

EFFECTS OF JALOUKAVACHARAN IN STYE & CONJUNCTIVITIS***Dr. Shilpa Dhote, Dr. Aparna Bhoite**

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INTRODUCTION

Inflammation is defined as the local response of living mammalian tissues to injury due to any agent. It is a body defence reaction in order to eliminate or limit the spirit of injurious agent as well as to remove the consequent necrosed cells & tissues. Inflammatory Ophthalmic disorders are very commonly seen in our day to day practises which cause much discomfort and annoyance to the patients. Raktamokshana ie. Bloodletting is one of the important procedure of Shodhana Karma which is very useful in the treatment of some of the eye disease especially in Rakta-Pitta disorders. Jaloukavacharan(Leech Application) is the best & effective method of Raktamokshsana because Leech is easily available & procedure is very simple. It is fast

acting & has got no major side effects. It has got one more plus point that it introduces numerous compounds (that have vasodilator, anticoagulant properties) at the time of blood sucking. Moreover Leech can be easily applied to the children as well as in very old patients also. Anjananamika (Stye) & Abhishyanda (Conjunctivitis) are very commonly seen Ophthalmic Disorders in our day to day practise. Jaloukavacharan (Raktamokshana) is indicated in these Sdiseases as it is mainly cause due to rakta-pitta vitiation. Acharya Sushrutha & Vagbhata has mentioned that Jalouka(Leech) sucks impure blood from affected site after application & reduces symptoms like burning sensation, pain, swelling, redness etc. In Modern Science, Antibiotics, Analgesics, Anti-inflammatory, Steroids are given in the treatment of above inflammatory disorders. but all these drugs are very costly & having side effects too. Moreover very good results by Jaloukavacharan are observed in various inflammatory disorders in general surgery. In this study, patients were selected on the basis of clinical examination & investigations etc. All the subjects were equally divided into 2 groups for comparing the results.

Group A- Jaloukavacharan**Group B- Modern Conventional Medical Line of Treatment**

Jaloukavacharan was done upto 3-7 days according to severity of signs & symptoms and findings are recorded on a standard proforma specially prepared for this purpose. The criteria of evaluation of the therapy is based upon regression of various symptoms & signs of both the diseases.

Literature Review**Anjananamika**

A small soft, copper coloured pustule (pidaka) appearing on the eyelid with mild pain, burning & pricking sensation is called as Anjananamika. (Sushruta.uttara.3/15) Pidaka (eruption) either in the middle or at the ends of the lid associated with itching, mild pain, and warmth, immovable, size of a green gram, coppery red in colour produced by rakta dosha vitiation is called as Anjananamika. (Ashtanga Hrudayam. utara. 8/14).

Treatment

Snehana, Swedana, Raktamokshana, Parisheka, Rubbing (Lekhana) with Rasanjana & Honey etc. should be done.

Abhishyanda

There are four types of Abhishyanda.

1. Vataja: Pricking pain, fixity, horripilation, foreign body sensation, hardness, headache, dryness, cold watery discharge etc.
2. Pittaja: Burning sensation, severe inflammation, longing for cold, smokiness in the eyes, sensation as if steam/ hot fumes are coming out, warm lacrimation, yellow discolouration of the eyes, redness, severe pain as if caustic soda is applied to an ulcer etc.
3. Kaphaja: Longing for warmth, heaviness, inflammation in the eye, itching sensation, stickiness, excessive coldness, excessive thick, unctuous, copious white, slimy discharge etc.
4. Raktaja: Coppery lacrimation, blood red discolouration of the eye, generalised deep red vascular markings etc., in addition to this features described for pittaja abhishyanda will be present. (Sushruta.uttara.6/6-9)

Treatment

1. Nidana parivarjanam(avoiding causative factors).

2. Samavastha: Langhana, Jaloukavacharana, Aschyotana,seka, lepa, bidalaka, bashpasweda, use of madhur, tikta rasatmak dravya etc.
3. Niramavastha: Vaman, Virechana, Basti, Raktamokshana followed by tarpana, putapaka, aschyotana, nasya, dhooma, parisheka, anjana etc.

Modern Review of Inflammatory Disorders

Stye: It is an acute suppurative inflammation of the follicle of an eyelash or associated gland of Zeiss or Moll.

Aetiology

1. Causative organism is usually staphylococcus aureus.
2. Common in children & young adults but may occur in any age.
3. Low general resistance, as in debility or diabetes.
4. Uncorrected refractive errors.
5. Associated with boils, acne of face or neck (Stye in crops).

