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Role of *Dhatryadi Rasakriya Anjana* in Refractive errors

Research article

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Abstract

Ayurveda the science of life deals with not only the treatment of diseases but has shown way of living & prevention of diseases. Now day's refractive errors are most common presenting feature in ophthalmic practice, though exact modern medicine against refractive errors is yet to be established. At present spectacles, contact lenses, refractive surgery is only treatment with their own hazards.

Ayurveda has mentioned various measures to keep vision normal throughout life in the form of *ANJANA*, *TARPANA*, *ASHCHYOTANA* etc. These measures can be applied in diseased state of eyes. *Timira* can be correlated with refractive errors. It can be well treated by *Anjana* karma. Considering contents of *dosha-dushya*, myopia, hypermetropia, astigmatism & presbyopia. [Refractive errors] are vata- kapha dominant in nature so it can be well treated by vata-kaphaghna, *lekhana* & *dhatupushtikar anjana*. *Dhatryadi Rasakriya anjana* is one of the best vata- kaphaghna, *lekhana*, *dhatupushtikar anjana* described in *Charaka chikitsasthana 26th adhyaya*. It consists of *Dhatryadi, Saindhava, Pippali, Marich* & Honey. Among the refractive errors 30 patients of each myopia, hypermetropia, astigmatism & presbyopia were selected, in which *Dhatryadi rasakriya anjana* was applied. The effect of treatment was seen in each group.

Keywords: *Dhatryadi Rasakriya, Anjana, Tarpana, Ashchyotana, Timir, vata-kaphaghna, lekhana, dhatupushtikar*

Introduction

Refractive errors are most common presenting feature in ophthalmic practice. Our watching & reading activities continue unabated even during late hours, it seems to be more common due to exposure to mobile, TV, computer screen, sleep disturbances etc. The errors of refraction are by far the commonest cause of defective vision. The curvature of cornea, position & refractive power of lens & axial length of eye are three major factors, which determines the refractive error.

There is no medicinal treatment available for refractive errors in modern science. The other mode of treatments are spectacles, contact lenses, & refractive surgeries.

At present spectacles are the more popular curative measures, but one will prefer the use of spectacle as fashion but the same fellow will refuse it as refractive compulsion. Contact lens is another solution but troublesome wearing, handling difficulties & fear of corneal infections force to avoid it. Refractive

surgeries are other alternatives but they are with their own hazards & as they are costly, beyond the limit of common man

Many patients do enquiry about medicinal treatments of refractive errors to avoid spectacles, contact lenses & refractive surgeries. So it inspired me to observe the role of herbal remedy in refractive error.

Aim

Study the role of *Dhatryadi Rasakriya Anjana* in refractive errors.

Objective

- 1) An effort to avoid spectacles, contact lenses & refractive surgeries.
- 2) To study the beneficial effects of ancient mode of treatments in modern era.
- 3) To reduce eye strain in refractive errors.
- 4) To increase visual acuity.

Review of Ayurved literature

Refractive errors can be correlated with *prathama & Dwitiya patalgat dushti*(2). The refractive error i.e. *prathama & Dwitiya patalgata dushti*, can be cured by *Anjana karma* *anjana karma* is one of the important *kriyakalpa* . Ophthalmic disorders can be prevented as well as cured by application of *anjana karma*. *Anjana karma* is easier & economical for common man.

Dhatryadi rasakriya anjana is one of the *patalgat dushtinashak anjana* described in *charak chikitsasthan* by *Acharya charak*(1). It consist of *Dhatri, saindhav, pippali, maricha* & honey. These all are *chakshushya dravya* which are being used since ancient time in various eye preparations. Refractive errors can be correlated with *prathama & Dwitiya patalgat dushti*. The refractive error i.e. *prathama & Dwitiya patalgata dushti*, can be cured by *anjana karma*. *Anjana karma* is one of the important

kriyakalpa .Ophthalmic disorders can be prevented as well as cured by application of *anjana karma*. *Anjana karma* is easier & economical for common man.

Materials:

For preparation of *anjana*:
Dhatri, saindhav, pippali, marich, honey.

