#### Case Report

# A New Finding-peripheral Vision Phobia: A Possible Subtype of Social Phobia

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#### [Abstract]

Background and objectives: Social phobia is a nervous anxiety characterized by one or more constant fear in social activity or specific situation which causes serious damage to individual's social functions leading to chronic functional impairment when it is untreated. The objective of this study is to report a new finding of a possible subtype of social phobia according to a case survey and study of sufferers found via online support group.

Methods: A single case review using survey and interview on patient was employed. Following a no-treatment baseline period for examination and interview, biweekly acupuncture treatment with interview for in-depth examination was delivered for 6months. Also, for in-depth investigation of peripheral vision phobia, survey questionnaire was done by the members of a Korean support group on on-line social group forum.

Result: A new type of social phobia which has not yet been reported nor mentioned in any journals, namely called 'peripheral vision phobia' has been identified. Biweekly acupuncture treatment reached a comfort state of mental status on one case of patient with social phobia.

Limitation: Due to the shift of environment on patient's part, the termination of the school session at where the phobia occur the most, the reoccurrence of the phobia is yet to be examined. Also, the generalization of the new type of phobia as a subtype only by reviewing one case alone with survey interview of on-line social group has limitation.

Conclusion: The result of the case review suggests that 'peripheral vision phobia' is strictly concentrated on malfunctioning of peripheral vision without functional or organic hindrance of pupils or of any parts of eyes including eye muscles due to peripheral vision phobia. PVP is similar to social phobia and it may be a subtype of social phobia, however, since etiology, diagnosis, medical treatment methods are under researched, investigation is yet to be done.

Key words: Peripheral vision phobia; Social phobia; Acupuncture; Korean medicine

> Received: 2014 01 20 Revised: 2014.02.18. Accepted: 2014 02 24

On-line: 2014.03.20.

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### I. Introduction

Social phobia is a nervous anxiety characterized by one or more constant fear in social activity or specific situation which causes serious damage to individual's social functions leading to chronic functional impairment when it is untreated<sup>1)</sup>. At some stages of a life time, many may come across some types of social phobia. It is one of the most common psychiatric disorders with a lifetime prevalence of 12 %<sup>2)</sup>. Medical encyclopedic definition of social phobia is a persistent and irrational fear of situations that may involve scrutiny or judgment by others<sup>3)</sup>. Aside from social phobia, a new disorder under the tab of social phobia is a new finding especially focused on the eye vision, more specifically, peripheral vision. As a young curious kid, one may have purposely tried to blur out the central vision and see through peripheral vision. One may have experienced movements and actions going on on both left and right side of space where one is spaced. This peripheral vision phobia is a symptom found by case review of peripheral vision phobia (PVP). The purpose of this study is to introduce a new finding of a disorder yet unknown and the acupuncture treatment that has been used to relief symptom.

## II. Case

A single patient at a clinical setting, 27 year old Korean female medical school student with a venerable emotional state with unknown disorder was assessed in 2011-2012 for 6 months (Aug 11, 2011- Feb 20, 2012) by a Korean medical doctor. She was not diagnosed with DSM-IV social phobia criteria and because the case was not yet seen at any other journals, investigator-administered questionnaire was used to sensitize symptoms of so-called 'peripheral vision phobia' at the baseline period. The survey questionnaire is comprised of demographic questions, way of managing stress and types of stress situation