Symptoms

1. Acute pain & swelling of the lid margin.
2. Sense of heaviness & discharge.

Signs

1. Redness & oedema of the affected lid.
2. Local temperature is raised.
3. A swollen area at the lid margin which is tender, it may has a whitish, round, raised pus point in relation to the root of cilium.
4. Matting of few eyelashes may be present.
5. Enlargement of pre-auricular or sub-mandibular lymph node.

Treatment

Hot compress, systemic analgesics, local antibiotics eye drops, evacuation of pus if it is there.
Preventive: correction of refractive error, improvement of nutrition & general hygiene.

Conjunctivitis

It is the inflammation of conjunctiva characterised by cellular infiltration and exudation is called as conjunctivitis. Conjunctiva may be affected due to exogenous, endogenous causes & by local spread of lesion from outside or surrounding structure.

Classification Sof Conjunctivitis In Short

(A) I- Classification according to types of secretions: - Catarrhal, mucopurulent, purulent, membranous, pseudomembranous, follicular, papillary.

II- Classification by anatomical site: - Epithelial, tunica propria, subconjunctiva.

(B) I- Infective conjunctivitis:-

- (a) Conjunctivitis due to bacterial infection
- (b) Viral conjunctivitis
- (c) Conjunctivitis due to bedsonia group of organisms
- (d) Conjunctivitis due to specific infections

II- Allergic conjunctivitis

III- Conjunctivitis following injury

IV- Conjunctivitis associated with skin diseases

Clinical Features

Burning sensation, Discharge/ lacrimation, itching, pain, photophobia, Impairment of vision, foreign body sensation, sticking together of lid margin during sleep etc

Signs: Congestion, chemosis, lid oedema, discharge, matting of eyelashes etc.

Treatment

Locally - Broad spectrum antibiotics, steroids, atropine 1% if cornea is involved.

Precautions: - eye wash, use of dark glasses.

Ayurvedic Review of Jalouka

The term Jalouka (leech) may be ethymologically interpreted to mean creatures whose life (ayu) or whose longevity is in, or depends upon water whereas the derivative meaning of term Jalouka is based upon the fact of their dwelling ('Oka' - dwelling place) in water (Jalam).

(sushruta.sutra.13/9)

Jalouka dwelling in water & having soothing (madhura) properties should be used in sucking the blood vitiated by pitta dosha.

(sushruta.sutra.13/6)

Jalouka may be divided into 12 distinct species of which 6 are venomous & 6 are non-venomous. Venomous species are Krishna, karbura, alagarda, indrayudha, samudrika,

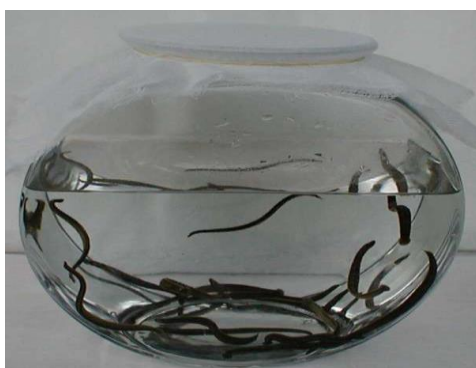
goch andana & non-venomous species are kapila, pingala, shankumukhi, mushika, pundarikmukhi, savarika. Non-venomous jalouka should be used for medicinal purpose.

(sushrutha.sutra.13/11-12) According to Acharya Vagbhata, the length of Jalouka for medicinal purpose should be 4,5 & 6 anguli long, though they can be of 18 anguli. He has not mentioned the types of Jalouka but he has only described the male & female classification. The Jalouka which is small in size, thin skin, small head, broad lower end is female and the Jalouka which is bigger in size, thick skin, both ends are broad should be considered as male.

(Vagbhata.sutra.25/50)

Jalouka should be caught hold of with a piece of wet leather or by some similar article ie. a piece of wet leather rubbed with ghee, milk or butter and then put into a large sized new pitcher filled with the water. Pulverised zoophytes and powder of dried meat and aquatic bulbs should be thrown into the pitcher as their food, and blades of grass and leaves of water plants should be put into it for them to lie upon. The water & the edibles should be changed every second or third day and the pitchers should be changed each week.

