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To study efficacy of *Guduchyadi Rasakriya Anjana* in the management of *Arma* (Pterygium)

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ABSTRACT

Arma Vyadhi can be compared with pterygium in modern science. There is no conservative treatment in alternative science, so we planned to search the result of *Guduchyadi Rasakriya Anjana*. Randomized single blind placebo controlled study was conducted on 40 patients of *Arma* and grouped into two. Group-A received *Guduchyadi Rasakriya Anjana*, while Group-B received placebo eye drop (distilled water) for a period of 21 days. *Guduchyadi Rasakriya Anjana* showed insignificant result in reduction of the length of *Arma*, visual disturbance, astigmatism, while significant results were observed in reduction of redness, foreign body sensation and watering of the eyes. Results suggest that *Guduchyadi Rasakriya Anjana* is helpful for prophylactic use as well as to avoid recurrence.

Key words: *Arma*, Pterygium, *Guduchyadi Rasakriya Anjana*.

INTRODUCTION

In Ayurvedic classics '*Arma*' is described under *Shuklagata Netra-Roga*. According to Acharya Sushruta main treatment of *Arma* is '*Chedana*' i.e. excision, but he also describes *Aushadhi Chikitsa* of *Arma*. According to Acharya Sushruta, *Arma* which is small, thin, yoghurt like and blue, red and brown in appearance should be treated on the lines described for the treatment of '*Shukra Vyadhi*', In Ayurvedic *Samhitas*, various *Anjana Yogas* have been described in the management of *Shukra Vyadhi*.^[1]

According to modern science clinical features of *Arma* is correlated with eye disease Pterygium. Pterygium is

a triangular shaped degenerative and hyperplastic process occurring medially and laterally in the palpebral aperture, in which bulbar conjunctiva encroaches on to the cornea.^[2]

It can be classified in to following three types on the basis of extension on cornea.

- Type 1 - Extends less than 2mm on cornea
- Type 2 - Involve up to 4mm on cornea
- Type 3 - Involve more than 4mm on cornea and involve visual axis. (Ref. clinical ophthalmology - by Jack.J. kanski)

Now a days. In modern science there is no specific medical treatment for Pterygium. There is only surgical treatment and recurrence rate after excision of pterygium is also more, hence it has been decided to do research on *Aushadhi Chikitsa* or Medical treatment of *Arma*, based on references described in Ayurvedic *Samhitas*.^[3]

OBJECTIVES

To assess the efficacy of *Guduchyadi Rasakriya Anjana* in *Arma* i.e. Pterysium (type 1)

MATERIALS AND METHODS

Study design - Randomized comparative clinical study

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Study Plan- Total 40 Patients of arma were registered and were randomly divided in two 2 groups. Group-A received *Guduchyadi Rasakriya Anjana*, while Group-B received placebo eye drops (distilled water) for a period of 21 days.

Posology

- Group A - *Guduchadi Raskriya Anjana* once in a day at evening for 21 day.
- Group B - Placebo (distilled water) eye drop once in a day at evening for 21 day.

Drug Preparation

Table 1: Ingredients of Guduchadi Raskriya Anjana^[4]

| Drugs | Quantity |
|---|----------|
| Guduchi (<i>Tinospora cordifolia</i>) | 200gm |
| Madhu (Honey) | 50 gm |
| Saindhava Lavana (Rock Salt) | 50gm |

Inclusion criteria

1. Patients from age group 25 to 55 yrs were included.
2. The *Arma* which can be treated medically as per *Samhita Grantha* were selected.
3. Patients with *Arma* (Pterygium type 1 i.e. Extends less than 2mm on cornea) were selected.

Exclusion Criteria

1. Patients less than 25 and more than 55 years.
2. Patients with *Chhedya* and *Asadhya Arma* (Pterygium) as per *Samhita Grantha* were excluded.
3. Patients with pterygium type II (Involve up to 4mm of cornea) and type III (Involve more than 4mm & involve visual axis) were excluded.
4. Other conditions which decreases visual acuity are excluded.
5. Pterygium and associated other ocular conditions were excluded.

6. Patients not willing for trial and who were not undergo treatment properly or not attending O.P.D. regularly for follow up.
7. Patients suffering from serious illness like cardiac disorders, malignancies, tuberculosis / asthma, diabetes mellitus, renal impairments / Hepatitis and other life threatening diseases or disorders were excluded from this trial.

Clinical Assessment

Subjective Criteria

1. Redness - 0,1,2,3
2. Foreign body - 0,1,2,3
3. Watering - 0,1,2,3

Objective Criteria

1. Length of Pterygium – Millimeter length from limbal measure by caliper.
2. Width of Pterygium – Milimeter width at limbal measure by caliper
3. Visual disturbance - 6/6 – 0
6/a – 1
0/12 -2
6/24 – 3 and above.
4. Amount of astigmatism
No - 0
<1 – 1
<2 – 2
>2 – 3

Observation found in study recorded as per assessment criteria and statistical analysis was done statistical test separately and appropriately applied on qualitative and quantitative data.