one may be in kind of personal stressful situation question, and 27 questionnaires of physical, psyhological, and emotional symptoms on peripheral vision phobia in Korean language(Fig. 1). At the first visit, physical examination was undergone. Thereafter, hourly personal interview/counseling and acupuncture treatment on patient following the interview was employed biweekly for six months for in-depth examination and investigation under patient's consent. For the acupuncture treatment, disposable acupuncture needles(H.L. SEO WON ACUP. NEEDLES, DIA 0.25 mm LENGTH 30 mm) were used. The patient was in supine position. The following acupuncture points LI<sub>2</sub>, LI<sub>3</sub>, PC<sub>7</sub>, SI<sub>2</sub>, GV<sub>23</sub>, SI<sub>6</sub>, BL<sub>4</sub>, LI<sub>4</sub>, LR<sub>3</sub>, HT<sub>7</sub>, PC<sub>5</sub>,  $PC_{6},\ LI_{11},\ CV_{17},\ ST_{1},\ ST_{8},\ BL_{1},\ BL_{2},\ TE_{23},\ GB_{1},\ GV_{20},$ EX-HN<sub>1</sub>, 3, 4, 5 were manually manipulated for 15 minutes followed by another set of points of scalp acupuncture points MS1, 2, 3, 12, and 13 for 15 minutes in prone position. Treatment sessions lasted for 30 minutes every visit. The treatment ended at 14 sessions with no remarkable side effects. Minor side effects such as brushes, blood let-out disappeared after 4 weeks from the treatments. For assessment of acupuncture treatment, we used visual analog scale(VAS) for symptom change. At the initial stage of the treatment, the patient was asked to rate the severity of the symptom by making a mark on a horizontal 100 mm visual analog scale bounded by the words "least severe" on the left and "most severe" on the right. At the end of 6 month treatment, patient was again asked to compare the current severity of the symptom on a new form, without reference to the previous mark. Patient was also asked to compare the current symptom severity to the previous measurement by choosing from 5 qualitative descriptors: "no change (0), "a little less (-1)," "a little more (-2)," "a lot less (-3)," or "a lot more (-4)."

Also, in a further search for similar cases to fully understand her complaints, an anonymous support group forum already formed on-line for those with peripheral vision phobia was found at a Korean portal sites, www.naver.com and www.daum.net. As a member of the anonymous forum, the same investigator administered questionnaire was utilized for more of

This survey questionnaire is developed to understand specific anxiety in everyday activity. The result will be	☐ When I hear people around me say, 'my eyes hurt', 'I'm dizzy', 'I have a headache', and I feel like it is because
confidential and will be used for research purposes	of me.
only.	☐ Within the last three months, I had an urge to dig out
	my eye.
	☐ I walking facing my head down because of the eye vision.
	☐ Within the last year, I had a nervous breakdown due to
I. General Information	break up in a relationship, death of a close relationship,
1. DOB: □ M □ F	break up with close friends, public scrutiny, feeling of
2. Siblings: #, □ Older brother, □ Older sister,	rejection, feeling of being left out in a group.
☐ Younger sister, ☐ Younger brother	☐ I feel like I don't have a single person to share my side
3. What year are you in school?	of the story.
☐ Elementary_grade, ☐ Middle school_grade,	☐ I feel like my peripheral vision is constantly staring at a
☐ High school_grade, ☐ College_year,	person sitting next to me that more than three time a
☐ Working, ☐ Etc	week, I just close my eyes and pretend that I'm sleeping.
4. Do you think you are in a good relationship you're	☐ When I'm nervous or attention is gathered at me, I get a
your parents and have good enough conversation with	cold sweat.
them?	$\square$ I feel like me eyes are letting out laser beam.
☐ Yes, ☐ No.	$\square$ I feel like my eyes are heated up often.
5. Do you think you receive enough attention by your	☐ I feel like sometimes my eyes become cross—eyed.
parents?	☐ If I squint my eyes, it is better.
☐ Yes, ☐ No.	☐ When I look up to see the board at front, I lose my
6. Do you get along well with your friends?	concentration because people in the front of me are
☐ Yes, ☐ No.	constantly in my vision (even though they are not
7. Do you feel more comfortable by yourself then with	blocking the site).
around your friends?	☐ I skip classes because of the eye problem.
$\square$ Yes, $\square$ No.	☐ I thought about taking time off school because of the eye
8. How do you manage stress? Please share your way of	problem.
dealing with stress.	☐ I took leave of absence from school because of the eye
	problem.
	$\square$ I have a headache or dizziness often.
	☐ When I'm at a crowed place or with many people, I get
II. When do you feel stressed out? Or At what situation	tired.
do you get stressed out? Please feel free to share	☐ I have visited medical hospital (or clinic) or search the
your side of the story.	internet because I feel like something is wrong with my
	eyes.
	☐ I did not share this eye problem with any of my friends
	or family because I am afraid of rejection.
	☐ I am not good at opening up to other people first that
	feel left out easily.
	☐ There are some side of me that I want to hide from
	others.
III. Check the boxes if you had the experience or was at	$\square$ I have weaknesses that I don't want my friends to know.
that situation.	☐ I am a person of a great self—respect (pride).
☐ Within the last three months, I had my eyes checked	
for vision problems.	IV. Please feel free to share anything you want.
☐ When I'm reading a book or doing computer, I have to	
cover the side of my eyes because I am conscious of	
the person sitting next to me.	
□ Even if I don't turn my head around to see, my attention	
(vision, or eye) is facing the person next to me.	
☐ I have more than 5 items such as eye glasses, hat (or cap),	
I into their o items such as eye glasses, hat (of cap),	Thank you for participating
colored lenses, circle lenses to cover up the vision.	Thank you for participating.

