

Clinical Study on Efficacy of Goghrita Padabhyanga as an Upkrama in Dincharya in Computer Vision Syndrome W.S.R. to Ophthalmic Hygiene

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Abstract : Computer is recent invention i.e. before three decades, so in ayurveda there is no information about computer and ayurveda had not mentioned its adverse effects on eye. But while describing effect on eye (*netrarogas*). Some acharyas mentioned following points that can similar with observing very minute objects, *Bhasvaravastuviksanama*, *Mithyavihara*, etc On an average, more than 50% of the workforce now uses a computer on the job and nearly 60 million people experience vision problems as a result. Continue use of computer can cause computer vision syndromes Computer vision syndrome is a term that describes eye related problems and the other symptoms caused by prolonged computer use. Including eye strain and irritation, along with back, neck, shoulder and wrist soreness. The most common symptoms in computer users are Eye strain/tired eyes, Dryness of eyes, Redness of eyes, burning of eyes, Headache, sleeplessness, watering of eyes, etc. In Ayurvedic *Dincharya*, *Padabhyanga* is mentioned beneficial for maintenance of healthy eyesight, it can be advised in maintenance of health as well as practiced in individuals which have ophthalmic complaints. The current study was conducted on the group of peoples suffering from computer vision syndrome and peoples which were not suffering from computer vision syndrome to evaluate the efficacy of *Goghrita Padabhyanga* mentioned as a *Dincharya upakarma*. *Padabhyanga* with *Goghrita* is very effective in maintaining the ophthalmic hygiene. In both the persons not using computer and computer users, *Goghrita padabhyanga* proved its superiority without any unwanted effect.

Keywords: Computer vision syndrome, *Padabhyanga*, *Goghrita*

I. INTRODUCTION

In this modern era of electronics and machines, life style of human being is completely changed, and this life style is changing periodically. Life of man has become very mechanical. As a result of this man is moving away from nature. We are living in modern and technologically advance environment where computer professions form the backbone. there continuous working in front of the computer for several hours creates glare in the eyes from the illuminated computer screen this results in eye strain, eye pain , dry eyes, watering of eyes, blurred vision, headache and others complaints like *Nidralpata*, *khandit Nidra* etc.

Ayurvedic texts have laid upon some guidelines regarding the use of sense organs for instance, excessive visualization of sharp objects or image is termed as *atiyoga of chakshurendriya* were as visualization of two small images strain of eyes is called *hina yoga*. This is a common similar situation observed by the computer professionals, who spends more than 6 to 8 hours a day sitting in front of the computer screen. In this present electronics era most of the people use electronics devises like not pad, mobile phone, tablets etc. hence I wish to put my humble efforts for prevention of ophthalmic complaints in computer users as well as non-computer users.

Abhyanga is one of the one most important procedure explained in *Dinacharya Upakarma* in our ancient texts for removing accumulated stress and toxins from mind and body^[1]. It is advised to perform *Abhyanga* to all the body organs but especially to *Pada*, *Shira* and *karna*. *Padabhyanga* is suggested to be most useful for the betterment of eyesight and sleep. According to Yog ratnakar *Padabhyanga* is beneficial in diseases of eyes and *Padabhyanga* imparts stability, induces sleep, alleviates fatigue and it is good for vision. Computer professionals work 6-8 hours daily in front of computer, which leads to various eyesight complaints. These ophthalmic complaints are generally seen in the Computer users.

In Ayurvedic *Dincharya*, *Padabhyanga* is mentioned beneficial for maintenance of healthy eyesight, it can be advised in maintenance of health as well as practiced in individuals which have ophthalmic complaints.

AIM: To evaluate Efficacy of *Goghrita Padabhyanga* in Computer Vision Syndrome W.S.R. to Ophthalmic Hygiene.

OBJECTIVES

- To assess the effect of *Padabhyanga* as a *chakshusha* in individuals.
- To assess the effect of *Padabhyanga* as a *chakshushya* in computer users.
- To observe the other effects if any

LITERATURE REVIEW:**Abhanga:**

Abhyanga is a part of this *upakrama*. According to ayurveda man should apply (or massage) *Sneha* (oil or *ghrita*) daily all over the body. Vata is predominant in sense organs, which is located in skin. *Sneha* (oil or *ghrita*) massage is most beneficial for skin; hence one should use it regularly. Ayurveda has specifically advised to apply *sneha* on head, ear and feet. But in today's fast life style it is not reliable to apply *Sneha* (oil or *ghrita*) all over the body. In such conditions, the massage with *snehan dravya* should practice at least for the feet. Vata dominates in a tactile sensory organs and this sensory organ is lodged in the skin. The massage is exceedingly beneficial to the skin, so one should practice it regularly. *Abhyanga* should be resorted daily, it wards off old age, exertion and aggravation of *vata*, bestows good vision, nourishment to body, long life, good sleep, good and healthy skin. As far as *Vagbhata* concerned, both legs have *nadis* which is direct Relation of *pada* to Eyes. Oil, *ghrut* or *Lepa* applied on the *Pada* gives desirables effect on ophthalmic health^[2].

Ophthalmic Complaints in Computer User

Computer is recent invention i.e. before three decades, so in ayurveda there is no information about computer and ayurveda had not mentioned its adverse effects on eye. But while describing effect on eye (*netrarogas*). Some *acharyas* mentioned following points that can similar with:-

1) Observing very minute objects 2) *Bhasvaravastuviksanama* 3) *Mithyavihara*

On an average, more than 50% of the workforce now uses a computer on the job and nearly 60 million people experience vision problems as a result. This condition is seen in the computer users.

Although the American optometric association reports that approximately 14% of patients scheduled eye exams because of computer use, many individuals who suffer vision problem from computer use is not even aware that they have the condition. Continue use of computer can cause computer vision syndromes

Computer vision syndrome is a term that describes eye related problems and the other symptoms caused by prolonged computer use.

Our dependence on computers continues to grow; an increasing number of people are seeking medical attention for eye strain and irritation, along with back, neck, shoulder and wrist soreness. The most common symptoms in computer users are Eye strain/tired eyes, Dryness of eyes, Redness of eyes, burning of eyes, Headache, sleeplessness, watering of eyes

People who spend more than 5 to 6 hours on a computer per day will experience symptoms of eyes. Not at all as many as 60 million people suffer from some degree vision problem. It is estimated that at least half of all computer users experience some or all of the symptoms. Any combination of these symptoms may be present.

Causes of vision problems:-

The causes of vision problems are due to poor workplace conditions, and improper work habits. Fixating the eyes for extended period of time on the computer screen or poor lighting conditions that cast shadow across your work can cause eyestrain. Inherent problems such as refractive disorders and dry eyes are among the leading cause of computer users.

