

A Clinical comparative study of *Vasadi ghrta aschyotana* with Carboxymethyl cellulose eye drops in the management of *Arjuna* w.s.r Subconjunctival hemorrhage

Research Article

Anand Vikram Kale^{1*}, Santosh Rahinj¹

1. Assistant Professor, Department of *Shalaky Tantra*,
Dr. D Y Patil College of Ayurveda and Research Center, Pimpri, Pune.
Dr. D. Y. Patil Vidyapeeth, Pune (Deemed to be).

Abstract

Eyes are the most precious gift of the god to the living beings. Good vision is crucial for social and intellectual development of person. So to protect this organ is not only a necessity but also a responsibility of every individual. India is having the highest rate of head injury in RTA in the world. Out of which 60% suffer from Subconjunctival hemorrhage. Subconjunctival hemorrhage or Ecchymosis is of very common occurrence. Subconjunctival hemorrhage” is a common benign condition of the eye that has characteristic features, such as the painless acute appearance of a sharply circumscribed redness of bleeding underneath the conjunctiva in the absence of discharge, and inflammation in contagious areas. While searching solution for Subconjunctival hemorrhage in ayurveda, its signs and symptoms match very much with *Arjuna*” described in “*Shuklagata roga*”. Which is having symptom painless red spot over white surface of eye. So taking these things into consideration “*Vasadi Ghrta Aschyotana*” was selected for treating the disease *Arjuna*. The *ghrita* contain “*Vasa*” and “*Yashtimadhu*” having *pittashamaka*, *Shonitasthapan* properties.

Key Words: *Shonitasthapan*, *Arjuna*, *Aschyotana*, *Raktapitta*.

Introduction

The eye, an organ of sight is of utmost importance as far as ones existence is concerned. Eyes hold special status among all the senses.

Eyes are the most precious gift of the god to the living beings. Good vision is crucial for social and intellectual development of person. So to protect this organ is not only a necessity but also a responsibility of every individual.

India is having the highest rate of head injury in Road traffic accident in the world. Out of which 60% are suffered from Subconjunctival hemorrhage. (1)

Though Subconjunctival hemorrhage is not an medical emergency and a harmless condition, it can worry the patient. It often occurs without any obvious harm to eye, or it may be the result of strong sneeze or cough that causes break down of conjunctival blood vessels. While searching solution for Subconjunctival hemorrhage in ayurveda, its signs and symptoms match very much with *Arjuna* (2) described in *Shuklagata roga*.(3) Which is having symptom of painless red spot over white surface of eye.

The management of this condition is based on various measures in *ayurveda* like *Aschyotana*, *Parisheka*, *Anjana* etc carried out with the help of different medicinal plants according to demand with respect to the predominance of various etiological factors. But according to Acharya vagbhat, in every *netra-roga Aschyotana*” (7)” should be carried out first. Acharya also said that treatment of *Arjuna* is same as that of *pittaj abhishyanda*” (8)”. So taking these things into consideration we decided to treat *Arjuna* by *Vasadi Ghrta Aschyotana* (4) method. The *ghrita* contain *Vasa* (5) and *Yashtimadhu* (6) having *pittashamaka*, *Shonitasthapan* properties.

According to modern science there is no specific treatment” (9)” for Subconjunctival hemorrhage. Carboxy methyl cellulose eye drops are used as placebo therapy. So I used it as a comparative group for the same study.

Aims and Objectives

Aim

A Clinical comparative study of *Vasadi ghrta aschyotana* with Carboxymethyl cellulose eye drops in the management of *Arjuna* w.s.r Subconjunctival hemorrhage.

Objectives

Primary

- To compare the effect of *Vasadi Ghrta Aschyotana* and carboxy methyl cellulose eye drops in *Arjuna*.

* Corresponding Author:

Anand Vikram Kale

Assistant Professor, Department of *Shalaky Tantra*,
Dr. D Y Patil College of Ayurveda and Research
Center, Pimpri, Pune 411018. India.
Dr. D. Y. Patil Vidyapeeth, Pune (Deemed to be)
Email Id: vdanandkale@gmail.com

Secondary

- To develop evidence-based support for the effects of Vasadi Ghrita Aschyotana as mentioned in our ancient literature.
- To provide simple and effective treatment for Arjuna.

