Potential of Photonic Effects of Ion-Spec Medical Design in Controlling symptomatic characteristics in people with headache, high blood pressure and intraocular pressure

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Abstract
IONSPEC - A nanobiophotonic medical design incorporated negative ions and far infrared rays (FIR) was developed in helping patients in reducing their bifrontal discomfors, visual discomfors, and headaches. Both aerobic and not aerobic conditions help eye pressure at a healthier level, and their vision discomfors relief after wearing IONSPEC correction. The results suggest that materials emitting FIR, which are widely used in Asia for therapeutic and preventative purposes, appear capable of reducing bifrontal pains due to visual discomfor, and a headache without side effects. This study will hopefully enlighten professionals on spreading awareness regarding health hazards of computers and IONSPEC nanobiophotonic medical design has a potential to reduce eye pains, headaches, and othe visual symptomatic in many eye conditions.

Keywords:
Symptomatic, Hypertension, Visual discomfort, Vision problems
Introduction

The IONSPEC is made from Tourmaline mixture. A nanotechnology designed is a combination of far-infrared rays (FIR), negative ion effects, and unique 0.06mA+ electricity conductive properties of Tourmaline. Tourmaline is used because it acted as source of negative ions and far infrared rays (FIR) are the materials used to produce IONSPEC. Tourmaline is rich in anions (negative ions) due to its natural characteristics. The interpretation of polarities observed on the Tourmaline was long known. Wiesenfeldt G and Breidbach O has shown that since the mid 18th century this crystal had become the hallmark in categorizes different qualities of charges (carrying mild electricity and magnetic fields) (Wiesenfeldt G. & Breidbach O,2012). Far infrared emission is one natural property of Tourmaline (Zhu D, Xu A, Liang J, 2011).

IONSPEC is an eye frame designed for helping reduces eye discomfort, improving head blood circulation, and balancing blood pressure. The IONSPEC is effective and available to medical professionals, commercial, officers and home consumers who wanted to reduce eye pain, eyes discomforts and headache. The IONSPEC is a certified FIR device by the Korean Far Infrared Association (KFIA, KIFIRAE, 2012).

Development of Nanotechnology grinds Tourmaline super fine powder (Tsfp):

E-port Tourmaline nanotechnology powder sizes are between ranges (refer to Chart 1): D3:0.26μm, D6:0.32μm, D10:0.42μm, D16:0.51μm, D25:0.66μm, D75:1.56μm(Mid ), D84:1.9μm(Mid), D90:2.25μm(Mid), D95:2.73μm(Mid), D97:3.03μm(Far)(e-Port, 2014). IONSPEC have effective Mid and Far infrared radiation (IR) uses D3:0.26μm=260nm to D97: 3.03 μm, where IR band are D75: 1.56 μm=1560nm to D97:3.03 μm (Chu & Saw,2014). Whereas, the IR band covers the wavelength range of 750 nm–100 μm, frequency range of 400 THz–3 THz, and photon energy range of 12.4 meV– 1.7 eV (Fatma V & Michael R. Hamblin, 2012).

The report about tourmaline powders emitting improved far infrared emission properties as the particle size decreases. In the range of 2000-500 cm (1), the emissivity of the samples with D50 size of 2.67micron and 0.2 micron are 0.973 and 0.991 respectively (Meng J,Jin W,Liang J,Ding Y,Gan K,Yuan Y, 2010). Fatma V, Wellman Center for Photomedicine, and Department of Dermatology, Harvard Medical School, Boston, MA, USA classified tourmaline as one source of FIR; when milled into fine powders emits FIR and the characteristics of the FIR emission depend on the particle size (Fatma V & Michael R. Hamblin, 2012).

The nanobiophotonic mechanism of IONSPEC Tsfp and FIR emissions:

The IONSPEC FIR emission was tested at 37 °C (98.6 °F), which mimic human body temperature for the constant FIR emission (KFIA , KIFIRAE, 2012). The increased surface free energy, the proportion of the polar components is the main character. The spontaneous polarization is increased, and the dipole moment of tourmaline is upgraded to a higher energy level, more easily for chemical bond vibration, that energy is emitted by transitions(Niwa Y, Iizawa O, Ishimoto K, Jiang X,1993) . The Tsfp is considered energies-wavelengths transformation stages. The Tsfp could define as energies, not as we used to though Tsf appears as solid. The Tsfp is ranging as of low level laser (LLL) emission; the energies emitted are absorbed by human skin heat receptors directly. Tsfp is considered energies-wavelengths transformation stages. Tsfp could define as energies, not as we used to though Tsfp is appearing as solid. Tsfp is ranging as of low level laser (LLL) emission; the energies emitted are absorbed by human skin heat receptors directly (Chu & Saw, 2014).