(Sushrutha.sutra.13/16-17)



Modern Review of Leeches

Leeches are segmented worms that belongs to the Phylum Annelida & comprise the Sub-class Hirudinea like other Oligochaetes, such as earthworm. Leeches share a clitellum & are hermaphrodites. Nevertheless, they differ from other Oligochaetes in significant ways. The majority of leeches live in freshwater environment, while some species can be found in terrestrial & marine environment as well. Most leeches are hematophagous, as they predominantly blood suckers that feed on blood from vertebrates & invertebrates animals. Almost 700 species of leeches are currently recognised, of which some 100 are marine, 90 terrestrial & the remainder freshwater taxa. For over 2000yrs, leeches were needlessly applied for many ailments as an adjunct to bloodletting. Their use in Europe peaked between

1830 & 1850 but subsequent shortage & improvement in medical diagnostic skill lead to decline in their use. Today there is a real clinical application in that they are of great value to many medical branches. Physicians realised that patients who were leeches did not often recover more fully than those who were not. Medicinal leeches have been found to secrete saliva containing about 60 different proteins. These achieve a wide variety of goals useful to the leech as it feed, helping to keep the blood in liquid form & increasing blood flow in the affected area. Several of these secreted proteins serve as anticoagulants (such as hirudin), platelet aggregation inhibitors, vasodilators & proteinase inhibitors. It is also thought that the saliva contains an anaesthetic, as leech bites are generally not painful. Leeches use their anterior sucker to connect hosts for feeding. Once attached, leeches use a combination of mucus & suction to stay attached & secrete an anticoagulant enzyme, hirudin into the host's blood stream. A leech attaches itself when it bites and it will stay attached until it becomes full at which point it falls off to digest. Due to the hirudin secreted, bites may bleed more than a normal wound after the leech is removed. Leeches normally carry parasites in their digestive tracts, which cannot survive in humans & do not pose a threat.

Clinical Study

METHODS & MATERIALS

The following materials has been used for trial on Sty & Conjunctivitis.

1. Jalouka (leech) for Jaloukavacharan for group A.
2. Modern conventional medical line of treatment as placebo for group B.

Other materials are examination table, turmeric powder, kidney tray, dressing materials including hand gloves, sterile needle, cotton, gauze, sticking tape, scissor etc.

Methodology

First history of the patients were taken. All the patients were clinically examined on the parameter of Ayurveda as well as Modern science.

Excluding Criteria

1. Patients who does not undergo the treatment properly, does not attend OPD for follow up or develop some complications during treatment.
2. Children below age group 6 yrs. (due to non co-operation).
3. Patients who suffer from bleeding disorders or who are taking anti-coagulant therapy.

For group (A)

The method of **Jaloukavacharan** is done according to ancient method as described by Acharya Sushruta. Jaloukas are preserved in fish pot. Water is changed frequently ie. after 5-7 days. Pot is kept in cold climates. Jaloukavacharan is a parasurgical measure & the procedure is divided into 3 parts.

1. Purvakarma (pre-operative)
2. Pradhankarma (operative)
3. Pashchatkarma (post-operative)

Purvakarma

Jaloukas are kept in mixture of turmeric powder & water for 2 minutes to make them active & then in fresh water. These Jaloukas are ready for application. Patient should be in lying down position.

Pradhankarma

The number of Jaloukas to be applied, varies according to severity of the condition. If Jalouka does not stuck, then it is applied after making a puncture by sterile needle. Even after this, if it does not stuck, another Jalouka is tried. The Jalouka sucks blood by its anterior sucker which is attached to the base by posterior sucker.

1. In mild condition, Jaloukavacharan was done for 1-3 days & later on after 7 days if required.
2. In moderate condition, Jaloukavacharan was done for 3-5 days & later on after 7 days if required.
3. In severe condition, Jaloukavacharan was done for 5-7 days & later on after 7 days if required.

Pashchatkarma

The Jalouka is removed from the site by sprinkling turmeric powder or otherwise Jalouka left the site on its own when completely swollen. Dressing of site application is done by haridra churna (turmeric powder). Patient has been given idea of oozing of blood from the site about 6-8 hrs. and hence advised to must attend the OPD on next day. Blood from Jalouka is removed by sprinkling haridra churna on its mouth and by slowly & gently squeezing from tail to mouth & then kept in fresh water. If blood is not removed from Jalouka after application, the Jalouka will die. Acharya has already described "Indramad Vyadhi" of

Jalouka which occurs if blood is not removed properly. Reuse of Jalouka was strictly avoided.



For Group B

In this group, patients were treated by **Modern conventional medical line of treatment.**

For Sty

*Systemic antibiotics (Ofloxacin 200mg)-2 times a day for 5 days.

