

TO STUDY THE EFFICACY OF TRIPHALA MASHI ANJANA IN PTERYGIUM W.R.T. ARMA AFTER EXCISION

Dr. Harshal R. Deshmukh*¹

¹Associate Professor, Dept. of Shalaky Tantra, Smt. Vimaladevi Ayurved College and
Hospital, Wandhari, Chandrapur (M.S).

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*Corresponding Author

Dr. Harshal R. Deshmukh

Assistant Professor, Dept. of
Shlaky Tantra, Smt.
Vimladevi Ayurved College
and Hospital, Wandhari,
Chandrapur (M.S).

ABSTRACT

Present polluted environment and excessive outdoor work causes exposure of conjunctiva. Pterygium is a burning problem in this modern era due to global warming which result in excessive exposure of sunlight because of depletion of ozone layer. Slow gradual progress of the disease, ignorance of the patient due to illiteracy and no availability of the effective and cheap treatment without its recurrence are the main hurdles in management of pterygium. According to Ayurveda to Ayurveda classics, *Arma* is *sandhigata rogas* which is a *chedana sadhya vyadhi*. Ayurveda methods adopted in performing the *shastra karma* are identical with the steps followed by the modern ophthalmologist even till date. So in this study, in compound

formulation of *Triphala mashi anjana* as *trial group* (30 patients) was selected and as *control group* (30 patients) were selected **Aim-** To study the clinical efficacy efficacy of *Triphala mashi anjana* in pterygium w.r.t. Arma after excision. **Objectives-** To assess the effect of compound formulation of *triphala mashi anjana*. To evaluate the changes in pterygium w.r.t. arma, after excision with Triphala Mashi Anjana. **Study Design-** This was Comparative, open, randomized, clinical study study. Pterygium fibrosis of corneal tissue occurs and fibrosis is responsible for corneal astigmatism. Astigmatism hampers visual acuity. Even after skillful surgery whatever fibrosis occurs at cornea is not reduced completely. The result of study showed in *triphala mashi* has scrapping (*lekha*) property and this scrapping property reduces the fibrosis that means indirectly improves the visual acuity by reducing corneal astigmatism. The effect of study shows that *triphala mashi anjan* provided better relief comparative to control group in the management of pterygium w.s.r to arma after excision.

KEYWORDS: *Triphala masi anjan, Arma, Pterygium, Conjunctiva, chedana sadhya vyadhi.*

INTRODUCTION

Present polluted environment and excessive outdoor work causes exposure of conjunctiva. Pterygium is a burning problem in this modern era due to global warming which result in excessive exposure of sunlight because of depletion of ozone layer.^[1] Slow gradual progress of the disease, ignorance of the patient due to illiteracy and no availability of the effective and cheap treatment without its recurrence are the main hurdles in management of pterygium. According to Ayurveda to Ayurveda classics, Arma is sandhigata rogas which is a *chedana sadhya vyadhi*.^[2] Ayurveda methods adopted in performing the shastra karma are identical with the steps followed by the modern ophthalmologist even till date. Ayurveda concept of *arma* correlated with the clinical features and management pterygium in modern science. They both have exact similar entities with absolute medical and surgical treatment. As per old age due vata dosha, degenerations concerned to conjunctiva becomes more common. So it is necessary to understand the characteristic features of *arma* as it reflects the dosha predominance and the pathological change. Ayurveda classics, arma is divided into 5 types, out of which *prastari*, *lohitarma* and *adhimamsaja arma* indicates the progressive phase of the disease *shuklarma* and *snayu arma* indicates the regressive phase of the disease.^[3] As Ayurveda classics clearly explained indications and contraindications for surgical excision of arma, ability of vision is affected then only surgical removal of pterygium is recommended.^[4]

Pashchat karma of Arma and postoperative care in case of Pterygium is very much similar. The drugs used to treat arma after surgical excision helps to stop the further recurrence. In pterygium patient have complaints of foreign body sensation, redness of eye, dimness of vision, cornea astigmatism. By all these symptoms we can say that there is predominance of vata, pitta and kapha dosha. The disease is concerned with *Shukla* (sclera) and *krushna* (cornea) mandala which are made up of *rasa- rakta* and *mansa dhatu*.^[4]

The surgical excision of pterygium does not reduce all these symptoms completely so the principle of treatment is use of pacifies all three *doshas* (*tridoshghna*), improve vision (*chakshushya*), *Haritaki* (*Terminalia chebula*) possesses dry in nature (*ruksha*), hot in potency, light to digest, improves vision (*Chakshushya*) and antioxidant (*Rasayani*) properties. *Bibhitaka* (*Terminalia Billerica*) have the properties of hot in nature (*ushna*), dry (*ruksha*), Penetrating power (Bhedana property), *Amalaki* (*embelica officianalis*) o has properties of dryness (*ruksha*), helps in pacification of all three doshas (*tridoshaghna*) and cold in potency.