It’s the photochemical reactions of wavelengths of light with our cell membranes, cell organelles and enzymes. Dysfunction or compromised cells respond rejuvenating activities than healthy cells to photochemical reactions. When cell exposure with LLL on damaged tissue can induce a chain of physiological reactions to enhance tissue regeneration, reduce acute inflammation, wound healing, and reduces pain (LLLT, ASLMS, 2010). Tsfp’s name laser super fine powder (Chart 1, In Chinese). In combination of above characteristics; IONSPEC is considered a biophotonic mechanism design, targeted to dysfunctional cells in the human head area.
Further, the FIR energy that Tourmaline naturally emits causes a resonance in the body at the same frequency as water. That's why when our bifrontal cells meet with FIR, having the same vibration frequency, and experience “resonant absorption”. This is a process known as “resonance-absorption to heat-generation” with the aid of FIR. Lots of cellular changes to a balance and healthier stage after the energies have been absorbed.

FIR Transformation: Tourmaline, hot spring water and human palmar energy (called "Qi Kong" in Japan and China), all which emit electromagnetic radiation in the far infrared region (wavelength 4-14 microns). These materials significantly increased phagocytosis, and generation of reactive oxygen species in neutrophils, and the blastogenetic response of lymphocytes to mitogen. The Chemotactic activity of neutrophils was also enhanced by exposure to tourmaline and the palm of "Qi Kong Shi" i.e., a person who heals professionally by the laying on of hands. Hot spring water, every kind of material living thing able to absorb and emits “growth ray” or far infra red ray (4-14 microns). Niwa Y(1993) et al. found that Tourmaline possesses a permanent electrostatic pole with high energy, being heavily electrically charged.

The Sun transmissions of FIR to Tourmaline to patients, an interpretation of Ancient Asian medical wisdom (Qi Kong) to modern Biophotonic medicine (FIR).

From the ancient times, Qi Kong or the laying on of hands has been claimed to have therapeutic effects. In the Christian Bible, Jesus Christ is said to have cured numerous diseases by touching the afflicted individuals.

These effects have generally been attributed to supernatural powers. However, there may be variation in the strength with which individuals emit these 4-14um electromagnetic rays from their palms. Most infrared radiation absorbed by human from sunlight is generally concentrated in the neck and head.1

The power of Qi Kong Shi is increased by daily training in the deep forests, which the trees have absorbed 4-14um electromagnetic rays from sunlight. They are assumed also to absorb these rays from the trees and re-emit the electromagnetic rays from sunlight (Niwa Y, Iizawa O, Ishimoto K, Jiang X,1993). The longer training time had made Qi Kong Shi exposure to forest, sunlight of FIR; therefore, the more FIR Qi Kong Shi absorbed. As we had observed “Qi Kong Shi” in our medical center that performed lying hands on patients’ head2 (Chu & Saw, 2014).

Nowadays, e-Port in cooperation created millions of “Qi Kong Shi” IONSPEC to fulfill home users’ need, that everyone is affordable to own a “Qi Kong Shi” IONSPEC healing in reducing their headache. We suggest that IONSPEC FIR ranging within 260nm-3.03um distributed to our patients has effectively reduces eyes discomfort and headache in our patients and so it could be beneficial to many others (Chu & Saw, 2014).

Method

In this research, 10 participants were recruited (5 male and 5 female). The who have bifrontal (eyes) discomforts are following up for a 6-month time frame. 10 participants were advised to wear FIR and negative ion products (IONSPEC) in a 6 month interval. Questionnaires interviewed to 10 IONSPEC users revealed that the majority of these users subjectively evaluated an improvement of their health.

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1In Eastern Traditional Medicine, we have a classical idea of “Yang” for head, means “energies”, “energetic”, “movement”, “day”, “sun”. The palm healing concentration on the head and neck is to observe good ‘energies’ of FIR.