Working at a computer is more visually demanding than doing other standard office work such as reading printed documents. Aspects of the computer video display such as screen resolution and contrast image refresh rates and flicker, and screen glare as well as working distances and angles all may contribute to worker symptoms.

In order to accomplish specific computer related tasks, frequent eye movements from work documents to the computer screen, or from the screen to the key board and back again are used. In addition as the object being viewed changes, so does the need for a change in eye focusing to maintain a clear image. These changes occur repeatedly during computer work. As a result, individuals are unable to adequately focus on close work and computer screen without a proper spectacle lens correction. Problems occur or are aggravated by repeated movements.

Human vision is not suited for starting at a computer screen. These problems are more noticeable with computer task than other near work because letters on the screen are formed by tiny dots called pixels, rather than a solid image. Since your eye cannot focus on them, you must constantly refocus to keep images sharp. Eventually you get repetitive stress of the eye muscles.

This causes the eye to work a bit harder to keep the images in focus it is difficult for the eyes to look into all these dots and they must constantly focus and refocus. The human focusing systems responds very well to images that have well defined edges with good contrast between background and any letters and symbols. The eyes react very differently to electronically generated character than to printed character on a page. Characters displayed on computer screen on video display terminal are made up of many small dots or pixels. Pixels are the result of an electron beam striking the phosphor coated rear surface of the screen. Each pixel is brightest in the center with a very small aperture is passed across a pixel with the light amplitude being charted against the horizontal location. The pixel shows a bell shaped curved (Gaussian) while the same light amplitude graphs of a printed characters form an almost perfect square wave. The eyes have a very hard time focusing on the pixel character. They focus on the plain of the computer screen but cannot sustain that focus. They focus on the screen and relax to a point behind a screen a resting point of accommodation. (*RPA*) or dark focus. The *RPA* is different for every individual but for almost everyone it is further away than the working distance to the computer. The working distance is the distance from the computer users' eyes to the front of the screen. So the eyes are constantly relaxing to the *RPA* and then straining to refocus on the screen. A monitor is a dynamic signal in that the screen is constantly being "redrawn" a monitor creates images on the basis of varying light intensity through a fix set of red, green and blue points. This result is less distinct edges and lower contrast.

The illumination profile of points on a monitor is not sharp (bright to dark) but is somewhat rounded again reducing contrast. All above things are the causative factors of computer vision syndrome. Also the other symptoms of computer users includes Dryness or Irritation of eyes, Eye strain, Headaches, etc.

MATERIALS AND METHOD:

Research design: Single blind randomized clinical trial was conducted on 60 persons aged between 20 to 50 years were selected irrespective of sex, caste and religion.

These are divided into 2 groups:

- Group A: 30 people not using computer.
- Group B: 30 people are using computer regularly minimum for 6- 8 hours since 6 months.

Inclusion criteria:

Persons having good ophthalmic and general health were selected for non-computer users group and Computer professions working for at least 6 to 8 hrs daily in front of the computer and suffering from one or more ophthalmic complaints selected for computer users group, complaints such as Eye strain, Eye pain, watering of eyes, dryness of eyes, Redness of eyes, Headache etc.

Exclusion Criteria:

Persons suffering from ophthalmic diseases like hereditary eye diseases, Cataract, Glaucoma, Pterygium, Diabetic retinopathy, other major ophthalmic complain etc. were excluded.

Baseline of Assessment:

With the following complaints were selected and assessed before and after *Padabhyanga*

1. Eye fatigue / eye strain/ eye tired
2. Eye pain
3. Watering of eyes
4. Dryness of eyes
5. Redness of eyes
6. Headache

Period of clinical trials:

Total period of trail was 28 days, follow-up was carried out every week. So each person was examined 5 times (1th examination + 4 follow up)

Follow up 7th day, 14th day, 21st day and 28th day

Time of *padaabhyanga* was at night before sleep for 28 days each individual. For present study the Dose for *goghrita* for *padaabhyanga* about 10 ml/per individuals /day (and depends upon the requirement of feet).

Both the groups was given *Goghrita* and special prepared instruction chart for *padabhyanga*. People were told to wash their foot before *ghrita* massage. Both the feet were massaged with *Goghrita* by hands by themselves at bed time. Duration of *padabhyanga* approximately 10 to 15 min for both the feet

PROCEDURE OF PADABHYANGA***Padabhyanga* was performed in 6 steps:^[3]**

1. Do all the steps on one foot and then on the other. Start with the *friction rub*. Sandwich the entire foot between the palms of your hands and rub briskly so that one hand goes forward as the other moves back. To do the heel, lift the foot up place hands parallel to the calf, and then rub up and down.
2. Do a series of long, slow stroke pulling from ankle to toes. Place one hand on the back of the heel and the other over the front of the ankle to sandwich the foot between your palms. Pull firmly and press in as you glide your hands back to the toes, following the foot throughout. Repeat as a smooth, flowing stroke for several minutes.
3. Stretch the foot by flexing downwards. Place the palm of your left hand around the ankle to support the foot. Then wrap the right palm over the toes, with your thumb under the sole of the foot. Gently push the toes downwards, hold for a count of ten, then relax and repeat four times. In the same position, gently push the foot from side to side five times.
4. Stretch the foot by flexing upwards. Lift the foot by holding it with the left hand behind the ankle. Place the palm of your right hand flat against the sole of the foot and push into follow the contour closely, then gently push against the toes of the foot to flex back up towards the leg. Hold for a count of ten, then relax and repeat four times.
5. Wrap your finger around the top of the foot and use your thumbs to make small circles all over the sole of the foot from under the toes back to heel. [circle up to down] Then keeping your thumbs stiff, use them to push and stroke, with one thumb following the others, all over the sole of the foot from the heel back up to the toes. [Stroke down to up]

Wrap your finger under the arch of the foot with your thumbs on the instep at the front. Use your thumb to make small circles all over the top of the foot and around the ankle bone. Then, keeping your thumb stiff, use them lightly to stroke all over the top of the foot from the toes back up to the ankle, with one following the other. [circle down to up] and [stroke up to down]

Gradation of assessment Criteria:**(1) Eye strain –**

- Grade 0: Eye strain after more than 6 hours of near work.
- Grade 1: Eye strain after 4 to 6 hours of near work.
- Grade 2: Eye strain after 2 to 4 hours of near work.
- Grade 3 Eye strain before 2 hours of near work.