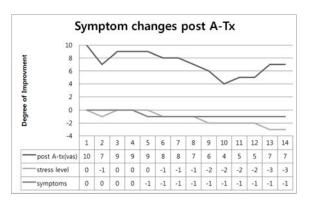
Fig. 1. Survey questionnaire used to diagnosis and assess peripheral vision phobia(PVP)

the same cases anonymously and contents of the anonymous support group forum were used in this case report.

The patient did not meet DSM-IV social phobia criteria, but this anxiety has made her life sedentary leading toward solitary and fear of being even with her immediate family members. She walked into the office wearing baseball cap and thick horn-rimmed glasses to cover her eyes. She had no past history of medical problems, no medications taken, no surgery of any kinds, and no family history of mental illnesses. She had three siblings and healthy parents supporting her medical endeavors. This phobia can be described in such way. As peripheral vision becomes the prime vision, peripheral vision becomes very sensitive and is conscious of the eyes of people sat or standing next to them that mentally one may think that it is harming those next to them. One suffering from this anxiety may think that their eyes are constantly staring at other people's eyes with their peripheral vision against their will and against the motor function of the eye movement. The eyes may make uncontrollable rolling movements as the person next to them makes a move, following the movement of the person next to them involuntarily. At the initial stage, one may be more conscious of the symptoms causing extreme nervousness. As the severity deepens, people sat diagonally at front or behind may be at attention by peripheral vision and they also become target of impaired staring. The sufferer becomes conscious of the other people's eyes that the focal vision becomes recess vision and the peripheral vision becomes dominant vision of the eyes. This constant mental anxiety may lead to secondary symptoms such as cold sweat, corectasis, headache, dizziness, pseudostrabismus, and nervousness. At this stage, the patient would walk out of the classroom and take a walk alone or put her head down at the desk to try get away from the vulnerable emotional state. The onset of this phobia began when she came across a close classmate who has her eyes closes at all times or had her head facing down and only stared at their book or notes with only 10~20 cm distance. She began to wonder and the curiosity found her eyes suddenly sense the stare and became

uncomfortable and conscious of the stare and the fear arose. On the patient's survey result, on general information section, she marked yes on good relationship with parents; however, she liked to be along then hanging out with friends. Also, she mentioned that she had no let-out from stress situation and stress level was at high level at all times. Of the 27 questions on peripheral vision phobia, she checked all 27 questions. At the initial state of treatment, she marked VAS 10 on visual analog scale. At the end of 6 month session, the patient's stress level reduced to "a lot less," the peripheral vision phobic symptoms to "a little less," and VAS score from 10 at the initial state to VAS 7 at the end of the 6 month (Fig. 2).

An anonymous support forum of social phobia group especially of peripheral vision phobia was found on Korean internet portal site(closed to general public for personal privacy). The investigator sent out an announcement of the survey questionnaire for the specific kind of phobia and a possible e-mail interaction or off-line interview of the members of the Korean support group. Three sufferers shared the experience and the remaining investigation was done using the content of messages (Korean language) from the anonymous forum. Sufferers elaborated the symptom as 'the state at of constant stare of people next to, behind, or in front of them against their will.



