

Scalp acupuncture and master tung distal points for the treatment of intraocular pressure for a patient with borderline glaucoma

Abstract

Acupuncture has been clinically used to treat patients suffering from eye disease. It has been used in efforts to help preserve vision for those with a wide range of eye conditions including glaucoma and intraocular hypertension. High intraocular pressure (IOP) is usually associated with glaucoma and conventional treatment is focused on lowering IOP. Controlling this risk factor should help hasten the onset of glaucoma for those patients that are suspect or borderline candidates for glaucoma.

In review of the limited scientific research there are not many studies that support conclusive evidence for the use of acupuncture on eye diseases and particularly glaucoma and ocular hypertension. For the information that does exist, diverse results from various interventions make it difficult to draw clear conclusions. The existing studies use different acupoints, techniques, frequencies, and durations. Individual treatment strategies according to the practitioner's subjective experience, patient condition, and the use of other complementary and natural strategies is ideal for taking a more dynamic and holistic approach to getting results.

Until more pragmatic research models are funded and implemented, case reports can offer good examples of experiential and objective outcomes. This case report presents a 61-year-old healthy female patient diagnosed with open-angle borderline glaucoma with elevated IOP. The patient's IOP was successfully reduced with 12 treatments over three months using scalp electro-acupuncture and distal Master Tung points.

Keywords: intraocular pressure, glaucoma, scalp acupuncture, master tung points, transcutaneous electric nerve stimulation

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Introduction

Acupuncture has been clinically used to treat patients suffering from eye disease. It has been used in efforts to help preserve vision for those with a wide range of eye conditions including macular degeneration, glaucoma, eye floaters, dry eyes, cataracts and much more. In review of the limited scientific research there are not many studies that support conclusive evidence for the use of acupuncture on eye diseases and particularly glaucoma and ocular hypertension/intraocular eye pressure (IOP).

There are 2 studies that have shown some promising results for the use of acupuncture and reducing IOP:

- i. A pilot study of 11 patients were treated with acupuncture twice-weekly for five weeks. The study results found that intraocular pressure significantly improved 15 minutes after treatment. Visual acuity also improved. However, the effect on IOP did not remain more than a month.¹
- ii. A 2016 study found that electro-acupuncture on the meridian points Pucan (BL 61) and Shenmai (BL 62) for 20 minutes was effective in reducing intraocular pressure.²

Glaucoma is a complex, multi-factorial eye disease with specific attributes such as optic nerve damage and a loss of visual field.³ Although patients can develop glaucoma with eye pressure in normal ranges, high IOP is usually associated with this disease.³ Dr. James Tsai refers to patients with elevated IOP as glaucoma suspects.

Case presentation

Chief complaint and western diagnosis

The patient is a 61-year-old healthy female diagnosed with anatomical open-angle borderline glaucoma, dry eye syndrome, and squamous blepharitis. Initial visit for this issue: March 6, 2018. Patient was being treated for right ankle pain prior to this issue.

History

It started five months prior to the initial visit. The onset was progressive. The patient would experience pain, distention, fatigue, swelling, scratchiness, redness and blurred vision. It would become worse while at work spending long periods of time in front of the computer screen. The patient is overworked and always pressured by time-lines. It would also worsen with anxiety or anger. Rest and relaxation improve the symptoms. The patient made an appointment with her ophthalmologist February 13th, 2018.

Signs and symptoms

The above symptoms were accompanied by regular bouts of anxiety, anger, depression, and chest pressure. The patient presents with pale and dry skin. She has gone through menopause but often complains of feeling hot. The patient for the most part reports as regular bowel movements but can occasionally be constipated. The patient was adopted as a child and did not know of her biological mother or father.

Physical examination and consultation

The patient’s body temperature, respiration, pulse rate, and blood pressure were within normal ranges. The pulse ran fast, in the low seventies and it felt deep. The guan or middle (liver) position was thin but firm (wiry) feel. The chi or position furthest from the wrist (kidney) could barely be felt. She stands five foot with a very thin and wiry build. Her hair was dry, and she complained of it falling out. The tongue presented as pale with a crack running down the center. The tongue also had a bright red tip. It was puffy or swollen and dry, with no coat. It had scalloped edges or teeth marks. Under palpation, tender points on the skin would be found along the top of the foot along the liver channel and around the lateral malleolus along the bladder channel. The patient was also being treated for ankle pain and this area around BL 61 & 62 was often treated in the past with electro-acupuncture. Patient did not take any medication. The patient would occasionally use over-the-counter moisturizing eye drops for the dry eye syndrome. The patient also took fish oil capsules daily, used a humidifier, and would occasionally use a warm, wet compress with organic Manuka honey to help reduce the pain symptoms and eye irritation caused by the blepharitis. Patient choose not to take the prescribed medication/drops that her doctor advised to decrease the IOP. The patient wanted to try acupuncture to see if it would control or lower the pressure. I highly recommended she use the drops as well as the acupuncture due to the fluctuating and rapid onset of IOP.

Eye Examination

On February 13th, 2018 the patient had her eyes examined: Visual Acuity: not affected- normal. Intraocular Pressure (measured with a tonometer): OD (oculus dexter/right eye): 36mm Hg and OS (oculus sinister/left eye): 28mm Hg. External Exam: Pupils: right pupil is slightly larger. No APD or macular degeneration. Adnexa: normal. Eye lids: right- blepharitis moderate and punctum is splayed; left-blepharitis is mild and punctum is normal.

The physician recommended eye surgery if the pressure continued to rise.