(2) Eye pain –

- Grade 0: Eye pain after more than 6 hours of near work.
- Grade 1: Eye pain after 4 to 6 hours of near work.
- Grade 2: Eye pain after 2 to 4 hours of near work.
- Grade 3 Eye pain after before 2 hours of near work.

(3) Headache –

- Grade 0: no headache
- Grade 1: very occasional Headache 42
- Grade 2: Irregular attacks of frequent headache
- Grade 3: regular headache

(4) Dryness of eyes –

- Grade 0: more than 15mm of schirmer paper / 5 min.
- Grade 1: 15 to 10mm of of schirmer paper / 5 min.
- Grade 2: 5 to 10mm of schirmer paper / 5 min.
- Grade 3: 0 to 5mm of schirmer paper / 5 min.

(5) Watering of eyes –

- Grade 0: Watering of eyes after more than 6 hours of near work.
- Grade 1: Watering of eyes after 4 to 6 hours of near work.
- Grade 2: Watering of eyes after 2 to 4 hours of near work.
- Grade 3 : Watering of eyes before 2 hours of near work.

(6) Redness of eyes:

- Grade 0: Normal eyes
- Grade 1: Pink color eyes
- Grade 2: Red color eyes
- Grade 3: Brisk Red color eyes

(7) Nidralpatva (Deprivation of Sleep):

- Grade 0: Nidra more than 7 hours. 43
- Grade 1: Nidra 5 to 7 hours.
- Grade 2: Nidra 3 to 5 hours.
- Grade 3: Nidra less than 3 hours.

(8) Nidrakhanditva (Disturbed Sleep):

- Grade 0: Continues sleep at night. .
- Grade 1: Nidrakhanditva less than 2 times .
- Grade 2: Nidrakhanditva 3 to 5 times.
- Grade 3: Nidrakhanditva more than 5 times.

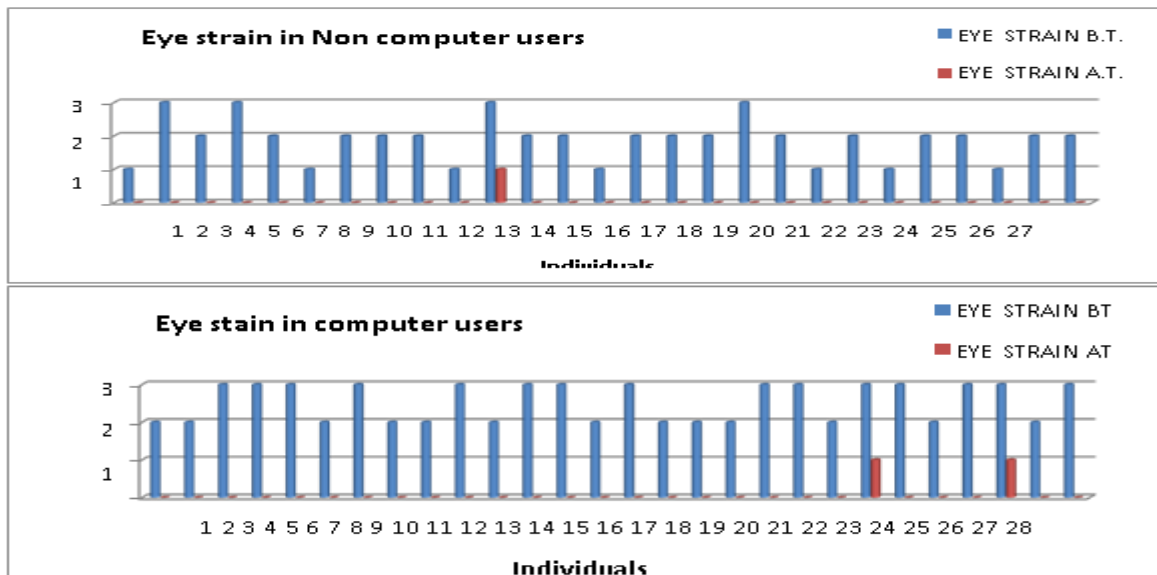
(9) Visual acuity of distance Vision:

- Grade 0: 6/6 Normal Vision
- Grade 1: 6/9
- Grade 2: 6/12
- Grade 3: more than 6/12

OBSERVATION AND RESULTS:

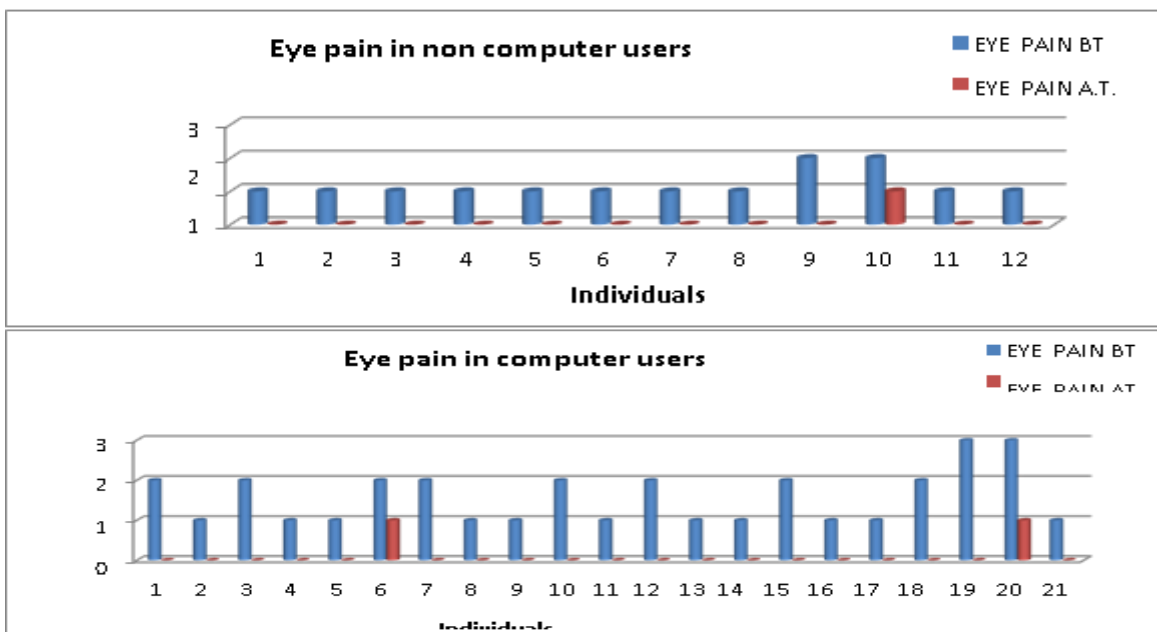
(1) EYE STRAIN:

In Non-computer EYE STRAIN was observed in 27 individuals severe in 4 individual, moderate in 16 individual and mild in 7 individuals before trial. After Trial all individuals got relief from eye stain expect 1 and In computer user sever in 15 individual moderate in 13 individual after trail all individual got relief expect 2



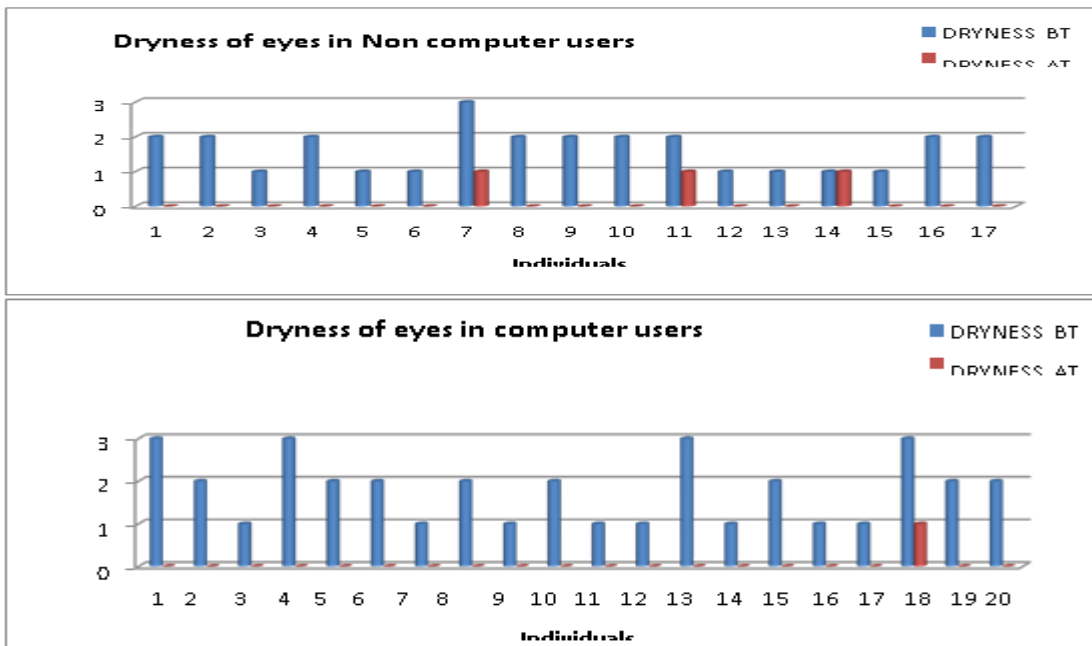
(2) EYE PAIN

In Non-computer EYE PAIN was observed in 12 individuals moderate in 2 individual and mild in 10 individuals before trial. After Trial all individuals got relief from eye pain expect 1 and in computer user sever in 3 individual moderate in 8 individual and mild in 11 after trail all individual got relief expect 2.



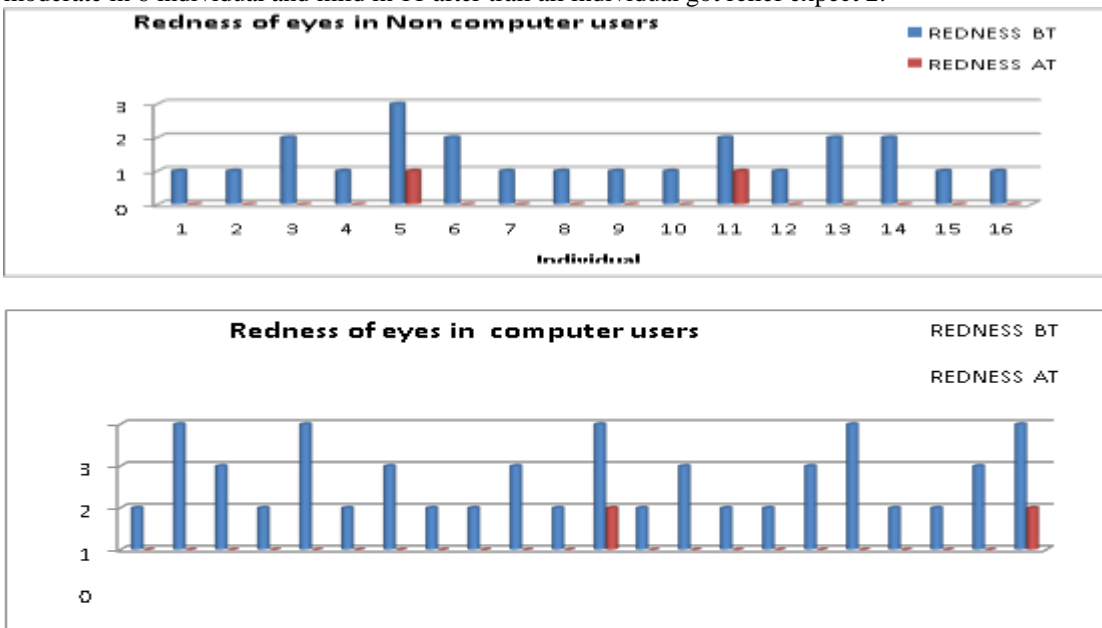
(3) DRYNESS OF EYES:

In Non-computer users DRYNESS OF EYE was observed in 17 individuals severe in 1, moderate in individual and mild in 10 individuals before trial. After Trial all individuals got relief from dryness expect 1 and In 9 computer user severe in 4 individual moderate in 8 individual and mild in 8 after trail all individual got relief expect 2.