Methodology:

The clinical study of *dhatryadi rasakriya anjana* in refractive errors is done at Govt. Ayu. College Nanded. Among the refractive errors 30 patients of each myopia, Hypermetropia, astigmatism & presbyopia were selected by random method after application of rejection criteria, special stress was given on visual acuity. Autorefractometry or mirror retinoscopy were done for confirming diagnosis of refractive error. Presbyopic diagnosis was done with the help of near vision chart. In this way 120 patients were studied. All patients were considered as experimental group, in which *dhatryadi rasakriya anjana* was applied After application of *anjana*, observations were recorded & patients were reviewed on 8th, 15th, 30th, & 60th day. The *anjana* therapy was given for 2 months. Observations & results were recorded as per standard parameters. After 60 days of *anjana karma* results were evaluated on the basis of parameters & in the form of cured, improved, and not improved. After application of *anjana*, observations were recorded & patients were reviewed on 8th, 15th, 30th, & 60th day. The *anjana* therapy was given for 2 months. Observations & results were recorded as per standard parameters.

After 60 days of *anjana karma* results were evaluated on the basis of parameters & in the form of cured, improved, and not improved. After application of *anjana*, observations were recorded & patients were reviewed on 8th, 15th, 30th, & 60th day. The *anjana* therapy was given for 2 months. Observations &

results were recorded as per standard parameters. After 60 days of *anjana karma* results were evaluated on the basis of parameters & in the form of cured, improved, not improved.

Statistical Analysis

Visual acuity, reduction in required lens, signs of eye strain were recorded before, during & after treatment. The essential qualitative data was converted in to quantitative form for statistical analysis. Students paired “t” test was applied for determination of significance of treatment. The level of significance was set as P=0.05(5%).

Study observation & Results

Inclusion criteria

- Patients having vision less than 6/9 or less i.e. 6/12, 6/18, 6/24, 6/36, 6/60.
- Patients having refractive error of 0.50D or more. Patients of 10 to 50 yrs of age group.
- Patients of both sexes. Patients having vision more than 6/9.

Exclusion criteria

- Patients having refractive error less than 0.50D
- Patients having age less than 10yrs & more than 50yrs.
- Patients having ocular disorders
- Patients having systemic diseases e.g. Diabetes mellitus, hypertension, renal pathology etc.

Parameters

1. Distant vision: (By Snell lens distant vision chart)	
6/60	(++++++)
6/36	(+++++)
6/24	(++++)
6/18	(+++)
6/12	(++)
6/9	(+)

2. Near vision	
N/36	(+++++)
N/24	(++++)
N/18	(+++)
N/12	(++)
N/8	(+)
3.Reduction in required lenses- (D)	
Lens reduction by “0”	(0)
Lens reduction by 0.5	(+)
Lens reduction by 0.5-1.0	(++)
Lens reduction by 1.0-2.0	(+++)
Lens reduction by >2.0	(++++)
4.Signs of eye strain:	
No sign	(0)
Discomfort	(+)
Headache	(++)
Headache & Discomfort	(+++)

Procedure of Anjana

Anjana was applied in supine position at night by glass rod. One *vidang matra* was applied.

Results were assessed as follows.

1. Improved: - when there is improvement in visual acuity with & without glass, reduction in required lenses (D), Signs of eye strain reduced.
2. Cured: - when vision improves to normal level, required lenses reduces to “0” diopters, signs of eye strain completely reduces.
3. Not improved: - when there is no change in visual acuity, no change in signs of eye strain.

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Table No. 1: Showing visual acuity- Before treatment

Visual Acuity	Myopia		Hypermetropia		Astigmatism		Total	
	No. of patients	%	No. of patients	%	No. of patients	%	No. of patients	%
6/60	8	26.66	1	3.33	1	3.33	10	11.11
6/36	2	6.66	2	6.66	0	0.00	4	4.44
6/24	7	23.33	5	16.66	1	3.33	13	14.44
6/18	4	13.33	6	20.00	3	10.00	13	14.44
6/12	5	16.66	10	33.33	7	23.33	22	24.44
6/9	4	13.33	6	20.00	18	60.00	28	31.11
6/6	0	0.00	0	0.00	0	0.00	0	0.00
Total	30	100	30	100	30	100	90	100

Table No. 2: Showing near vision in presbyopia

Sr. no.	Near vision	Presbyopia	
		No. of pts.	Per. (%)
1	N/36	0	0.00
2	N/24	2	6.66
3	N/18	8	26.66
4	N/12	20	66.66
5	N/8	0	0.00
6	N/6	0	0.00
Total		30	100

