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A PILOT STUDY ON THE EFFICACY OF VYOSHADI VARTI IN THE MANAGEMENT OF ARMA (PTERYGIUM)

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ABSTRACT

Arma is a disease of Shuklamandala of eyes in which a wing like growth develops gradually from either Kaneenika Sandhi (inner canthus) or Apanga Sandhi (outer canthus) towards the cornea. It can be correlated to Pterygium in modern science. Pterygium is more commonly found in people residing tropical and subtropical area. Due to the geographic location and climatic conditions pterygium is a common ocular disorder in India. Arma is Chhedan Sadhya Vyadhi. However in the initial stages of the disease ancient authors had advised application of Lekhana Anjana i.e. to cure the disease without Shalya Karma with the help of medicine only. In present trial 20 patients of Arma were selected and administered Vyoshadi varti as anjana. A significant relief was found in various sign and symptoms of Arma (pterygium).

KEYWORDS: Arma, Pterygium, Vyoshadi Varti, Anjana.

INTRODUCTION

Arma is one of the Shuklagata roga It is defined as gradually developing continuous wing like growth in Shuklamandala from either Kaneenika Sandhi (inner canthus) or Apangasandhi (outer canthus) or from both sides towards the Krishna Mandala, causing discomfort to the eye.[1] It is a common problem encountered in Shalakya practice. On the basis of signs and symptoms described in modern medical science, the disease 'Arma' can be correlated to pterygium. The word 'pterygium' is derived from the greek word 'pterygion' which means a small wing of butterfly. Pterygium is a triangular shaped growth consisting of bulbar conjunctival epithelium and hypertrophied sub-conjunctival connective tissue occurring medially and laterally in the palpebral fissure and encroaching on to the cornea.[2] Pterygium is more commonly found in people residing tropical and subtropical area. Risk factor includes outdoor work, exposure to UV radiation, dark skin complexion, dry and dusty climate, genetic predisposition etc. Prevalence was higher in factory workers than in office workers, higher in rural areas than in the city and highest in fishermen.[3] Due to the geographic location and climatic conditions pterygium is a common ocular disorder in India.

Arma is a type of Mamsasvriddhi (muscle like growth) and all type of Mamsavriddhi is Kaphatmaka, hence Acharyas have indicated Lekhana[4] and Chedana[5] as the mainstay of treatment. In modern parlance as well, surgical excision is the definitive treatment, though not devoid of complications and recurrence causing more spread in recurrence stage.[6] In initial stage of Arma, where the growth is thin and confined to a small area limited to Shukla Mandala, use of Lekhana Anjana is indicated whereas when it is thick, fleshy, and extensive and encroaches the Krishana Mandala then excision is advised. Anjana karma is a process in which specific medicaments are pasted over the marginal conjunctiva in a systematic way from Kaneenaka Sandhi to Apanga and vice versa. Lekhana Anjana is one among 3 types of anjana described by Aacharya Sushruta.[7] It scrape and expel the Doshas from Netra, Vartma, Sira, Netra Kosha and Ashruvaha Srotas through the mouth, nose and eye.[8] Considering all above facts, Vyoshadi Varti,[9] a formulation described in Bhaisajya Ratnawali Netra Roga Chikitsa was selected to assess the effect of non-surgical approach of Lekhana Karma by Lekhana Anjana when Mamsasvriddhi reaches upto Krishana Mandala so as to come up with a cheap, cost effective non-surgical treatment for Arma (Pterygium).

MATERIALS AND METHODS

Selection of patients

The clinical study was organized on the O.P.D. and I.P.D. patients of P.G. department of Shalakya Tantra, NIA, Jaipur. The patients were selected randomly and freely given informed consent was obtained from every subject prior to research participation. A special research proforma was prepared comprising of Ayurvedic and modern parameters essential for diagnosis and assessment of disease.

Inclusion criteria

- Age between 20 to 60 years old patients.
- Clinically diagnosed patient of Arma (Pterygium) covering the conjunctiva and cornea less than the pupillary margin.

Exclusion criteria

- Age below 20 years and above 60 years.
- The patients in which Pterygium covering over the pupillary area.
- Any other inflammatory disease of eye.
- Any systemic disease like hypertension, diabetes etc.

Drug dosage and duration

One Harenu matra of Vyoshadi Varti with honey was applied locally in the eye once a day (morning) for 1 month.

Investigations

Laboratory investigation like Hb%, TLC, DLC, ESR and RBS was done only for rule out the diseases. Examination of eye was performed for recording the vision and ruling out any other ocular pathology which includes: Visual acuity, refraction and intraocular pressure.

Assessment criteria

For assessment of the efficacy of the trial therapy, following subjective and objective parameters were adopted.

Subjective criteria

1. Mamsa vriddhi (fleshy growth of conjunctival tissue)
2. Lacrimation (netrasrava),
3. Photophobia (prakash asahishnuta),

4. Foreign body sensation (gharsha)
5. Blurred vision
6. Raga (redness/congestion of conjunctiva)

Objective criteria

1. Vascularity
2. Length of pterygium mass
3. Width of neck

Table No.1 Grading of the parameters.