*Systemic analgesic with anti-inflammatory (Nimesulide 100mg)- 2 times a day for 3-5 days.

*Local antibiotics eye drops (Ofloxacin)- 4 times a day for 7 days.

* Hot fomentation.

For Conjunctivitis: *Local antibiotics eye drops (Ofloxacin)- 6 times daily for 7 days.

After the treatment was given to the patients, the total effect of the clinical trial was assessed & finding are noted on the proforma.

Criteria for Diagnosis of Sty

Symptoms

1. Burning sensation
2. Type of discharge (from white pus point near the root of eyelash)
3. Amount of discharge
4. Itching
5. Pain

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Sign

1. Redness of affected eyelid
2. Swelling of lid margin
3. Tenderness

Criteria for Diagnosis of Conjunctivitis:-**Symptoms**

1. Burning sensation/ Discomfort
2. Type of discharge/ Lacrimation
3. Amount of discharge/ Lacrimation
4. Itching
5. Pain
6. Photophobia
7. Blurring or Impairment of vision

Sign

1. Congestion/ Chemosis (Conjunctival/ Ciliary/ Conjunctivo-ciliary)
2. Lid oedema.

For the assessment of the results, symptoms and signs were given a score according to their severity the details of which are as under.

*No symptoms/ signs-0

*Mild symptoms/ signs-1

*Moderate symptoms/ signs-2

*Severe symptoms/ signs-3

*No discharge-0

*Watery discharge-1

*Mucopurulent discharge-2

*Purulent discharge-3

Criteria for the Assessment of the Total Effect of Treatment:-

For the assessment of the total effect of therapy, the following six categories were taken into consideration.

1. Cured: - 100% relief in symptoms & sign & clinical investigation.
2. Markedly Improved: - More than 75% relief in symptoms & sign.
3. Improved: - More than 50% relief in symptoms & sign.
4. Benefited: - More than 25% relief in symptom & sign.
5. Stable:- Checking of the progression of the disease without improvement in symptoms &
6. Deteriorated: - Worsening of the original symptoms & sign during treatment.

Observations

Clinical evaluation of the therapy in 44 patients of Styte reveals that those patients treated by Jaloukavacharan shows full recovery (cured) in 15 patients (68.18%), Markedly improvrmnt in 5 patients(22.73%) & Improvement in 2 patients (9.09%) whereas those treated with Modern conventional medical line of treatment shows full recovery (cured) in 3 patients (13.65%),Markedl improvement in 14 patients (63.64%), Improvement in 4 patients (18.18%) & Benefited in 1 patient (4.55%). Clinical evaluation of the therapy in 40 patients of Conjunctivitis shows full recovery (cured) in 2 patients (10%), Markedly improvement in 8 patients (40%) & Improvement in 10 patients (50%) by Jaloukavacharan whereas those treated with Modern conventional medical line of treatment shows full recovery (cured) in 2 patients (10%), Markedly improvement in 13 patients (65%) & Improvement in 5 patients (25%). Statistical analysis is carried out on styte & Conjunctivitis by the treatment of Jaloukavacharan & Modern medicine. Two groups each of 22 patients for Styte & each of 20 Patients for Conjunctivitis are taken for studies and obtained on the basis of statistical analysis. Thus obtained data reveals that **Jaloukavacharan is highly effective in Styte as compare to Modern conventional line of treatment as far as recurrence is concerned whereas in Conjunctivitis Jaloukavacharan as well as modern conventional line of treatment both are effective.**

During this study, it is observed that **Jaloukavacharan is very much effective in acute conditions & their recurrence rate is very much less. In some recurrent cases of Styte, recurrence after Jaloukavacharan treatment is seen after 5-6 months ie. after a prolonged period.**

CONCLUSION

On the basis of clinical evaluation & statistical analysis following conclusions are drawn.

1. Jaloukavacharan (group A) is highly effective in Styte.
2. Modern conventional medical line of treatment (group B) is also highly effective in Styte.
3. Jaloukavacharan (group A) is effective in Conjunctivitis.
4. Modern conventional medical line of treatment (group B) is effective in Conjunctivitis.

As far as discharge, photophobia & blurring of vision in Conjunctivitis is concerned, Modern conventional line of treatment is somewhat more effective as compared to Jaloukavacharan whereas in Styte, Jaloukavacharan is highly effective than Modern conventional treatment as far as recurrence is concerned.

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