Table No.3: Showing result of treatment in myopia

Myopia	Cured	Improved	Not improved	Total
No. of pts.	4	19	7	30
Per (%)	13.33	63.33	23.33	100

Table No. 4: Showing result of treatment in Hypermetropia

Hypermetropia	Cured	Improved	Not improved	Total
No. of patients	2	11	17	30
Per (%)	6.66	36.66	56.66	100

Table No. 5: Showing result of treatment in Astigmatism

	Cured	Improved	Not improved	Total
Astigmatism				
No. of patients	5	7	18	30
Per(%)	16.66	23.66	60.00	100

Table No. 6: Showing result of treatment in Presbyopia

	Cured	Improved	Not improved	Total
Presbyopia				
No. of patients	0	0	30	30
Per (%)	0.00	0.00	100	100

Discussion

Refractive errors are *patalgat dushtis*. *Dhatryadi rasakriya anjana* is *patalagat dushtinashak anjana*. In myopia there is diminished vision, signs of eye strain, i.e. lacrimation, itching sensation, discomfort, laxity of outer coat of eye. (*shaithilya*), eyeball may be larger than the normal size. Hence we can correlate with *vata pradhan*, *alpa kapha dushti*. In hypermetropia, there is diminished vision, signs of eye strain, i.e. headache, lacrimation, itching sensation, discomfort, mild eye pain, eyeball may be smaller than normal size, hence we can correlate *vata pradhana*, *alpa kapha dushti*. In astigmatism there is blurring of vision, signs of eye strain i.e. headache, lacrimation, itching sensation, discomfort, mild eye pain, change in corneal curvature, hence we can correlate it with *vata pradhana*, *alpa kapha dushti*. In presbyopia, there is diminished vision for near, signs of eye strain i.e. headache, discomfort, tiredness, lacrimation, itching sensation, decreased lens elasticity, weakness of ciliary muscle, also as age progresses *vata pradhan* symptoms occurs. Hence we can correlate it with *vata pradhan alpa kapha dushti*. From above, refractive errors have *vata pradhan & alpa kapha dushti*. *Dhatryadi rasakriya anjana* is *patalagat dushti nashak anjana*. It consist of *Dhatri*, *saindhav*, *pippali*, *marich*, & honey. *Dhatri* with its *amla rasa* acts as *vatahara & being ruksha kashaya* it acts as *kaphahara* (3). *Saindhav*

being *lavana*, *madhur*, *snigdha*, *sukshma* acts as *vatahara* (3). *Pippali* with its *snigdha guna* acts as *vatahara & being katu* acts as *kaphahara* (3). *Marich* with its *ushna virya* acts as *vatahara & being katu, ruksha, tikshna* acts as *kaphahara* (3). Honey being *laghu, ruksha* acts as *kaphahara*. *Marich & honey* are *lekhana* in property (3). Honey being *yogawahi* it enhances the activities of other drugs. All the above drugs are *chakshushya* in property. Also *dhatri pippali* are *rasayan* in property, which acts on *rasa, rakta, & mansa dhatu*.

From the above discussion we conclude that *dhatryadi rasakriya anjana* acts as *lekhana, vata-kaphaghna & dhatu pushtikar* in property. Due to mechanical irritation produced by *anjana*, there may be some structural changes. Diminution of vision was main sign before treatment.

It is observed that after treatment visual acuity increases significantly in myopia, hypermetropia & astigmatism. Reduction in required lenses shows significant effect in myopia, hypermetropia, & astigmatism. The change was also observed in autorefractometer reading in before & after treatment. In case of presbyopia it is observed that there was no change in visual acuity & reduction in required lenses, before & after treatment. Signs of eye strain reduces significantly in all types of refractive errors.

Conclusion

The effect of treatment on visual acuity for distant vision is improved in myopia, hypermetropia, & astigmatism. In case of presbyopia no treatment effect is seen on visual acuity for near vision. The treatment shows effect on reduction in required lenses in myopia, hypermetropia, & astigmatism but not in presbyopia. The treatment shows effect on signs of eye strain in all types of refractive errors. It is concluded that the *Dhatryadi Rasakriya anjana* seems to be effective in myopia, hypermetropia, & astigmatism but not in

presbyopia & further study is required in this work.

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