Triphala separately have the properties of pacifies aggravated kapha pitta doshas (*kapha-pittaghna*), improves vision (*chakshushya*). *Saindhav lavana* (Rock salt) carries properties lightness (*laghu*), penetrating power (*sukshma*), improve vision (*netrya*), pacification of all three doshas (*tridoshghna*).^[5] *Saurvarchala lavan* (black salt) have the properties like high penetrating power (*bhedana*), clear (*vishad*) and light in nature (*Laghu*) These entire drugs *triphala*, *saindhav* and *saurvarchala* were used in form of *Mashi kalpana*, in which potentiation of *gunas* takes place.

The foreign body sensation is reduced by the hot potency of *mashi* (*ushna veerya*) and scrapping (*lekhana*) property which removes the *dusta mansa dhatu* and *dusta kapha dosha*. Redness is reduced by the clearing channels (*strotasa shodhana*) which occurs due to subtle nature (*sukshma*), lightness (*laghu*), penetrating (*bhedana*) and hot (*ushna*) properties of above all the drugs.^[6]

The *Mashi Kalpana* potentiates the penetrating properties of above all the drugs resulting into delivery of the drug up to micro level. This removes the *dusta kapha pradhan tridosha* and *dusta mansa* and which are responsible for symptoms remains even after excision of Pterygium.

Aim

To study the clinical efficacy of *Triphala Mashi Anjana* in pterygium w.r.t. *arma*, after excision.

Objectives

- To assess the effect of compound formulation of *Triphala Mashi Anjana*.
- To evaluate the changes in pterygium w.r.t. *arma*, after excision with *Triphala Mashi Anjana*.

MATERIALS AND METHODS

Research Design

A Randomized Control Trial Participant

- Patients: pterygium (*Arma*)
- Gender-Both Male and Female
- Age- From 25yrs-70 yrs of age.

Sampling Procedure

Comparative, Open, Random sampling.

Grouping (Table 1)

Groups	No. of patients	Age	Gender	Intervention	Dose/day
Group A Trial group	30	25 yrs to 70 yrs	Male and Female	Treated with the combination of <i>pterygium</i> excision, antibiotic drops and <i>Triphala Mashi Anjana</i> .	excision + antibiotic drop + Triphala Mashi Anjana
Group B Control group	30	25 yrs to 70 yrs	Male and Female	Treated with only excision of <i>pterygium</i> and antibiotic eye drops	Excision + antibiotic drop

Selection of Cases

Patients having classical signs and symptoms of pterygium encroaching on cornea and early pterygium cases were selected after clinical & objective examination. I had selected 60 patients of pterygium. These patients were selected randomly. Follow-up assessment was done by specially prepared case record forms of every patient to meet all baseline requirement. Follow-up signs & symptoms were recorded.

Method of Selection of Patients

Inclusion criteria

- Patients of age group 25-70 yrs, irrespective of gender who is willing to give informed consent were included in study.
- Patient suffering from visual disturbances due to corneal astigmatism.
- Patient having pterygium encroaching on cornea and early pterygium.

Exclusion Criteria

- Patient having conjunctivitis, dacryocystitis, blepharitis, corneal ulceration
- Patient having systemic diseases such as DM, HT, Asthma.
- Patient with known case of conjunctival cystic degeneration, neoplastic changes like epithelioma, fibrosarcoma or malignant melanoma.
- Patient having any other ocular disorders.
- Patients of age below 25 and above 70 yrs were excluded from study.
- Patients who refuse to participate in study

Method**INSTRUMENTS AND EQUIPMENTS**

For diagnosis, and examination of patients:

- 1) Torch 2) Slit lamp Bio microscope
- 3) Snellen's distant vision chart 4) Auto refractometer

For operative procedure:

- 1) Microscope 2) Eye speculum
- 3) Iris forceps 4) Iris repositor
- 5) Syringes 5cc and 2cc needles 6) Spirit lamp
- 7) Cautery 8) Bard parker handle
- 9) Surgical blades 10) Artery forceps
- 11) Eye towel 12) Sterile gauzes and eye pad

Drug

- 1) Xylocain 4% 2) Inj xylocain 2% with adranaline 3) Normal saline 4) Betadine
- 5) Inj T.T. 6) Ciplox eye drop 7) Triphala Mashi churna

☐ **Investigations**

- CBC with ESR
- BSL fasting & postprandial

☐ **Drug****Contents of of Triphala Mashi anjan (bhaishajyaratnavali)**

- 1) Haritaki 2) Bibheetak
- 3) Amalaki 4) Saidhav lavana
- 5) Sauvarchal lavana

Method of Preparation

Triphala Mashi Churna (TMC) was prepared in the laboratory by following classical method described in 'Ayurvedic Formulary of India'. In addition, its main ingredients include 5 traditional medicinal herbs. All the ingredients of (TMC) were procured from the local market. For preperation –all the above drugs should be taken in powder form in equal amount.

Diet

All *Pathyakar ahar vihar* mentioned in ocular disease.

Diagnostics Criteria

- Patients after pterygium excision
- Surgery is indicated in very thick like extra skin (*sammabha*), highly elevated (*bahala*), fleshy growth covered densely with fibrous tissues (*snayu-mamsa avrita*), visible blood vessels in *arma*

Follow up

- (1) Symptomatic improvement, after every week.
- (2) Follow up of patients of both groups were taken for observation on 1st, 7th, 15th, 30th, 60th, 90th day

Case Record Form – Record, of all patients included in trial is documented & follow up is mentioned in case record forms.

Clinical examination – Complete clinical examination from the point of view of *arma* to diagnose & assess the condition of patient.

Criteria of Assessment – Assessment of patients was done subjectively as well as objectively.

Subjective – Symptoms of obesity plus Symptoms of *arma* mentioned in the text or practically observed are assessed at each follow up. Presence or absence of these symptoms pterygium w.s. r to *arma* were registered. Symptoms of Study of changes in gradation of symptom was done after treatment.

Gradations of practically observed symptoms:- (Table 3).

Assessment of sign and symptoms were done by adapting suitable scoring method^[7]:

Sr. No	Parameters	Symptoms	Scoring
1	Foreign body sensation	Routine work disturbance	3
		Persistent but do not disturb routine	2
		<i>occasional</i>	1
		Not present	0

2	Local Redness:	Cherry Red	3
		Red	2
		Faint Red	1
		Absent	0
3	Visual Acuity	6/60	6
		6/36	5
		6/24	4
		6/18	3
		6/12	2
		6/9	1
		6/6	0
4	Auto refraction for corneal astigmatism:	Before treatment	
		After treatment	
5	Recurrence	Present	
		Absent	

OBSERVATION AND RESULTS

Table no 4: showing effect of treatment on signs and symptoms of Experimental Group-A.

Sr.no	Sign & Symptoms	n	Mean	S.D	S.E	t	p
1	Foreign body sensation	30	1.56	0.80	0.09	17.05	P<0.05
2	Auto refraction for corneal astigmatism	30	0.15	0.23	0.042	3.52	P<0.05
3	Local Redness	30	1.73	0.44	0.082	21.10	P<0.05
4	Visual Acuity	30	1.36	0.49	0.08	15.27	P<0.05

In case of foreign body sensation from 7th day to 30th day of follow up mean decrease is 1.56 and t value is 17.025, which is greater than table .t. ($17.025 > 2.05$) It is significant. In corneal Astigmatism mean decrease is 0.15 and calculated t value is 3.52, which is significant. In case of Redness from 7th day to 30th day of follow up the mean decrease is redness is 1.7333 and t value is 21.10, which is greater than table t ($21.10 > 2.05$) it

is significant. In visual acuity mean decrease is 1.36 and .t. value is 15.27 which is significant, It means that experimental therapy is effective on all above parameter.

Table no 5: showing effect of treatment on signs and symptoms of Control Group-B.