2A same healing philosophy that head is absorbing FIR energies, therefore the healing of “Qi Kong Shi” concentrate from the patient’s head, and then migrate to the patient’s body.
Bifrontal discomfort, headache and Computer Vision Syndrome (CVS):

The majority (6/10) of the patients (4 women, 2 men: Subject 1-6) are prolonging computer users that cause discomfort and pain in surrounding eye area (Chu & Saw 2014). More evidence from researchers indicated computer usages do cause eye pains: 1) Shantakumari reported more than half students confronted most common visual problems were headaches. Follow by a burning sensation in the eyes and tired eyes. Headaches and tired eyes caused interruption of work in of the students (Shantakumari N, Eldeeb R, Sreedharan J, Gopal K, 2014). 2) More than three-fourth of the students complained the symptoms of CVS while working on the computer. Significant correlation was found between increased hours of computer use and the CVS symptoms increases (Logaraj M, Madhupriya V, Hegde S, 2014).

Results

The users were primarily interested in the popular belief that far-infrared rays promote healthier bio-psychological effects. 6/11 patients are in ages 30-50 years old. 1 control is not used IONSPEC. Table 1 is the demographic of the participants involved in this study.

Table 1: The IONSPEC user’s demographic statistic:

<table>
<thead>
<tr>
<th>Age (years)</th>
<th>Gender</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male</td>
</tr>
<tr>
<td>30-40</td>
<td>1</td>
</tr>
<tr>
<td>41-50</td>
<td>2</td>
</tr>
<tr>
<td>51-60</td>
<td>1</td>
</tr>
<tr>
<td>61-70</td>
<td>1</td>
</tr>
</tbody>
</table>

The subjects comments about IONSPEC during the interviews:

Six subjects who under these studies given satisfactory comments about IONSPEC:

Subject 1: F4, 33. A Theology master studies student. She was complaint having CVS, after using IONSPEC, her eyes pains reduce.

Subject 2*: M7, 40. A chief scientist, have hypermyopic problem. He has given commands that IONSPEC does help his eye discomfort, and his CVS does reduce.

Subject 3*: F, 42. She is hypermyopic accompany with insomnia. After she uses IONSPEC, she highly recommended IONSPEC to her peer, as her eye pains, headache, and insomnia have gone in the first interview.

Subject 4*: F, 42. She is an officer who uses computer 3-4 hours per day. After wearing IONSPCE for 3 weeks, she realized that her eyes felt much comfortable and headache after using computer significant reduces. Her blood pressure reduces from 110mmHg to 98-96 mm Hg (systolic), which is an optimal level. Her optimal blood pressure has maintained after 3 weeks of stop wearing IONSPEC.

Subject 5*: M, M, 43 report of nasal tubs blockage causes him headaches of over 20 years. He gave a statement that his bifrontal pains have improved, and headache discomfort has reduced.

Subject 6: F, 50. She is an accountant working on a computer 8-9 hours a day, for over 5 years. She experiences her eyes habitual severe pains at 4pm of every working day. After 2 weeks she uses IONSPEC,

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3 Not indicated in users’ demographic statistic.

4 F stands for female.
5 33 stand for 33 years old.
6 * Subject 2,3,4,5,7 are in the aerobic group, their heart rates are in 70-80% of their max heart rate.
7 M stands for male.
8 “mm Hg” refers to millimetres of mercury, a scale used to measure blood pressure.
her eyes pain stopped, and sleep quality improved. She found significant different and comfortable before and after using IONSPEC.

Subject 7*: M, 36. He is an electronic engineer, who complains about seeing glare object causes him a headache and eye discomfort. The discomforts make him feel stopping and wanted to get some rest. After using the IONSPEC, he was being able to look at a glare object (computer screen) for a longer time.

Table 2 described the summary of interviewed conducted in this study.

Table 2: Subjective evaluation of IONSPEC wearing, after first interview: 20th Feb, 2014.