Materials and Methods

Drug information: - Bhavprakash nighantu

1) Vasadi Ghrita Aschyotana –

Contents :-

1. Vasa – Adhatoda Vasica Nees.
2. Yashtimadhu – Glycyrrhiza glabra.
3. Goghrita.(Cow ghee) ” (10)”

Methods of drug preparation

Yashtimadhu roots and Vasa leaves were taken and washed thoroughly with water. then Ghrita siddhi done as per granthokta reference of Sharangadhara samhita madhyama khand. ” (11)”.

Mixture of Vasa and Yashtimadhu , Ghrita and water mixed with proportion of 1: 4:16 respectively and heated till only the ghrita(ghee) remains. Thus medicated ghrita(Ghee) was prepared.

Methodology

Method of selection of study subject

A) Inclusion Criteria

- Age group-18yrs to 60yrs.
- Sex- Both Males and Females.
- Patients with signs & symptoms of Arjuna
- (Subconjunctival hemorrhage)
- Hypertensive patients.

B) Exclusion Criteria

- Age group below 18yrs and above 60yrs.
- Patient suffering from infectious diseases such as Trachoma, dacryocystitis, conjunctivitis, sty.
- Patient suffering from HIV, HbsAg, Bleeding disorder like Purpura, Haemophilia, Scurvy.

Table 1: Group A- Trial Group

Drug	Contents	Dose	Method of administration	Duration
Vasadi Ghrita Aschyotana	Vasa Yashtimadhu Goghrita	2 Drops 4 times a day 4 hourly	From the distance of 2 angula” (12)” (2 cm) at Kaninika sandhi (medial canthus)	10 Days.

Table 2: Group B- Comparative Group

Drug	Contents	Dose	Method of administration	Duration
Carboxy methyl cellulose eye drops	Carboxy methyl cellulose	2 Drops 4 times a day 4 hourly.	From the distance of 2 angula (2 cm) at Kaninika sandhi (medial canthus)	10 Days.

Parameters for clinical assessment (Assessment Criteria)

- 1) **Netra Daha** (burning sensation of eye) :-
0 - Absent
1 - Mild (one to two episodes per day)
2 - Moderate (Present intermittently throughout the day)
3 - Severe (present continuously day & night)
- 2) **Netra Toda** (Pain & Foreign body Sensation in eye):
0 – Absent
1 – Mild (Present during morning time)
2 – Moderate (During morning & evening)
3 – Severe (Continuously day & night)
- 3) **Prakash Asahatva** (Photophobia):
0 - Absent
1 – Mild (Present Intermittently)
2 – Moderate (During day time only)
3 - Severe (Continuously day & night)

4) **Netra Araktata** (Redness of Eye) :-

- 0 – Absent
- 1 – Mild (Restricted to ¼ part of Bulbar conjunctiva)
- 2 - Moderate (Restricted to ½ part of bulbar conjunctiva)
- 3 - Severe (Occupying whole of the Bulbar conjunctiva)

5) **Netra Shopha** (Swelling of Eye lid)

- 0 – Absent
- 1 - Mild (Restricted to upper or lower eye lid)
- 2 - Moderate (Restricted to both eye lid)
- 3 - Severe (Involving both Eye lid & palpebral conjunctiva)

Observations and Results

For this VASADI GHRITA ASCHYOTANA was used to one group of 30 patients of Arjuna for once. This group was termed as Trial group (**Group A**).

To compare the result of Vasadi Ghrita Aschyotana, a standard known drug was selected for that was applied to another group of 30 patients of Arjuna as Comparative group (**Group B**).

Table 3: Table showing Percentage Relief in Symptoms of 30 patients in Trial group (Group A)

Sr No	BT	AT	Diff	%
Netra daha	14	3	11	78.57143
Netra Toda	17	5	12	70.58824
Netra lalima	47	7	40	85.10638
Prakash Asahatva	14	4	10	71.42857
Netra Shopha	13	4	9	69.23077

Table 4: Table showing Percentage Relief in Symptoms of 30 patients in Comparative group (Group B)

Sr No	BT	AT	Diff	%
Netra daha	20	4	16	80
Netra Toda	18	5	13	72.22
Netra lalima	52	20	32	61.54
Prakash Asahatva	18	5	13	72.22
Netra Shopha	12	5	7	58.33

Table 5:- Table showing effect of therapy on symptom score in trial Group (Group A) By Wilcoxon matched pairs signed rank test” (13)”