Symptoms	0	1	2	3
Mansavriddhi (fleshy growth of conjunctival tissue)	Absent	Mild muscular growth before limbus	Encroach cornea upto 1mm from limbus	Encroach cornea >1mm
Netrasrava (lacrimation)	Absent	Occasionally	Intermittent	Continuous
Prakash-asahishnuta (photophobia)	Absent	Photophobia on exposure to bright light	Intermittent	Continuous
Garsha (foreign body sensation)	Absent	Occasionally	Intermittent	Continuous
Avildarshan (blurred vision)	Absent	Occasionally	Frequent	Continuous
Raga (Redness)	Absent	Occasionally	Redness in external Environment	Regular
Vascularity	Absent	Mild with unidirectional pattern	Moderate with unidirectional &enlarged vessels	Marked with unidirectional & engorged vessels

Table No. 2: Measurements of the lesion.

Length of whole pterygium mass	Actual size i.e. length of whole pterygium mass and width of neck was measured with help of Castroviejo caliper. Assessment of size: in mm
Width of pterygium mass at the neck	

Statistical analysis

The scoring of criteria of assessment was analyzed statistically in terms of mean values of B.T. (Before Treatment), A.T. (After treatment), S.D. (Standard Deviation) and S.E. (Standard Error).Various observations made and results obtained were computed statistically using Wilcoxon matched-pairs signed-ranks test on graphpad-Instat software .

RESULTS AND DISCUSSION

In the present trial total 22 patients were enrolled at the beginning but 2 patients discontinued the trial before its completion and therefore had to be excluded out of the trial. Among 22 patients, male and females were equal. In affected eye wise distribution, 7 patients right eye, 5 patients left eye and 10 patients bilateral eye was affected. Most of the patients had the disease with 0-1 year duration with gradual onset and progressive course of illness. Symptoms wise distribution showed that Mamsa Vridhhi Lakshana and vascularity was seen in all patients. In present study, it was seen that all the patients (100%) were having grade-I Pterygium. Results of 20 patients showed that symptomatic improvement was considerable in all the parameters of Arma. As per table no. 3 and 4, Vyoshadi Varti application showed 80% relief in foreign body sensation, 78.94% in lacrimation, 75.71% in Raga, 73.61% in photophobia, 69.96% in blurred vision, and 13.70% in Mamsa Vriddhi. In objective parameter i.e.in vascularity, Vyoshadi Varti provided 69.96% relief, 16.44% in width and 13.01% in length of pterygium mass.

Arma is (Mamsa Dhatu Dusta) Kapha predominant Tridoshaja Vyadhi. Looking into the pathogenesis of Arma it becomes clear that drugs having Kaphanashaka and Lekhana quality can effectively cure this disease. Ingredients of the Vyoshadi varti are Shunthi, Maricha, Pippali, Utpal, Abhaya, Kushtha and Rasanjana. Most of the ingredients have katu, tikta, kashaya rasa, Laghu, Ruksha, Tikshana Guna, Ushna Virya and Lekhaniya properties which are responsible to give best effect in Lekhana Karma. Moreover, Anjana require lesser quantity of drug. It is having good absorption quality and having long residual time in the organs which gives higher bioavailability of the medicinal drug. Thus usage of Lekhana Anjana with Vyoshadi varti can gradually reduce the thickness of the membrane of Pterygium and preventing the growth of Arma and also reduces the size.

Table No. 3 Effect on subjective parameters (Wilcoxon matched pairs signed ranks test)

Variable	Mean		Mean Diff.	% Relief	SD	SE±	p	S	W
	BT	AT							
Mamsa vriddhi	1.7	1.46	0.233	13.7	0.43	0.078	28	<0.015	S
lacrimation	0.76	0.166	0.6	78.94	0.498	0.09	171	<0.0001	ES
photophobia	0.633	0.166	0.466	73.61	0.507	0.092	105	0.0001	ES
FBS	0.9	0.172	0.724	80	0.591	0.109	190	<0.0001	ES
Blurred vision	0.333	0.1	0.233	69.96	0.43	0.078	28	0.015	S
raga	1.4	0.333	1.067	75.71	0.365	0.066	435	<0.0001	ES

Table No. 4 Effect on objective parameters.

Variable	Mean		Mean Diff.	% Relief	SD	SE±	p	S	W
	BT	AT							
Length	6.4	5.567	0.833	13.01	0.833	0.152	5.473	<0.0001	ES
width	2.433	2.033	0.4	16.44	0.563	0.102	3.89	0.0005	ES
Vascularity	1.467	0.466	1	69.93	0.371	0.067	406	<0.0001	ES

CONCLUSION

In the present trial, Vyoshadi varti was found to be effective in reducing signs and symptoms of Arma and statistically significant results were seen. No adverse and toxic effects were observed during and after the completion of trial. Modern ophthalmologist does not treat the pterygium in initial stage. But in Ayurveda, Arma which is in initial stage can be treated with Netra Kriyakalpa like Anjana to prevent the speedy growth of the membrane. Likewise, it is highly beneficial after the surgical treatment for prevention of relapse after surgery. Therefore Vyoshadi Varti can be used safely and effectively in the treatment of Arma (pterygium).

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