupuncture was applied to the local body points of GB-14, BL-1-2, ST-1, Ex-HN-3-4-5 with disposable 0.20x13 mm sterile steel needles for 20 minutes. The remote point is not selected. According to the French auricular acupuncture, it was scanned with a detector and placed on the Shen-men and eye point with a 0.22x1.5 mm permanent steel needle with double plasters to be changed weekly **(Figure 2),** the ears were needled bilaterally. The patient received 10 sessions of body acupuncture and 5 sessions of ear acupuncture, each lasting approximately 20 minutes, over 40 days. The patient's complaints decreased, he could see his surroundings more clearly and could make eye contact. In the examination performed by an ophthalmologist for control purposes, his visual acuity was evaluated as 2/10 in both eyes, the pressure in both eyes was 15 mm Hg, fundus findings were as detected in the first examination. Post-treatment optical coherence tomography image is shown in **Figure 3.**

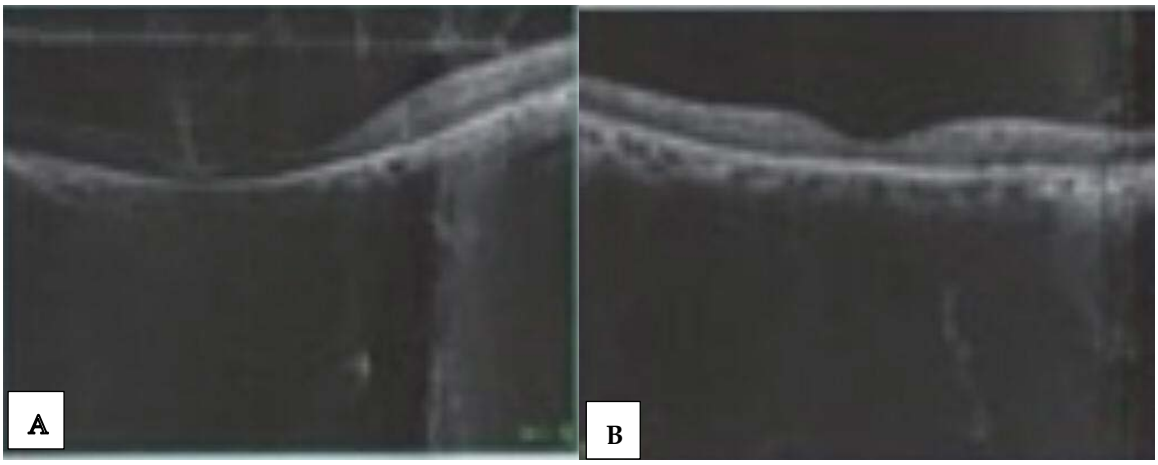

Figure 1. Optical coherence tomography image before treatment **A:**Right eye **B:** Left eye

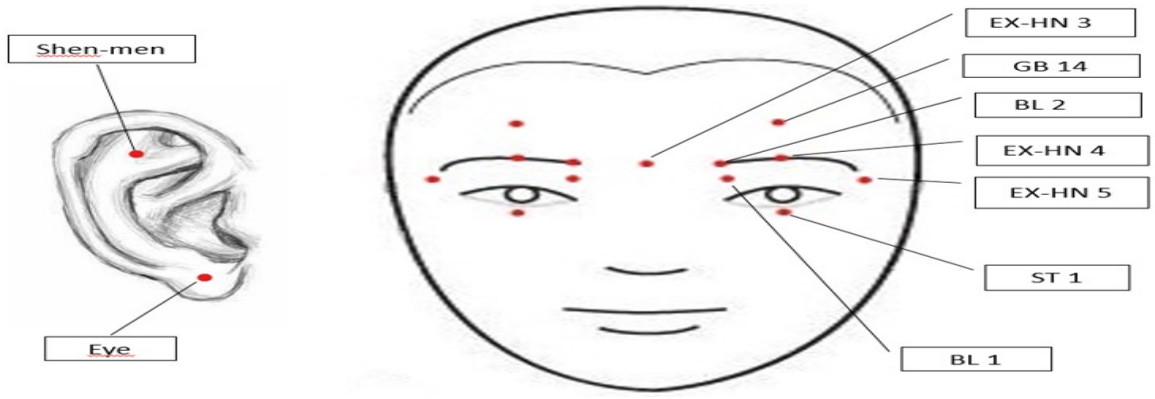

Figure 2. Acupuncture points used on the patient

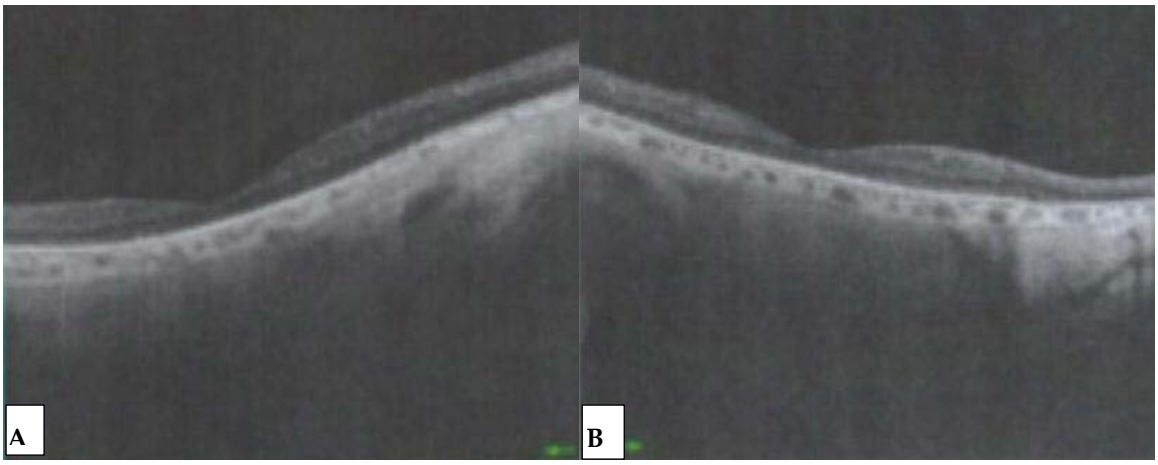

Figure 3. Optical coherence tomography image after treatment.**A:**Right eye **B:** Left eye