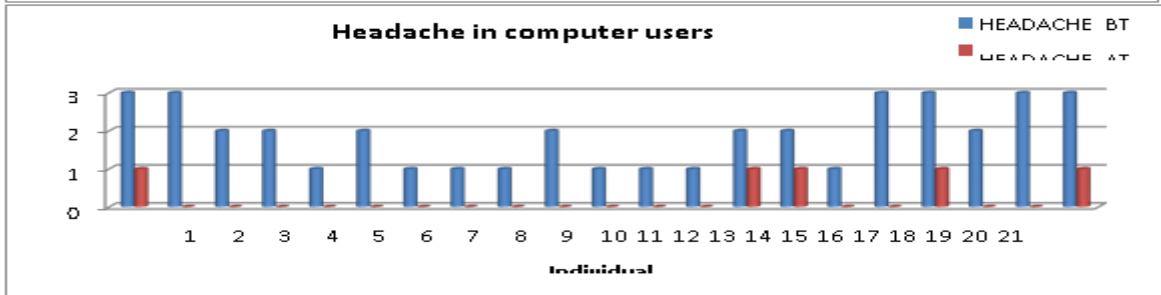
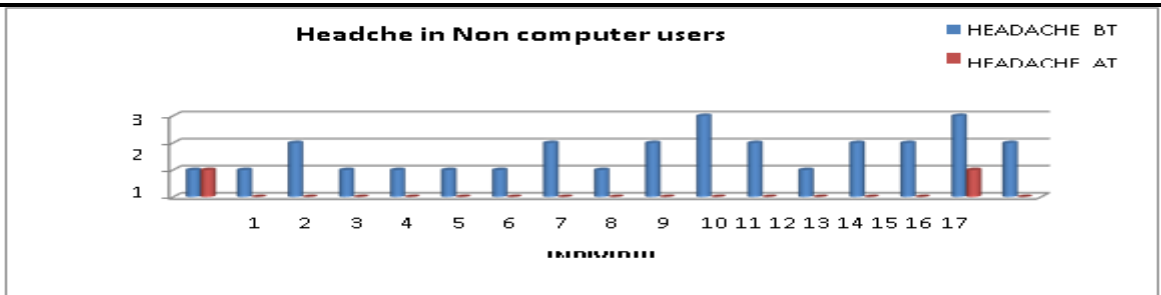
(4) REDNESS OF EYES

In Non-computer user REDNESS OF EYES was observed in 16 individuals severe in 1, moderate in 6 individual and mild in 10 individuals before trial. After Trial all individuals got relief from Redness expect 2 and In computer user sever in 5 individuals moderate in 6 individual and mild in 11 after trail all individual got relief expect 2.



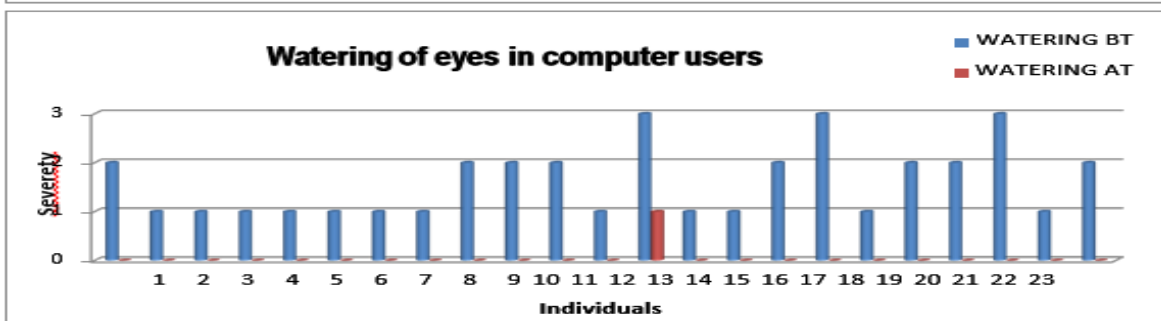
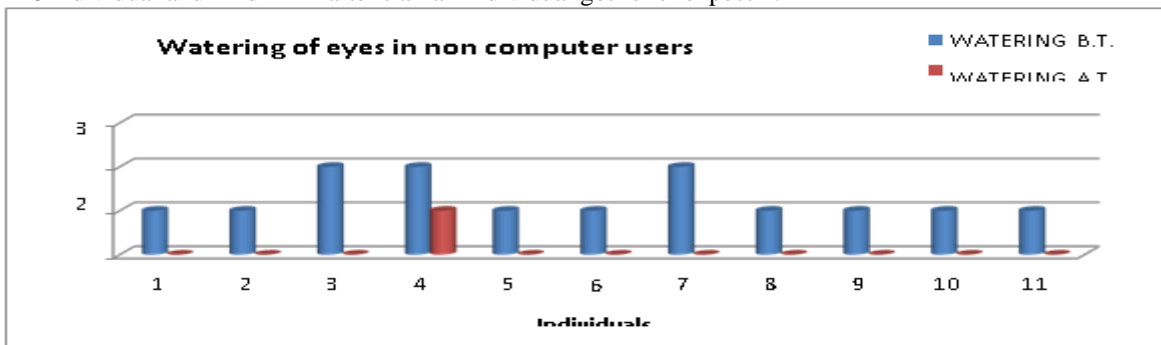
(5) HEADACHE

In Non-computer users HEADACHE was observed in 17 individuals severe in 2, moderate in 7 individual and mild in 8 individuals before trial. After Trial all individuals got relief from headache expect 2 and In computer user sever in 6 individual moderate in 7 individual and mild in 8 after trail all individual got relief expect 5.



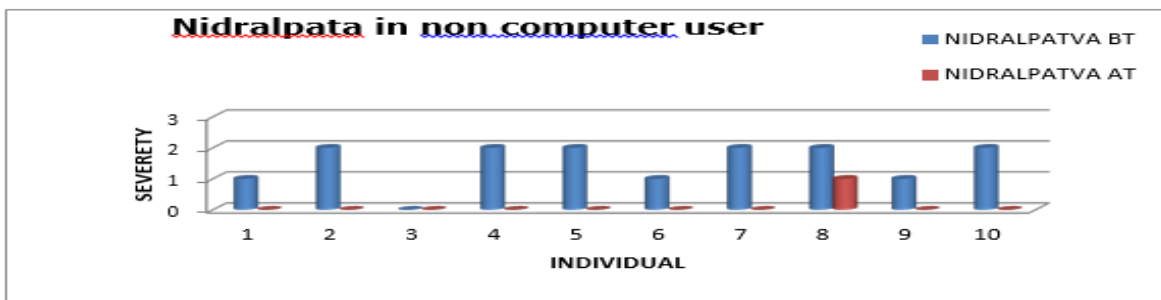
(6) WATERING OF EYES

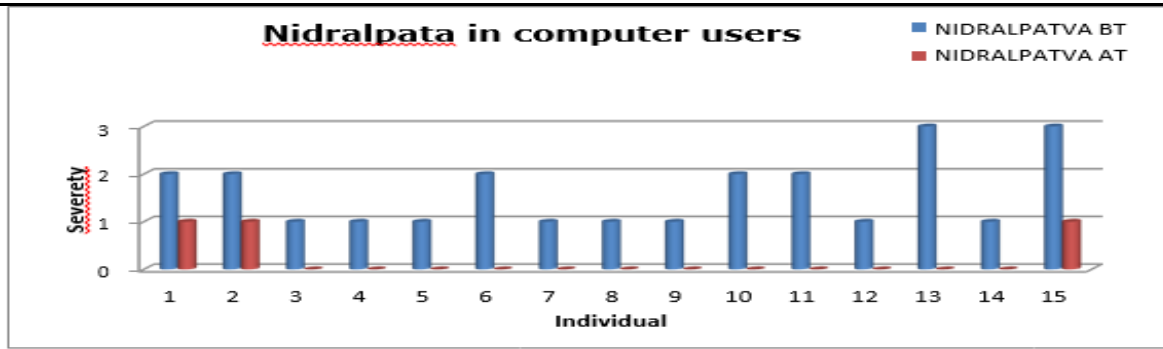
In Non-computer users WATERING OF EYES was observed in 11 individuals moderate in 3 individual and mild in 8 individuals before trial. After Trial all individuals got relief from watering of eyes expect 1 and In computer user sever in 3 individual moderate in 8 individual and mild in 12 after trail all individual got relief expect 1.