OBSERVATION AND RESULTS

Length of Pterysium

In Group-A, length before treatment mean \pm S.D is (0.8 \pm 0.4104) and after treatment mean \pm S.D is (0.8 \pm 0.4104), whose P value summary N.S. i.e. $P > 0.05$ means *Guduchyadi Rasakriya Anjana* is not significant to decrease length in Group A patient.

In Group-B, It is also non significant which is expected.

Differential Analysis: In both group P value summary is N.S. i.e. $P > 0.05$ means both *Guduchyadi Rasakriya Anjana* and placebo eye drop are not significant to reduce length of *Arma*.

Visual acuity disturbance

P value summary N.S. i.e. $P > 0.05$

In both groups means both group not significant to decrease visual disturbance.

Astigmatism

P value summary N.S. i.e. $P > 0.05$

In both groups means both group are not significant to decrease astigmatism.

Redness

In Group-A, before treatment mean \pm S.D. (2.5 ± 0.6882), after treatment \pm S.D. is (0.35 ± 0.4894), P value is $P < 0.001$. *Guduchyadi Rasakriya Anjana* is highly significant to reduce Redness, while compare with Group-B which P value summary N.S. i.e. $P > 0.05$ not significant.

Foreign Body Sensation

In Group-A, before treatment mean \pm S.D. is (1.65 ± 0.4894) and after treatment mean \pm S.D. is (0.8 ± 0.6156), whose P value summary i.e. $P < 0.001$ means *Guduchyadi Rasakriya Anjana* is highly significant while compared with Group-B which P value is $P > 0.05$ not significant.

Watering

In Group-A, before treatment mean \pm S.D. is (1.45 ± 0.6863) and after treatment mean \pm S.D. is (0.6 ± 0.5026) whose P value summary is $P < 0.001$ means *Guduchyadi Rasakriya Anjana* is highly significant to decrease watering while compared with Group-B which is $P > 0.05$ not significant.

Percentage of relief at glance

| Signs and symptoms | Group | Relief Percentage |
|--------------------|-------|-------------------|
| Redness | A | 86 |
| | B | 2.08 |
| Foreign body | A | 51.51 |

| | | |
|--------------------|---|-------|
| Sensation | B | 2.77 |
| Watering | A | 58.62 |
| | B | 3.12 |
| Astigmatism | A | 0 |
| | B | 0 |
| Visual Disturbance | A | 0 |
| | B | 0 |
| Length | A | 0 |
| | B | 0 |
| Width | A | 0 |
| | B | 0 |

DISCUSSION

The aim of the study was to evaluate the clinical efficacy of *Guduchyadi Rasakriya Anjana* in the management of *Arma* (Pterygium). For clinical evaluation total 40 patients were selected for this trial on the criteria mentioned in Methodology and equally divided in two groups. In Group - A 20 patients were treated with *Guduchyadi Rasakriya Anjana* once in a day in the evening for 21 days. In Group - B, 20 patients were treated with 'Placebo eye drop' 1° q.i.d. for 21 days.

The result assessed on the basis of reduction in size of *Arma* (pterygium) also with that in this clinical study we studied other criteria also, which consists of subjective criteria containing redness, foreign body sensation and watering and objective criteria containing - visual disturbances, astigmatism and width of *Arma*, data was collected on specially prepared case sheet results were analyzed statistically.

Guduchyadi Rasakriya Anjana is not effective to reduce length or size of *Arma* (Pterygium). But the drug is statistically highly significant to reduce, Redness, foreign body sensation, watering which occurs by pterygium, and it also, does not reduce width of *Arma* (Pterygium) and visual disturbances and Astigmatism occurred by Pterygium.

The exact mechanism of action of treatment of groups were tried to explain and is subject for further study. Education wise 28 (70.00%) patients were literate. As far as occupation is concerned maximum belongs to

outdoor work' category 20 (50%). Maximum no. of patients were found consuming mixed diet i.e. 26 (65%). Out of 40 patients maximum patients 31 (77.5%) belongs to middle economic class. In maximum no. of patients arma (Pterygium) found unilaterally 31 (77.5%).

CONCLUSION

Guduchyadi Rasakriya Anjana for once in a day for 21 days is not sufficient to reduce length, width, astigmatism of pterygium band and may require longer time therapy and also it is not effective to improve vision. But symptomatic relief can be achieved in redness, foreign body sensation and watering. Preparation of *Rasakriya Anjana* should be modified so that higher drug concentration can be achieved.

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