<table>
<thead>
<tr>
<th>Description</th>
<th>Subjective Evaluation</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Comfort with IONSPEC</td>
<td>Very good</td>
<td>2/10 (20%)</td>
</tr>
<tr>
<td></td>
<td>Good</td>
<td>8/10 (80%)</td>
</tr>
<tr>
<td>Better and effective after using IONSPEC</td>
<td>Very effective</td>
<td>5/10</td>
</tr>
<tr>
<td></td>
<td>Effective</td>
<td>5/10</td>
</tr>
<tr>
<td></td>
<td>Slightly effective</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Ineffective</td>
<td>0</td>
</tr>
<tr>
<td>Reduce Headache</td>
<td>Either side</td>
<td>5/10</td>
</tr>
<tr>
<td></td>
<td>Discomfort</td>
<td>5/10</td>
</tr>
<tr>
<td>Reduce pain in eyes</td>
<td>Dull pain</td>
<td>0/10</td>
</tr>
<tr>
<td></td>
<td>Sharp pain</td>
<td>1/10</td>
</tr>
<tr>
<td></td>
<td>Tiredness</td>
<td>8/10</td>
</tr>
<tr>
<td></td>
<td>Discomfort</td>
<td>5/10</td>
</tr>
<tr>
<td>Daily function improvement</td>
<td>Insomnia</td>
<td>2/10</td>
</tr>
<tr>
<td></td>
<td>Alertness</td>
<td>3/10</td>
</tr>
<tr>
<td></td>
<td>Vision</td>
<td>8/10</td>
</tr>
<tr>
<td></td>
<td>Emotions</td>
<td>6/10</td>
</tr>
</tbody>
</table>

Bifrontal discomfort and headache, demographic factors:
During the interview of local Malaysian patients, we found that 4 patients reported headaches when exposed to sun in hotter days.

Subject 8: M, 43. He is a marketing executive, who drives 4-5 or more hours per day; under warm, hot sun. He commends his mild headache were due to heat. The IONSPEC does helps reduces his headache.

Major findings about IONSPEC:
Finding 1: The IONSPEC FIR function as computer radiation filter9:
After 6 months wearing IONSPEC while working in front of a computer screen, 6/6 patients informed their eye pains has stopped during the first interview. The effects of IONSPEC can stop eyes pains during computer work remains on second interviews, and final interviews.
As compared to the patient who is under control group, not using IONSPEC, continue complaint of their headaches and vision getting worse.

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9 Japanese researchers have reported that FIR radiant heat antidotes the negative effects of toxic electromagnetic sources (George G. 2013)
**Finding 2:** None aerobic group#, shown their intraocular pressure at a healthier level. In the first interview:

Subject 9#: M, 65. Who is a Glaucoma patient. His vision worse in year 2012, his vision field (visual acuity) left less than 33%. After 1 year he wears IONSPEC, his vision acuity increases to 66%, which is a 50% increase (Chu & Saw 2013). Continuing 1.5 years after he wear IONSPEC, reporting his vision remain.

Most glaucoma cases are diagnosed with pressure exceeding 20 mm Hg. He has satisfied with no eyes discomfort and headache after using IONSPEC.

Subject 10#: F, 45. Who has higher intraocular pressure (IP). Her IP was 20 mm Hg before using IONSPEC. After 1 week she wears IONSPEC, she was tested again. Her IP reduced from 20 mm Hg to 18-17 mm Hg, which is a 15-20% reduces in eye pressure. The test is Tonometry test: The range of normal pressure is 12-22 mm Hg (GRF, 2014).

Discussion: Medical professionals usually associate exercise with balancing blood pressure, or exercise can help reduce hypertension. However, we found in the not exercise group, subject 9, and 10, both IP improved with normal heart beats range. This is an exciting finding that IONSPEC does help reduce IP on patients who have higher IP than normal eye pressure patients. We suggest that IONSPEC is the one effective method to prevent Glaucoma. We continue to follow up with subject 10, who diagnosed with having high IP. She was saved from suffering of Glaucoma because using IONSPEC, her IP reduces within 1 week.

**Finding 3:** In the final interviews: 8 out of 10 subjects given statement about their vision improved. 2 cases of insomnia have improved, the patients psychological stage are happier and satisfactory with IONSPEC.

**Discussions 1: Hypothesis of the mechanism of IONSPEC:**

Due to the finding of blood pressure reducing and ease pressure reducing effects after using IONSPEC, we initially derived a hypothesis that IONSPEC may reduce the patients’ blood pressure to help with eye discomfort. But, it was the unique natural Tourmaline properties that help reduce eye discomfort and headaches. In our 4 women patients, their headache is none tumour causes. Their headache related to computer vision syndrome as disrupted by Shantakumari N. et al,(2014). Our women patients headache also affected by disturbed sleeping (Headache, A.D.A.M, 2014 ). None of them are type 2 diabetes mellitus (DM). We found these 4 women's headaches have reduced, especially related to computer usage period. Hence, we hypothesized that FIR, Anions, and mild electricities properties in Tourmaline have helped reduces headache, eye discomforts in women patients (Chu, & Saw, 2014).