(7) NIDRALPATA

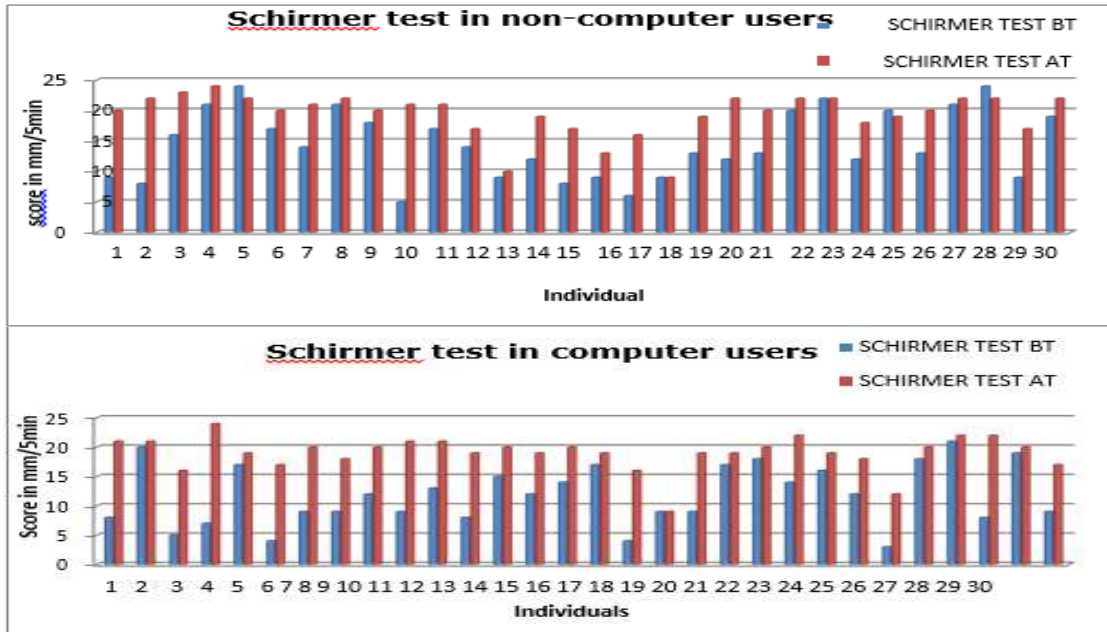
In Non-computer users NIDRALPATA was observed in 10 individuals moderate in 6 individual and mild in 8 individuals before trial. After Trial all individuals got relief from Nidralpata expect 3 and In computer user sever in 3 individual moderate in individual and mild in 12 after trail all individual got relief expect 1





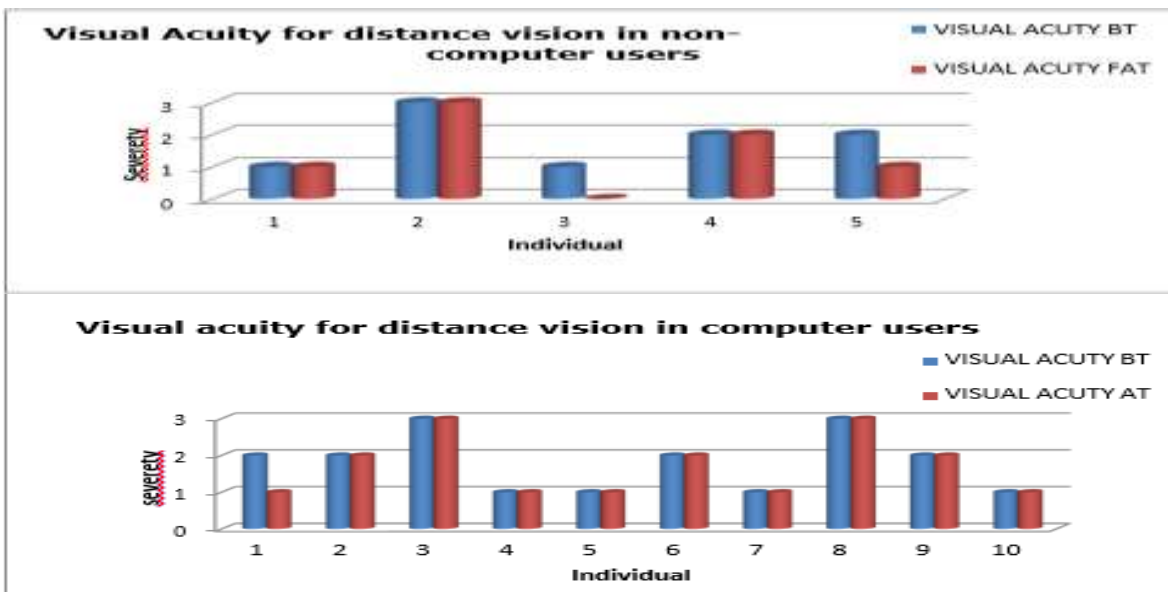
(8) SCHIRMER TEST

Graphs shows improvement in Schirmer test after upakrama in the both group. There is significant improvement in schirmer test



(9) VISUAL ACUITY FOR DISTANCE VISION

In Non-computer users VISUAL ACUITY FOR DISTANCE VISION was observed in 5 individuals severe in 1, moderate in 2 individual and mild in 2 individuals before trial. After Trial 1 individuals got relief. In computer user sever in 2 individual moderate in 4 individual and mild in 4 after trail no one individual got relief.



RESULTS**(1) EYE STRAIN:**

Parameter	Group A				Group B				Result
	Mean diff.	S.D	T Value	Table value	Mean diff.	S.D	T value	Table value	
Eye strain	1.6	1.03	8.6	2.05	2.3	1.3	9.5	2.05	H.S

Table 1: eye strain before and after upakrama (paired t test)

Above statistical analysis shows that in case of Eye Strain management both group are highly significant, but group B is more effective than group A.