2. Fig. Symptom changes post acupuncture treatments

Patient was asked of changes after acupuncture treatment on VAS scale and compare the current stress level and symptom severity to the previous measurement by choosing from 5 qualitative descriptors: "no change (0)," "a little less (-1)," "a little more (-2)," "a lot less (-3)," or "a lot more (-4)Once they make eye contact by peripheral vision with the person consciously at attention due to uncontrollable eye's peripheral view, the sufferers go through a constant guilty feeling that they are perpetrator of constant stare and that those at target of their malfunctioning vision are the victims of non-verbal uncomfortable state of being and being in the same space causes them to be in a very uncomfortable situation and that it is all sufferer's fault. The tension state of emotion worsens as the duration of this ongoing fear lengthens that the eyes may feel chemically heated up and one may think that their eyes are shooting out laser beams at the victims causing other people to become dizzy or sleepy. Concentration at any duty is no longer possible at the state of the situation and the fear inside their mind become magnified leading to severe anxiety stage. The onset of one case started with an experience of neglect by a group of people and in the other case, one had a mockery in front of the closed social groups and the fear of reoccurrence of the scrutiny or thinking of other people's judgments may have activated the peripheral vision phobia. Those who had finished the survey on possible peripheral vision phobia had identical symptoms; ages were widely ranged from teens to forties. There was no gender difference that it may occur to both males and females. Of the 27 questions, those sufferers from the peripheral vision disorder marked more than 13 questions out of 27 questions. No medication has been reported to relieve this anxiety. The symptoms severity varies as the duration increases. In trying to overcome the situation, one interviewer had made more than 5 office visits to seek medical help; however, there were no medical problems to their eyes. Other interviewer had more than 6 difference eye glasses, 5 difference baseball hats, and many colored contact lenses to block the vision. Another interviewer mentioned that one has shoulder pains because one always has her hands covering the sides of the eyes when looking straight forward that the posture causes shoulder joint pains, but she'd rather have pain then be in fearful situation of staring at other people and making them uncomfortable. Very few have recovered fully from the onset of the symptoms which means it's a lifelong struggle for the sufferers and many have found life's adjustments with their symptoms.

## III. Discussion

Extreme shyness is one of the factors in social phobia<sup>4)</sup>, and the severe nature of the phobia causes considerable disruption to patients' normal functioning and personal relationships<sup>5)</sup>. Social anxiety disorder has been recognized and the diagnostic criteria have been issued in DSM-IV<sup>6)</sup>, however, specific phobia namely called, Peripheral Vision Phobia is either unknown to neuropsychiatric specialists and of any other specialists or it is under-recognized<sup>7)</sup>. Thus it may be a new finding of a possible subtype of social phobia that has not yet been reported in any journals.

Since PVP is under-recognized, there has not yet be any etiology that is been reported, but by the survey and interviews of the sufferers, it can be concluded that it tends to occur more in a closed compact social groups such as within secondary school settings, closed work settings where there are limited people within the groups where the stance and people's set judgment is not liberal. 80% of them had fear of becoming an outsider, low-self-esteem, low confidence, feeling of inferiority. Because of the fear of being rejected by friends when they share their problems, they don't share their secret. Rather, sufferers tend to pull themselves away from the social groups they are in. Since they think that their eyes are making the people uncomfortable and for the fear of the reoccurring awkward situation, they no longer hang out with any social groups, rather, they become focused on their own personal issues, PVP. The concern of peripheral vision phobia is that one thinks it is contagious within the social network or social group. As the anxiety worsens, they even drift away from their close family members such as parents, siblings, and spouses.