Discussion

When the relevant diagnosis and treatment method are searched together, few works are encountered. It is known that acupuncture is used in the treatment of RP in Chinese medicine. One of the conditions in which acupuncture can be applied, which is included in the traditional and complementary medicine practice regulation in force in Turkey since 2014, is chronic eye diseases. Acupuncture was applied to our patient in the light of these informations.

In RP patients, the complaint of not being able to see at night, “nictalopia” is typical. In addition, concentric narrowing of the visual field is typical and peripheral visual field loss is insidious, slow and progresses over years. It usually progresses symmetrically in both eyes. Photopsia, dyschromatopsia, photophobia, visual hallucinations, nystagmus and refractive errors may accompany (5,6). Our case is compatible with the literature in terms of its symptoms.

RP may only be an eye-catching picture, or it may be in the form of syndromic RP with systemic findings. Usher syndrome, accompanied by deafness and balance disorder, is the most common syndromic form of RP. In areas with retinal atrophy, choroidal vessels are clearly visible, there may be cell infiltration in the vitreous, cataracts, and subretinal exudations that become evident in some forms. In addition, keratoconus, epiretinal membrane formation, optic disc drusen, optic disc astrocytic hamartoma and myopia can be seen more frequently in RP patients (3,4). In our case, there is a coexistence of cataracts.

In all RP patients, the rate of cases in which genetic transmission cannot be determined, called simplex, is more than half, but it is known that autosomal dominant, autosomal recessive or X-linked transmission may occur. Digenic inheritance and maternal (mitochondrial) inheritance are rarely seen. Genetic examination was not performed in our case, but the presence of the same diagnosis in her mother suggests a hereditary transmission.

It is known that there is no valid treatment yet, research focuses on retinal transplantation and gene therapy (7). It has been shown that acupuncture has a positive effect on the repair of the function of optic nerve cells and the regenerative capacity of the central nervous system is greater than is generally believed. Acupuncture can improve the microcirculation of local ocular tissues and limit the pathological reaction involved in RP (8). Xu et al. tried to treat 26 RP patients with acupuncture and reevaluated the patients after 3 months of treatment, during a 20-year study. At the end of the sessions, two-thirds of the participants found improvement in visual acuity and quality of life (9). Huang et al. created a randomized controlled trial protocol on this subject in 2021 (2). Fereydouni et al. conducted a study with 23 RP patients and found significant improvement in visual acuity after acupuncture sessions (10). The regression of the complaints of our case with acupuncture may pave the way for future studies.

Conclusion

Examination findings, radiological results and satisfaction in our case suggest that acupuncture can also be used in the treatment of RP disease.

Acknowledgments: None

Ethical Approval: *N/A* ***Author Contributions:*** *Concept:AEŞ, ÇG Literature Review:RKS, İŞ, OÖ Design :AEŞ, OÖ Data acquisition:AEŞ, ÇG Analysis and interpretation:OÖ Writing manuscript: AEŞ, ÇG, OÖ Critical revision of manuscript: İŞ*

Conflict of Interest: *The authors have no conflicts of interest to declare.* ***Financial Disclosure:*** *Authors declared no financial support*

References

1- Verbakel SK, van Huet RAC, Boon CJF, et al. Non-Syndromic retinitis pigmentosa. Prog Retin Eye Res 2018;66:157–86.

2- Huang H, Wang J, Li H, et al. Acupuncture for retinitis pigmentosa: study protocol for a randomised, sham-controlled trial. BMJ Open. 2021;11(11):e049245.

3- Şentürk F, Doğramacı M. Aras C. Retinitis Pigmentosa; Epidemiyoloji, Patofizyoloji ve Sınıflandırma. Güncel Retina 2021; 5 (2): 95-106.

4- Arf S, Hocaoğlu M. Retinitis Pigmentosa; Klinik Bulgular, Görüntüleme Bulguları ve Tanı. Güncel Retina 2021; 5 (2): 107-12.

5- Bittner AK, Diener-West M, Dagnelie G. Characteristics and possible visual consequences of photopsias as vision measures are reduced in retinitis pigmentosa. Invest Ophthalmol Vis Sci. 2011:52(9):6370–6.

6- Strong S, Liew G, Michaelides M. Retinitis pigmentosa-associated cystoid macular oedema: pathogenesis and avenues of intervention. Br J Ophthalmol. 2017;101(1):31–7.

7- Wang D-Y, Fan B-J, Wu X-Q, et al. [Recent progress in molecular genetics and gene therapy for retinitis pigmentosa]. Zhonghua Yan Ke Za Zhi 2005;41:188–92.

8- YY L, You SW, GH S. Research progress on the protection of ganglion cells after optic nerve injury and nerve repair. Chin J Ophthalmol 2004;40:141–4.

9- Xu H, Min ZJ, TY L. Clinical observation of acupuncture for primary pigmentary degeneration of retina. Shanghai Journal of Acupuncture and Moxibustion 2016;35:395–8.

10- Fereydouni F, Qasemi V, Moradian S, Tabatabaee S. Can acupuncture therapy help patients with retinitis-pigmentosa? J Curr Ophthalmol. 2017;29(4):321-3.