ABSTRACT

Arma (Pterygium) is described by Acharyas under Shuklagatrogas. Arma is a wing shaped fold of conjunctiva encroaching cornea from either side within the inter-palpebral fissure. It is a response to prolonged effect of environmental factors such as exposure to sun, dry heat, wind and pollution. In rural population which is working in farms, occurrence of Arma (Pterygium) is common. For excision of Arma (Pterygium) mostly bare sclera surgical technique is accepted, as grafting surgical procedure is expensive. In bare sclera technique, recurrence rate is high. Hence patient have to undergo repeated surgeries. To avoid this recurrence, ayurvedic special therapy “Netratarpan” is one of the best option. Hence this therapy was selected for comparative study in post-surgical patient of Armachedan (pterygium excision-bare sclera technique) especially reference to post-surgical recurrence of Arma (Pterygium). After this comparative clinical study it can be concluded that use of Netra–tarpan with TriphalaGhrit in post-surgical patient of Armachedan (pterygium excision-bare sclera technique) can reduce chances of recurrence.

Key Words: Arma-chedan, bare sclera technique, Netra–tarpan, pterygium excision, TriphalaGhrit.

INTRODUCTION

Arma (Pterygium) is described by Acharyas under Shuklagatrogas. Arma is a wing shaped fold of conjunctiva encroaching cornea from either side within the inter-palpebral fissure.5,6,7,8

Etiology: The etiology is unknown. An increased incidence is noted in latitudes nearer to the equator and in individuals with a history of increased UV exposure. It is a response to prolonged effect of environmental factors such as exposure to sun, dry heat, wind and pollution.5,7

Pathophysiology: The large number of theories that exist to explain the pathogenesis of pterygium (arma) growth underscores the uncertainty of the etiology.
Primary prevention: As UV radiation, exposure to dust and pollution is believed to play an important role in the pathophysiology, avoidance of UV exposure is probably important to primary prevention. Ocular surface lubrication may also help.

Need of research topic: In rural population which is working in farms and other places where exposure to pollution is more, occurrence of Arma (Pterygium) is common. For excision of Arma (Pterygium) mostly Armachedan (bare sclera) surgical technique is accepted, as grafting surgical procedure is expensive. In Armachedan (bare sclera) surgical technique, recurrence rate is high. Hence patient have to undergo repeated surgeries. To avoid this recurrence, Ayurvedic special therapy “Netratarpan” is one of the best option. Hence this therapy was selected for comparative study in post-surgical patient of Armachedan (pterygium excision-bare sclera technique) especially reference to post-surgical recurrence of Arma (pterygium).

AIM & OBJECTIVES:
1. To study comparative results of Netratarpan with Triphalagrit in post-surgical patients of Armachedan (pterygium excision – bare sclera technique) specially reference to post-surgical recurrence of Arma (pterygium).
2. To study the etiology and pathology of recurrence of Arma.
3. To aware and educate the people to take care to avoid occurrence and recurrence of Arma.

MATERIAL & METHODS:
Selection of drug: Trial drug Triphalagrit was selected for netra-tarpan

Procurement of Drug: Triphalagrit contents are Amla (Embelia Officinalis), Harad (Terminalia Chibula) and Behada (Terminalia bellerrica). Market preparation of Triphalagrit was preferred. 2, 4

RESEARCH DESIGN:
Study population: The study population having Arma was selected from patients attending NetraVibhag of ShalakyaTantra department of Seth Sakharam Nemchand Jain Ayurved Hospital, Solapur and its periphery.

Sampling: Sampling was done randomly.

Sample size: 30 patients having Arma and undergone for surgery Armachedan, willing to participate in study were selected for each group i.e. experimental as well as control group. These patient were selected from patients attending NetraVibhag of ShalakyaTantra department of Seth Sakharam Nemchand Jain Ayurved Hospital, Solapur.

Study Setting: The study was carried at Seth Sakharam Nemchand Jain Ayurved Hospital, Solapur during Jan 2007 to Dec 2013.

Diagnostic criteria: The diagnosis was made by slit-lamp examination of the typical limbal growth at the characteristic location within the palpebral fissure. The diagnosis is most often clear clinically.

Inclusion criteria: Patients of 30 to 60 years age group, having arma and undergone for surgery “armachedan”, willing to participate in study were selected.

Exclusion criteria:
- Patients suffering from pothaki, kumbhaki and othershoothjanyavyadhi of vartrma (follicles, papillae, giant papillae, concretions).
- Patients having vathvatvartma, kruchonnilan and pakshmagatvyadhi (ptosis, lagohthalmos, entropion and ectropion).
- Patients already undergone for Armachadan and having recurrence.
Patients having Adhimanth (glaucoma) svrana and avranashukla (corneal ulcer and corneal opacity) corneal degeneration and vascularization.

- Advanced Arma (pterygium) crossing pupillary area.
- Arma with history of mechanical or chemical burn.
- Contact lens wearer as well as HIV patients were not included for clinical study.
- Patient not following line of treatment regularity in treatment.