Sr.no	Sign & Symptoms	n	Mean	S.D	S.E	t	p
1	Foreign body sensation	30	0.66	0.47	0.08	7.61	P<0.05
2	Auto refraction for	30	0.05	0.10	0.018	2.69	P<0.05
	Corneal astigmatism						
3	Local Redness	30	1.4	0.66	0.122	19.38	P<0.05
4	Visual Acuity	30	1.1	0.48	0.08	12.53	P<0.05

In control group from 7th day to 30th day of follow up the mean decrease in foreign body sensation is 0.66 and t value is 7.6158, which is greater than table .t. ($7.6158 > 2.05$). Mean improvement in corneal astigmatism is 0.05 and calculated .t. value is 2.63, It is significant mean decrease in redness 1.4 and calculated .t. value is 13.61, which is greater than table .t. ($13.61 > 2.05$). Mean improvement in visual acuity was 1.1 and .t. is 12.53 which is significant. It means that control therapy is effective on all above parameter.

Table no 6: Showing comparative effect of therapy.

Sr.no	Sign & Symptoms	n	Mean	S.D	S.E	t	p
1	Foreign body sensation	30	0.90	0.49	0.12	7.08	P<0.05
2	Auto refraction for corneal astigmatism	30	0.10	0.17	0.04	2.15	P<0.05
3	Local Redness	30	0.33	0.50	0.13	2.53	P<0.05
4	Visual Acuity	30	0.26	0.48	0.12	2.12	P<0.05

In case of foreign body sensation combine mean decrease is 0.90 and value of .t. is 7.08. $t_{\text{calculate}} > t_{\text{table}}$ (i.e. $7.08 > 2.05$). Auto refraction for corneal astigmatism Calculated value of unpaired .t. is 2.15 and table value of .t. is 2.05. In case of redness combine mean decrease is 0.33 and value of unpaired .t. is 2.53, $t_{\text{calculate}} > t_{\text{table}}$ ($2.53 > 2.0$). In case visual Acuity of Calculated value of unpaired .t. is 2.12 and table value of .t. is 2.05 that means $t_{\text{calculate}} > t_{\text{table}}$, i.e. .t. value is significant. It means therapy given in experimental is more effective than treatment given in control group.

DISCUSSION

A Study entitled “**To study the efficacy of Triphala Mashi Anjana in pterygium w.r.t. Arma after excision**” was undertaken. At the end of the study, following points can be concluded on the basis of Observations made in the form of Tables & Graphs and minutely discussed in the previous chapters, following conclusion are drawn.

In Pterygium fibrosis of corneal tissue occurs and fibrosis is responsible for corneal astigmatism. Astigmatism hampers visual acuity. Even after skillful surgery whatever fibrosis occurs at cornea is not reduced completely.^[8] *Triphala Mashi* has lekhana property^[9] and this *Lekhan* property reduces the fibrosis that means indirectly improves the visual acuity by reducing corneal astigmatism. Pterygium is a burning problem in this modern era due to global warming which result in excessive exposure of sunlight because of depletion of ozone layer.^[10] This study was aimed to assess the efficacy of. *Triphala Mashi Anjana* in management of pterygium after excision. Sixty patients were randomly selected for this clinical study having age between 25 to 70 years. The patients of experimental group were given excision + antibiotic drop + *Triphala mashi Anjana*. The patients of control group were treated with only excision + antibiotic drops.

After complete assessment, it was found that in experimental group 13 patients were cured, 16 patient were improved and one patient was not cured. In control group 8 patient were cured, 20 patient were improved and 2 patient were not cured. Foreign body sensation and Redness reduced more early in experimental group as compare to control group. Effect on visual acuity and astigmatism is more in experimental as compare to control group.

CONCLUSION

By statistical analysis, it was concluded that therapy used in experimental group (i.e. excision + antibiotic + *Triphala Mashi Anjana*) is effective in pterygium. It is safe economical and easy to perform. It gives better result as compared to only excision. So for treatment of pterygium this can be alternative treatment of choice. In case of corneal astigmatism, therapy used in experimental group (excision + antibiotics + *Triphala Mashi Anjana*) gives better results as Compared to control group (i.e. only excision + Antibiotics). In case of recurrence of pterygium, though recurrence of pterygium after excision was found to be comparatively less in the experimental group than control group, it is due to *Lekhana* property of *Triphala Mashi Anjana* but to decide complete recurrence 3 months follow up is inadequate, so further study is require.

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