Sr		Mean	SD	SE	W	n	Z value	P2	P1	Result	
1	Netra daha										
	BT	0.4667	0.5713	0.104	66	11	2.934	0.001	0.0062	Extremely significant	
	AT	0.1	0.3051	0.055							
	Diff	0.3667	0.4901	0.089							
2	Netra Toda										
	BT	0.5667	0.6261	0.114	78	12	3.059	0.0005	0.0008	Extremely significant	
	AT	0.1667	0.379	0.069							
	Diff	0.4	0.4983	0.090							
3	Netra lalima										
	BT	1.567	0.6789	0.124	465	30	4.782	<0.0001	< 0.0001	Extremely significant	
	AT	0.2333	0.4302	0.078							
	Diff	1.333	0.4795	0.087							
4	Prakash Asahatva										
	BT	0.4667	0.5074	0.093	55	10	2.803	0.002	0.0105	Very significant	
	AT	0.1333	0.3457	0.063							
	Diff	0.3333	0.4795	0.087							
5	Netra Shopha										
	BT	0.4667	0.6814	0.124	55	10	2.803	0.002	< 0.0001	Very significant	
	AT	0.1333	0.3457	0.063							
	Diff	0.3333	0.4795	0.088							

Table 6: Table showing effects of therapy on symptom score in comparative Group (Group B) By Wilcoxon Matched Pairs signed rank test

Sr		Mean	SD	SE	W	n	Z value	P2	P1	Result	
1	Netra daha										
	BT	0.667	0.606	0.110	136	16	3.5162	< 0.0001	0.0032	Extremely significant	
	AT	0.133	0.345	0.063							
	Diff	0.533	0.507	0.092							
2	Netra Toda										
	BT	0.6	0.498	0.090	91	13	3.1798	0.0002	0.0236	Extremely significant	
	AT	0.167	0.379	0.069							
	Diff	0.433	0.504	0.092							

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3 Netra lalima										
BT	1.733	0.739	0.135	378	27	4.5407	< 0.0001	< 0.0001	Extremely significant	
AT	0.667	0.606	0.110							
Diff	1.067	0.520	0.095							
4 Prakash Asahatva										
BT	0.6	0.498	0.090	91	13	3.1798	0.0002	0.0236	Extremely significant	
AT	0.166	0.379	0.069							
Diff	0.433	0.504	0.092							

Since p value < 0.05, the level of significance for both factors; there is strong evidence to reject the null hypothesis for both factors. There is significant difference in Group A & Group B if Effects of both factors are considered. It indicates that Vasadi Ghrita has significant role on Arjuna (Subconjunctival hemorrhage) than Carboxy methyl cellulose eye drops.



Image:-1: Before Treatment



Image:-1: After Treatment

Discussion

The place where I have studied is known for its natural humid weather, added to this with the pollution due to heavy industrialization prone the individuals of this area to different types of eye diseases. Amongst which Subconjunctival hemorrhage or Ecchymosis is of very common occurrence. Also in modern science there is no specific treatment for Subconjunctival hemorrhage. Hence it was decided to start survey for Subconjunctival hemorrhage in the patients attending our Shalakyia OPD.

In Ayurveda Arjuna is mentioned in Shuklagata roga. It is mainly Pitta Rakta dustijanya vyadhi. All acharya mentioned “VASA RAKTAPITTESHU” Agryam in their Samhitas. Vasa is useful in Sampraptibhanga of Subconjunctival hemorrhage due to its Kapha-Pittaghna properties & Yakritgamitva. Also Yashtimadhu has Sandhaniya, Shonitasthapana,¹⁵ Pitta-Rakta Prashamana properties. So Aschyotana of Ghrita made with these two components were found to be beneficial in relieving the symptoms Burning of eyes, Swelling of eyes, Redness of eyes, Photophobia, foreign body sensation in eyes in these patients. On the other hand in 30 patients with comparative group Carboxy methyl cellulose eye drops showed only symptomatic relief in symptoms of Burning sensation of eyes, Photophobia.

Conclusion

The present clinical study has recorded encouraging results providing thought to ponder over the theory and practice of Kriyakalpa and drugs. A new horizon can be opened for the Arjuna by these treatments and further research should be carried out in this direction.

In nut shell we can say that

- After statistical analysis and study, it is proved that better results found in group a i.e. Trial group than group B. i.e Comparative group.
- No any adverse reactions were observed in patients of both groups.
- The clinical research drugs are cheap, easily available and their preparation is easy.
- The present study showed that Quick resolution of subconjunctival hemorrhage is possible with Vasadi Ghrita in the period of study.

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