**Hypothesis of the mechanism of IONSPEC:**

The finding of Tourmaline natural properties helped all our patients bifrontal discomfort. The reasons are: a) there are 4 women reported headaches and eye discomfort has helped by IONSPEC. All 4 women had healthy blood pressure which ranging 110+/80+ to 96+/66++. This finding does match with researches conducted by Waters and Tronvik: Those whom regard as hypertensive is concluded that most individuals with headache, and with migraine, have blood pressures similar to those who do not have headaches (Waters, 1971). Later, “That blood pressure regulation may be linked to the pathophysiology of headache” (Tronvik E, Zwart JA, Hagen K, Dyb G, Holmen TL, Stovner LJ, 2011). The pathophysiology of type 2 diabetes mellitus does affect by the high blood pressure: The relation of higher blood pressure and bifrontal headache: F,32 with a history of bipolar disorder, hypertension and a 4-year history of uncontrolled type 2 DM presented with bifrontal headache, elevated blood sugars (>500 mg/dL). Vital signs included blood pressure 160/89 mm Hg, and heart rate 67 bpm. (Strowd RE, Wabnitz A, Balakrishnan N, Craig J, Tegeler CH, 2014).

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10 warm up means 50-60% of the patients’ heart rate zone.

11 “mm Hg” refers to millimetres of mercury, a scale used to measure IP (eye pressure).
Discussions

IONSPEC and Blood pressure:

The IONSPEC group experienced statistically significant improvement and remained stable for over 6 months-1 year. These patients also have aerobic exercises (3-4 times a week, every time 30 minutes.) The results of this study are promising and indicate a possible role of IONSPEC in the conservative management of blood pressure control, and stroke prevention (Chu & Saw, 2014).

The expert’s reports about FIR offered other benefits to human health:

The expert’s report about FIR offered other benefits to human health: FIR was discovered by NASA to be a safe, beneficial light wave. It reduces pain and swelling, while increasing blood flow and reducing stress by increasing the secretion of serotonin (George G, 2013). Where In the States, used in physical therapy to enhance healing of joint and soft tissue injuries such as an arthritis treatment, carpal tunnel syndrome or athletic sprains and injuries. It has been used prior to radiation therapy in breast cancer to prevent the inflammatory dermatitis that is frequently associated with. FIRs also are used for periodic treatments to enhance skin rejuvenation (LLT, ASLMS, 2010). Harvard Medical School, University Department of Dermatology, Dr. Micheal stated: “The goal of this review is to cover the use of sub-division (3–12 μm) of this wave band, to stimulate cells and tissues. Technological advances have provided new techniques for delivering FIR radiation to the human body, FIR exposed group indicating that FIR reduced inflammation.” (Fatma V & Michael R. Hamblin, 2012).

Current reports detailing the public are exposed to the hazard electromagnetic fields, such as those from high-tension power lines, cell phones, or computer display terminals. Far-infrared waves have been tested in Japan and found free of toxic electromagnetic fields. Rather, Japanese researchers have reported that far-infrared radiant heat antidotes the negative effects of toxic electromagnetic sources (George G, 2013).

The reason - infrared Tourmaline is the only one mineral to show permanent electricity on the earth and is also a natural (non-manufactured) source of anions and FIR. It is also known to be helpful for improving circulation, relieving stress, increasing mental alertness and strengthening the immune system function (Niwa Y, 1993). Far-infrared rays have good effects on human skin, blood circulation, and skin cell vitalizing (Yoo BH, Park CM, Oh TJ, Han SH, Kang HH, Chang IS, 2002).

Conclusion

We suggest the Tourmaline super fine powder, the tinier it is, the more surface area for emitting near far infrared rays. And, Tourmalin’s natural physical properties to re-emitted FIR to patients, helps patients’ headaches and bifrontal (eyes) discomforts. The patients’ eyes pressure reduced to a healthier level and their vision maintained for 6 months. 8/10 subjects reported satisfactory of feeling eyes comforts while in front of a computer, their headache, and bifrontal (eyes) pain has reduced as compared to not wearing IONSPEC. The patients’ general comfortable on job and duty while using the computer has improved. The results of this study are promising and indicate a possible role of IONSPEC in the conservative management of blood pressure control, and preventative of Glaucoma (Chu & Saw, 2014).
References