Diagnostic analysis

The main characteristics of this patient are the progressive onset of the symptoms are exacerbated by emotional stress. This patient is a suspect of open-angle glaucoma due to the elevated IOP. This type of glaucoma is a common and chronic eye disorder, often associated with aging. It usually affects both eyes, has a genetic component, and is often associated with diabetics.⁴

Traditional Chinese medical theoretical diagnosis

Increased IOP due to Liver Yang Rising with Liver-Kidney Yin-Deficiency.⁵

Traditional Chinese medical theory

The key function of the liver is to govern dispersal and promote the smooth flow of qi-energy. Anger and stress can cause liver stagnation. This stagnation will eventually transform into fire and will lead to the upward, counter-flow of qi and fire with fluid retention. The natural yin (moisture/fluid essence) deficiency of aging and the patient’s deficiency in blood also contribute to the progressive nature of this case, resulting in an increase of IOP and related symptoms. The liver channel passes through the hypochondriac region. Therefore, the inhibited flow of qi within the channel causes chest tightness. The tongue, pulse, and palpatory findings were all signs of liver depression transforming into fire.^{6,7}

Treatment timeline

The Chinese theoretical assessment or pattern-diagnosis is more designed to help guide with herbal treatment and TCM style acupuncture. The treatment principle is to reduce IOP by nourishing Kidney-Liver Yin and subdue Liver Yang.⁵ The focus of treatment was with the use of acupuncture and changing styles commensurate on IOP measurement outcomes. The patient would continue with the warm water and honey compress, fish oil supplements, and try daily meditation/relaxation techniques that were discussed in the initial consultation.

	Intervention	Results
March 6, 2018	Reported initial IOP. Treatment focus: reduce IOP and continue with managing chronic ankle pain using acupuncture.	OD: 36mm Hg and OS: 28mm Hg.
March: 6, 13, 20.	Electro-acupuncture: Bilateral BL61 & 62, GB40 and ashi- 1 cun distal and posterior to GB40, ST43, BL2 and ST2, Right: SI4 & 5	Relieved ankle pain.
April: 3, 10, 17 & 20, 24 & 27	Electro-acupuncture: Bilateral BL61 & 62, GB40 and ashi- 1 cun distal and posterior to GB40, ST43, BL2 and ST2, Right: SI4 & 5	Relieved ankle pain.
April 30	Patient had IOP measured by ophthalmologist. New treatment focus is on reducing IOP.	OD: 34mm Hg and OS: 28mm Hg
May 1	Electro-acupuncture: 4 scalp needles located: Vision Area and eye area of the primary motor cortex line. Other points: Bilateral- Master Tung (MT) Flower Bone One	
May 22 & 29. June 5, 12, 26. July 10, 17 & 20, 24 & 27, 31	Electro-acupuncture: 4 scalp needles located: Vision Area and eye area of the primary motor cortex line. Other points: Bilateral- Master Tung (MT) Flower Bone One	Patient reported that the dry eye has gotten better.
August 1	Patient had IOP measured by ophthalmologist	OD: 30mm Hg OS: 24mm Hg Patient reported major improvement with dry eyes

Electric stimulation of 2Hz at a tolerable intensity was applied to following points: BI61, 62 and GB 40 has dual purpose to treat the ankle locally and eye distally. The ashi point is 1 cun distal and posterior to GB40 within the joint fold of the lateral malleolus. The patient’s tarsal bones of her left ankle had collapsed medially with her arch. The patient is avoiding ankle reconstruction surgery and has been receiving acupuncture to manage her chronic ankle pain for 2years prior to this case report. Other points used: ST 43 helps reduce

redness and swelling of the eyes; eliminates damp and harmonizes the stomach and down-bears qi. The Stomach channel starts at the eye. ST 2 and BL 2 help locally. Right SI 4 & 5 is homologous points to the location of the ankle pain. The one-inch needles used on the body were Dong Bang 34 gauge. The half-inch needles used on the face were SeirinJ-15, 44gauge. April 30th the patient had her eye pressure measured and reported a slight decrease in the right eye and IOP remained the same in the left. Patient was enthusiastic about results and wanted to continue with treatment in order to avoid medication.

Electro-Scalp Acupuncture started on May 1st. Two-inch Seirin J-Type, 30 gauge needles were used for the scalp. Two needles were inserted bilaterally, top down or superior to the inferior aspect of the Vision Area (VA) line of the scalp. The VA is located over the occipital lobe on the posterior aspect of the head. It starts on a horizontal line at the level of the occipital protuberance. The VA starts at a point 1cm lateral to the occipital protuberance and runs upward for 4cm, parallel to the anterior-posterior line or the center line of the head. The other two needles would be placed obliquely downward in the temporal region on either side of the head. This temporal area is the topographical region of the eye, on the motor homunculus or the primary motor cortex line. Each lead would be connected bilaterally to the needle on the eye region of the homunculus line and the needle on the VA line. The electric stimulation was set at 10Hz for 25minutes at intensity tolerable to the patient. Other points used were Master Tung (MT) points known to help with eye conditions. The points are called, Flower Bone One which is a series of 4 points equally spaced apart between the first and second metatarsal, running proximal to distal in that space.

The first treatment series between March 6th and April 27th was able to slightly reduce the IOP of the right eye by two points and maintain the pressure of the left eye. The second treatment series between May 1st and July 31st significantly reduced IOP in the right eye by six points and the left eye by 4points. The patient was also

happy with improving the dry eye condition. She only had to use moistening drops when she was on the computer for long periods of time. Although the treatment was effective in reducing IOP, glaucoma is a chronic and progressive condition that should be managed with medication. The recommendation is to use scalp acupuncture along with MT distal points as additional therapy to standard medication.

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None.

Conflict of interest

The author declares no conflict of interest.

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