**TECHNIQUE OF DATA COLLECTION:** The patient suffering from Arma (pterygium) were selected for the study as per inclusive and exclusive criteria. Detailed history in particular format was taken with present complaints. Visual acuity and other ocular examination was done thoroughly. Patients were examined for recurrence of Arma every month up to one year duration. After one year duration of therapy according to recurrence or non-recurrence of Arma, patient were added to particular group to evaluate results.

**TREATMENT & METHODOLOGY SCHEDULE:** Patients having Arma (pterygium) and undergone Armachedan (pterygium excision surgery with bare sclera technique) were selected for study. These patients were divided randomly in two groups. i.e. Experimental (Group A) and Control group (Group B).

**After 21 days of surgery,**
Group A was treated with Netra-tarpan with Triphala Ghrit. Netra-tarpan was given for subsequent 7 days each month for one year duration. Group B was prescribed carboxymethyl cellulose (lubricating) eye drops for one year duration.

Both groups were advised to use sun goggles for protection from pollution, dust and sunlight.

**Precaution for Procedure of Netratarpan:**
- Patients having Abishyandaor any infective or inflammatory condition of eye were given treatment for such condition then procedure of Netra-tarpan was followed.
- Triphalaghrit used for Netra-tarpan was sterile to avoid infection and inflammation to eye.
- UdadPali was used for Netra-tarpan.
- Flour of Udad dal (black lentils) was used for preparation of dough for pali around eye. Fresh preparation was used for Netra-tarpan each time.
- Proper sterilization precautions were taken using autoclave method to avoid infection and contamination.

**Procedure of Netratarpan:**
- Snehan with til tail and aardraswed was given at mukh and manyapradesh to each patient before netra-tarpan.
- Dough was prepared using flour of Udad dal, which was used to prepare Pali around eye for netra-tarpan.
- Triphala Ghrit was made luke warm in steel container with the help of hot water. Then it was gently poured with spoon in the netrapali prepared around eye from apang or kanikasandhi (lateral canthus or medial canthus). Pouring of ghrit directly on onkarnika (cornea) was strictly avoided.
- Triphalaghrit was poured till eye lash merge in Ghrit.
- Patient was asked to blink gently so that Triphala-ghrit should reach every part of eye.
- Luke warmness of ghrit was maintained by removing old and adding fresh luke warm ghrit time to time as per season.
- The procedure of Netra-Tarpan was carried for 10 to 15 minutes.
After that ghrit was removed from netrapaliand pali was also removed and patient was asked to wash eyes with luke warm water.

Patient was advised to use sun-goggle to avoid contact of dust, air and pollution.

**Duration of therapy:**
- One year.
- 10 to 15 minutes duration Netra-tarpan daily for subsequent 7 days each month for one year duration.

**Assessment criteria:**
- Patient were examined every month.
- After completion of one year duration the patients were examined specially for post-surgical recurrence of Arma.

<table>
<thead>
<tr>
<th></th>
<th>Recurrence</th>
<th>Percentage</th>
<th>No recurrence</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group A (Experimental Group)</td>
<td>8</td>
<td>23.66%</td>
<td>22</td>
<td>73%</td>
</tr>
<tr>
<td>Group B(Control Group)</td>
<td>14</td>
<td>46.66%</td>
<td>16</td>
<td>53.33%</td>
</tr>
</tbody>
</table>

**OBSERVATION & RESULTS**

Total 30 patient were selected for each group. In group A (experimental group) 73% patients showed no recurrence and 23.66% patient showed recurrence of Arma while in group B (control group) 53.33% patients has no recurrence and 46.66% patients has recurrence.

After above mentioned therapy for one year duration, it was observed that chances of recurrence were reduced by 20% in patients of Group A as compare to Group B. Overall therapy effect is noticeable effective.

**DISCUSSION**

In Ayurveda many exclusive therapies are described which can be combined with modern medicinal as well as surgical treatment (described by Ayurveda as well as modern) for synergetic effect to benefit the patients and give the better lifestyle to people. In ShalakyaTantra “Netra-kriyakalpa” is also a unique and effective therapy for treating and preventing eye diseases. Netratarpan is one of them. Triphalaghrit is the trial drug used for Netratarpan. Its contentsTriphala and Ghrit both are having netrya property. Ghrit contains K2 and lionelic acid. It is having anti-inflammatory anti-cancer property. Ghritis also rich in vitamin A. Supplementation of Vitamin A reduces and treats dryness which occurs due to its deficiency. In Netra-tarpan all these properties nourishes the conjunctival layers and avoid inflammation and proliferation of tissue of conjunctiva. Thus helps to avoid recurrence of Arma after Armachedanshastrakarma.

**CONCLUSION**

The clinical study reveals that use of Netra–tarpan with Triphalaghrit in post-surgical patient of Armachedan (pterygiumexcision-bare sclera technique) can reduce chances of recurrence.
Limitation:
The study was limited to single geographical area having hot and dry climate. Sample size was very small.

Recommendation for future research:
The clinical study was a sincere effort to study the effect of Netra–tarpan with TriphalaGhrit in post-surgical patient of ArmaChedan (pterygium excision-bare sclera technique). Suggestion related to the study are welcome. As the sample size is small, the study has its own limitations so there is need to study and collect data in bigger sample size.

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REFERENCES

Photographs
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