(2) EYE PAIN:

Parameter	Group A				Group B				Result
	Mean diff.	S.D	T Value	Table value	Mean diff.	S.D	T Value	Table value	
Eye Pain	0.43	0.5	4.59	2.05	1.6	0.84	6.5	2.05	H.S

Table 2: eye pain before and after upakrama (paired t test)

Above statistical analysis shows that incase of Eye Pain management both group are highly significant, but group B is more effective than group A.

(3) DRYNESS OF EYES

Parameter	Group A				Group B				Result
	Mean diff.	S.D	T Value	Table value	Mean diff.	S.D	T Value	Table value	
Dryness of Eyes	1.03	0.82	6.7	2.05	1.2	0.97	6.8	2.05	H.S

Table 3: Dryness of Eyes before and after upakrama (paired t test)

Above statistical analysis shows that incase of Dryness of Eyes management both group are highly significant, but group B is more effective than group A.

(4) REDNESS OF EYES

Parameter	Group A				Group B				Result
	Mean diff.	S.D	T Value	Table value	Mean diff.	S.D	T Value	Table value	
Redness of Eyes	0.7	0.71	5.23	2.05	1.23	0.96	6.8	2.05	H.S

Table 4: Redness of Eyes before and after upakrama (paired t test)

Above statistical analysis shows that incase of Redness of Eyes management both group are highly significant, but group B is more effective than group A.

(5) HEADACHE

Parameter	Group A				Group B				Result
	Mean diff.	S.D	T Value	Table value	Mean diff.	S.D	T Value	Table value	
Headache	0.93	0.83	6.01	2.05	1.17	1.09	5.7	2.05	H.S

Table 5: Headache before and after upakrama (paired t test)

Above statistical analysis shows that incase of Headache management both group are highly significant, but group B is more effective than group A.

(6) WATERING OF EYES

Parameter	Group A				Group B				Result
	Mean diff.	S.D	T Value	Table value	Mean diff.	S.D	T Value	Table value	
Watering of Eyes	0.43	0.54	4.31	2.05	1.2	0.9	7.17	2.05	H.S

Table 6: Watering of Eyes before and after upakrama (paired t test)

Above statistical analysis shows that incase of Watering of Eyes management both group are highly significant, but group B is more effective than group A.

(7) NIDRALPATA

Table no.11	Group A				Group B				Result
	Mean diff.	S.D	T Value	Table value	Mean diff.	S.D	T Value	Table value	
Nidralpata	0.46	0.63	3.9	2.05	0.7	0.79	4.77	2.05	H.S

Table 7: Nidralpata before and after upakrama (paired t test)

Above statistical analysis shows that incase of Nidralpata management both group are highly significant, but group B is more effective than group A.

(8) NIDRAKHANDITVA

Parameter	Group A				Group B				Result
	Mean diff.	S.D	T Value	Table value	Mean diff.	S.D	T Value	Table value	
Nidrakhanditva	0.96	0.74	6.9	2.05	1	0.75	7.2	2.05	H.S

Table 8: Nidrakhanditva before and after upakrama (paired t test)

Above statistical analysis shows that incase of Nidrakhanditva management both group are highly significant, but group B is more effective than group A.

(9) SCHIRMER TEST

Parameter	Group A				Group B				Result
	Mean diff.	S.D	T Value	Table value	Mean diff.	S.D	T Value	Table value	
Schirmer Test	4.9	5.2	5.02	2.05	7.13	5.58	7.04	2.05	H.S

Table 10: Schirmer Test before and after upakrama (paired t test)

Above statistical analysis shows that incase of Schirmer Test management both group are highly significant, but group B is more effective than group A.

(10) VISUAL ACUITY

Parameter	Group A				Group B				Result
	Mean diff.	S.D	T Value	Table value	Mean diff.	S.D	T Value	Table value	
Visual acuity for Distance Vision	0.11	0.69	0.83	2.05	0.13	0.89	0.8	2.05	N.S

Table 11: visual acuity before and after upakrama (paired t test)

Above statistical analysis shows that incase of visual acuity management both group are non-significant value therefore no effect of upakrama on Visual acuity.

COMPARISON BETWEEN NON-COMPUTER USERS AND COMPUTER USERS**(1) EYE STRAIN:****Comparative effect of Goghrita Padabhyanga on Eye strain:**

Eye strain	Mean Difference	S.D	Unpaired "t"	Table value	P value	Result
Group-A	1.6	1.03	2.26	2.02	0.05	S
Group-B	2.3	1.3				

Table 13: Comparative effect of Goghrita Padabhyanga on Eye strain

Severity of Eyestrain has reduced in both the groups after the upakrama. The reduction in group B is slightly better than Group A. the mean Score in Group A is 1.6 against the mean score 2.3 in group B. the variation seen in this two groups is statistically significant as indicated by unpaired "t" test

(2) EYE PAIN:**Comparative effect of Goghrita Padabhyanga on Eye Pain:**

Eye Pain	Mean Difference	S.D	Unpaired "t"	Table value	P value	Result
Group-A	0.43	0.5	2.64	2.02	0.05	S
Group-B	1.6	0.84				

Table 14: Comparative effect of Goghrita Padabhyanga on Eye Pain

Severity of Eye pain has reduced in both the groups after the upakrama. The reduction in group B is slightly better than Group A. the mean Score in Group A is 0.43 against the mean score 1.6 in group B. the variation seen in this two groups is statistically significant as indicated by unpaired "t" test.

(3) DRYNESS OF EYES:**Comparative effect of Goghrita Padabhyanga on Dryness of eyes**

Dryness of Eyes	Mean Difference	S.D	Unpaired "t"	Table value	P value	Result
Group-A	1.03	0.82	2.26	2.05	0.05	S
Group-B	1.2	0.97				

Table 15: Comparative effect of Goghrita Padabhyanga on Dryness of eyes

Severity of Dryness of eyes has reduced in both the groups after the upakrama. The reduction in group A is slightly better than Group B. the mean Score in Group A is 1.03 against the mean score 1.2 in group B. the variation seen in this two groups is statistically significant as indicated by unpaired "t" test

(4) REDNESS OF EYES:**Comparative effect of Goghrita Padabhyanga on Redness of eyes**

Redness of eyes	Mean difference	S.D	Unpaired "t"	Table value	P value	Result
Group-A	0.7	0.71	2.26	2.05	0.05	S
Group-B	1.3	0.96				

Table 16: Comparative effect of Goghrita Padabhyanga on Redness of eyes

Severity of Redness Of eyes has reduced in both the groups after the upakrama. The reduction in group B is slightly better than Group A. the mean Score in Group A is 0.7 against the mean score 1.3 in group B. the variation seen in this two groups is statistically not significant as indicated by unpaired "t" test.