Some possible explanation of peripheral vision phobia maybe related to malfunctioning of ANS leading to over activity of sympathetic nervous system and over activated state of peripheral vision. Due to corectasis, sight becomes broader that the vision is absorbing more images and over activity of rod cell

receptors excited by anxiety causing hyperactive state of sympathetic nerve system. As the rod cells become predominant rather than corn cells, central vision, even if the eyes are looking straight at an object such as looking at a board up front at a classroom setting, because the peripheral vision is acting as dominant part of the vision, people sitting next to or sitting at the right or left part of the classroom many be unconsciously become the target of the vision sending wrong information to the brain that one is staring at other people's eyes leading to more anxiety and trying to block what one is seeing. As the symptom becomes severe, the conscious mind tries to block the peripheral vision which cannot be done voluntarily, worsening the visual function and it causes malfunctioning of the eye muscle movement that pseudostrabismus may arise. Tired eye muscles crash and both eyes become less synchronized that when a person is sat on the right side, only the right eye moves to the right, conscious of the person sat on that side and when a person is sat on the left side, only the left eye moves to the left, conscious of the person sat on the left side trying not to stare but uncontrollable consciousness is reflected by the movement of the eyes and the nervous anxiety. In such situation, auditory sensory also becomes very sensitive but the auditory and visual sensory are not synchronized that in reaction to a sound, eyes may not catch where the sound is coming from leading to unfocused eye sight and a possible pseudostrabismus, become handicapped in walking or driving.

As the patient's onset started with the thought of the constant staring at other people with peripheral vision, at the initial state, the thought may cause nervousness. And to prevent the situation, one may try to block the eye vision with thick eye glasses or baseball hat to limit their view and conceal their eyes. Some may deliberately try to worsen the eye vision by wearing minifying eye lens or strong diopted lens. Some may limit their view by constant frowning to blur their vision or simple close their eyes at all times when sat in immobile position.

Effective psychological and pharmacological interventions exist for social disorder and anxiety disorder, however, not of peripheral vision phobia. Therefore, treatment of the disorder is yet to be investigated. Under Korean medical clinical setting; acupuncture intervention was tried out at the clinic. Acupuncture treatment has shown some improvement in relieving the headaches, nausea, nervousness, related symptoms<sup>8)</sup>. Biweekly acupuncture treatment may have helped by relieving stress and calming the mind and relaxing the tired muscles. By reducing the symptoms by 30 % from the initial state, acupuncture treatment maybe somewhat effective. Acupuncture points LI<sub>2</sub>, LI<sub>3</sub>, PC<sub>7</sub>, SI<sub>2</sub>, GV<sub>23</sub>, SI<sub>6</sub>, BL<sub>4</sub>, LI<sub>4</sub>, LR<sub>3</sub>, HT7, PC5, PC6, LI11, CV17, ST1, ST8, BL1, BL2, TE23, GB<sub>1</sub>, GV<sub>20</sub>, EX-HN<sub>1</sub>,  $_3$ ,  $_4$ ,  $_5$  and scalp acupuncture(MS1, 2, 3, 12, 13) were used with no manipulation. LI<sub>2</sub>, LI<sub>3</sub>, PC<sub>7</sub>, SI<sub>2</sub>, GV<sub>23</sub> are points for eye pain according to Chimgu-dajun. SI<sub>6</sub> and BL<sub>4</sub> are points for blurry vision according to Chimgu-jasangkyung. Acupuncture points ST<sub>1</sub>, ST<sub>8</sub>, BL<sub>1</sub>, BL<sub>2</sub>, TE<sub>23</sub>,  $GB_1$ ,  $GV_{20}$ ,  $EX-HN_1$ , 3, 4, and 5 that surrounds the eyes were used to enrich Qi and Blood flow and to give relaxation to the eye area. In relieving mental and emotional discomfort and high degree of stress level, HT7, PC5, PC6, LI11, CV17 were used. These points mainly treat neuropsychological symptoms. Scalp acupuncture points MS 1, 2, 3, 12, 13 is the zone for vision area which corresponds to the cortical area of the cerebrum and cerebellum responsible for central nervous system function of vision<sup>9)</sup>. Also, the interview may have help relieving the emotionally uneasy state because sharing the problem with others is another way of counseling. Because this is psychological disorder, changing the patterns of thoughts and memories may help in relieving the symptoms and physical symptoms may be relieved by acupuncture treatments, however, no data or report of treatment has been reported. Peripheral vision phobia may become a serious issue for the sufferers in living a normal life. More examination and studies are needed to support the new finding. As this may affect many people and possibly contagious, it should not be ignored, but finding treatment methods are in need.

## IV. Acknowledgments

Thank the one above, the student and her family for the support.

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