(5) HEADACHE:**Comparative effect of Goghrita Padabhyanga on Headache**

Headache	Mean difference	S.D	Unpaired "t"	Table value	P value	Result
Group-A	0.93	0.83	2.26	2.05	0.05	S
Group-B	1.7	1.09				

Table 17: Comparative effect of Goghrita Padabhyanga on Headache

Severity of Headache has reduced in both the groups after the upakrama. The reduction in group B is slightly better than Group A. the mean Score in Group A is 0.93 against the mean score 1.7 in group B. the variation seen in this two groups is statistically significant as indicated by unpaired "t" test

(6) WATERING OF EYES:**Comparative effect of Goghrita Padabhyanga on Watering of eyes**

Watering of eyes	Mean difference	S.D	Unpaired "t"	Table value	P value	Result
Group-A	0.43	0.54	3.2	2.05	0.05	S
Group-B	1.2	0.09				

Table 18: Comparative effect of Goghrita Padabhyanga on Watering of eyes

Severity of Watering of eyes has reduced in both the groups after the upakrama. The reduction in group B is slightly better than Group A. the mean Score in Group A is 0.43 against the mean score 1.2 in group B. the variation seen in this two groups is statistically significant as indicated by unpaired "t" test.

(7) NIDRALPATA:**Comparative effect of Goghrita Padabhyanga on Nidralpata:**

Nidralpata	Mean difference	S.D	Unpaired "t"	Table value	P value	Result
Group-A	0.46	0.63	0.73	2.05	0.05	NS
Group-B	0.7	0.79				

Table 19: Comparative effect of Goghrita Padabhyanga on Nidralpata

Severity of Nidralpata has reduced in both the groups after the upakrama. The reduction in group B is slightly better than Group A. the mean Score in Group A is 0.46 against the mean score 0.7 in group B. the variation seen in this two groups is statistically not significant as indicated by unpaired "t" test

(8) NIDRAKHANDITVA:**Comparative effect of Goghrita Padabhyanga on Nidrakhanditva**

Nidrakhanditva	Mean difference	S.D	Unpaired "t"	Table value	P Value	Result
Group-A	0.96	0.74	0.44	2.05	0.05	NS
Group-B	1	0.75				

Table 20: Comparative effect of Goghrita Padabhyanga on Nidralpata

Severity of nidrakhanditva has reduced in both the groups after the upakrama. The reduction in group B is slightly better than Group A. the mean Score in Group A is 0.96 against the mean score 1 in group B. the variation seen in this two groups is statistically not significant as indicated by unpaired "t" test.

(9) SCHIRMER TEST:**Comparative effect of Goghrita Padabhyanga on Schirmer test**

Schirmer test	Mean difference	S.D	Unpaired "t"	Table value	P value	Result
Group-A	4.9	0.5	3.34	2.05	0.05	HS
Group-B	7.1	0.84				

Table 22: Comparative effect of Goghrita Padabhyanga on Schirmer test

Severity of schirmer Test has reduced in both the groups after the upakrama. The reduction in group B is slightly better than Group A. the mean Score in Group A is 4.9 against the mean score 7.1 in group B. the variation seen in this two groups is statistically significant as indicated by unpaired "t" test.

(10) VISUAL ACUITY FOR DISTANCE VISION:**Comparative effect of Goghrita Padabhyanga on Visual acuity for distance vision:**

Visual acuity	Mean difference	S.D	Unpaired "t"	Table value	P value	Result
Group-A	0.83	0.69	0.07	2.05	0.05	NS
Group-B	0.80	0.88				

Table 23: Comparative effect of Goghrita Padabhyanga on Visual acuity for distance vision

Severity of Visual acuity has no any specific change in both the groups after the upakrama. The reduction in group A is slightly better than Group B. the mean Score in Group A is 0.83 against the mean score 0.80 in group B. the variation seen in this two groups is statistically not significant as indicated by unpaired "t" test.

DISCUSSION:

In present study goghrita Padabhyanga on the both the Legs, a dose about 10 ml/ individuals /day before sleep applied for 28 days, Provided significant improvement in most of sign and symptoms in both groups. In computer users result showed by releasing the above Laxana. This effect is achieved by Vataghana and Pittaghana property of drug. In Ayurvedic text it is elaborated as most of the ophthalmic problems are a result of vitiated Pitta and Vata dosha. According to properties of Goghrita, we can consider the following action – The drug Goghrita contains mainly Madhur rasa, shit virya and Madhur vipaka due to which the vitiated pitta and vata is reduced. Goghrita has Best Pittaghnya properties in all the snehan dravya which helps in reducing Pitta and vata Doshas. It keeps good balance of vitiated Tridoshas. In both computer users and non –computer users act by the Rasayana and Chakshushya property and gives effect. In today's life use of computer increasing rapidly and also environmental pollution is also increasing, Result of this is increasing ophthalmic problems. Goghrita Padabhyanga has found very useful in maintaining ophthalmic hygiene and prevention and curing effect the ophthalmic problems. From all above observation it is confirmed that if padabhyanga upakrama described in dinacharya is done regularly, with Goghrita, definitely it will help the people in improving their ophthalmic hygiene and preventing the ophthalmic diseases. Here the fact should be noted that highly significant improvement was observed in the most of targeted symptoms. However a lot of research with update methods of assessment should be designed to explore Ayurvedic concept of Dinacharya to specify the Padabhyanga effect to prevent the ophthalmic problems and to improve the ophthalmic health. More study is necessary on large group of people to draw the final inferences, but I am glad to bring to notice that 70% people have continued Goghrita Padabhyanga afterward on their own, as they have got very much improvement in their ophthalmic hygiene.

CONCLUSION

Padabhyanga Upkrama proved its efficacy clinically in this research work. Padabhyanga with Goghrita is very effective in the maintenance of ophthalmic hygiene. In both the persons not using computer and computer users, Goghrita padabhyanga proved its superiority without any unwanted effect. The subjective improvements were observed with the goghrita. It is significantly effective to cure the symptoms like Eye strain, Eye pain, Dryness of eyes, watering of eyes, Alpanidra and objective improvement in Schirmer test. It is a good ophthalmic preventive procedure in today fast life. Moreover its effect in padakharatva was also observed during the trails.

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