

TREATMENT OF EYE DISEASES BY THE HEALERS OF MARAKANAM BIO-REGION

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ABSTRACT: *The present study is an attempt to list some of the medicinal plants used by the traditional practitioners of the Marakanam bio-region in the treatment of various eye diseases. The survey of folk medicine men from this bio-region has revealed that there are 24 medicinal plants locally available for treating both simple and complex eye diseases. Most of these diseases have been identified in Sanskrit and Tamil and are correlated with their English terms.*

INTRODUCTION

India has a rich medicinal heritage which has been utilized for thousands of years. For example, the Charaka samhitha (1000 BC)-mentions the use of approximately 300 plants for medicinal purposes. Assed to this, India has an extremely rich and diverse natural resources base. Today, over 7,000 different species of plants are said to be used for medicinal purposes in the country.

The importance of eye care has been stressed since man first grew into a thinking, rational being. Some of the major factors causing eye diseases today are due to heredity (e.g myopia, colour blindness), lack of basic eye care (eg. Blindness due to chicken blood application to the eye), over-exposure to both natural (eg. Lightning) and artificial radiation (eg. Television), environmental pollution (eg. Exhaust fumes), injuries and accidents.

The marakanam bio-region has more than 300 years of tradition and a tremendous wealth of biodiversity which has been utilized by many generations of local healers. Traditional healers in the bio-

region continue to use over 300 species of plants to treat a wide range of ailments.

STUDY

The Marakanam bio-region is a triangular area located between Pondicherry Marakanam and Tindivanam. This survey targeted more than 60 traditional villages within the bio-region, and in each village there were at least 2 folk medicine men. In total, 134 traditional folk practitioners were contacted. Of these approximately 26 were specializing in eye diseases.

The natural vegetation of the bio-region is tropical dry evergreen forest (TDEF). At present, only 1500 acres of this forest type remains in the bio-region. The TAEF contains at least 350 plant species that have medicinal properties. A few local, traditional folk practitioners still know the uses of many medicinal plants of this area. Others simply collect medicinal plants of this area. Others simply collect medicinal plants from the green patches nearby ie. Tank bunds river sides, forest patches, fields, etc in some

cases, the knowledge has been preserved on palm leaf manuscripts written 500 years ago.

Collected plants were identified with the flora of the presidency of Madras (J.S Gamble, 1987). The specimens were deposited in the herbarium of department of botany., A.V. V.M Sri Pushpam College (Autonomous), Poondi-613 503, Thanjavur, Tamil Nadu, India.

OBSERVATIONS:

1. **Alternanthera sessilis** (L) R.Br ex Dc
Ponnanganni.

Family: (Amaranthaceae)

(001/DBH/NL/96: for *Pitta vidadha drushti*
Day blindness)

Whole plant juice is mixed with an equal amount of sesame oil. The mixture is boiled and taken as an oil bath.

For *Kapha abshyandha* (*simpeconjunctivities*) and *shiraharasha* (congestion)

Hair oil and be prepared with whole plant juice: Equal amounts of this juice and sesame oil are mixed and boiled until reduced to half the initial volume and then filtered and stored. Oil bath is taken once in every four days of three months.

For *Vata, Kapha related eye diseases*

The fresh leaves of this plant are collected, fried with ghee and the ghee is applied externally over the eyelids (tied down with fine cloth) during night.

For *corneal diseases including vatika linganash* (Cataract)

Fresh leaves of this plant are fried with spices and taken orally.

For *Doomadrishti* (*smoky vision*) *Shukliga* and *shukshashipaka*, *Shukliga* and *shukshashipaka*

The leaves (Fried or fresh) are eaten with butter for 40 days.

2. **Amaranthus tricolor**L.

(Tamil : - Sirukeerai

Family : Amaranthaceae) (002/DBH/NL/96:

For *Ashopha akshipaka* (Endophthalmitis), *Shiraharsha* (Congestion), *Doomdarshi* (*Smoky vision*)

One liter of each of the following are mixed together –milk, sesame oil the leaf juice of *A tricolor* and *Eclipta prostrate*. Half a liter of lemon juice is added to the mixture. The mixture is boiled until reduced to one third of the initial volume, then stored and used as a hair oil

3. **Argemone mexicana** L. (Bhramadhandu,
Family: Papavaraceae) (003/DBH/NL/96):

For *Anyatovata* (/ Neuralgic Pain), *Bhalavartma* (\ Multiple meibomitis), *Kaphaja abshytandha* (simple Conjunctivitis), *Shiraharsha* (Congestion), *Shirotpata* (/ Deep inflammation) and *Jalasrava* (/ Lachrymation)

One drop of the fresh yellow milk (latex) of the plant is applied every morning external into the eye.

4. **Bambusa arundinacea** (Retz.) Wild.

(Tamil: - Bamboo, Family : Poaceae)
(004/DBH/NL/96):

For *diseases of conjunctiva*

Roots of this plant are prepared in the form of Rasakriya in a copper vessel and made into a form of varti. This is later applied externally into the eyes in the form of anjan.

For (*Shiraharsha* (Congestion) and *Hatatimantha* (Silent glaucoma))

The dew water accumulated on the leaves of this plant is collected and 2 to 3 drops are applied externally into the eyes in the morning.

5. ***Barringtonia acutangula*** (L) Gaertner (Adambai, Family: Lecythidaceae) (005/DBH/NL/ 96): for *Avrana shukra* (corneal opacity).

Seeds are rubbed with water and applied the eyes in the form of anjan in the morning and evening for 7 days.

6. ***Blepharis maderaspatensis*** (L) Roth. (Tamil : Nethirapoonda, Family : Acanthaceae) (006/DBH/NL/96):

for *Shukshashipaka* (Vision cloudy), *Hatatimantha* (Silent glaucoma), *Kaphaja netrasrava* (rhuy/Epiphora), *Nakulandhya* (/ Colour blindness), *savrana shukra* (/ Ulcer of cornea), *Avrana shukra* (/ Opacity cornea), *Bhalavartma* (/ Multiple meibomitis) and *Hatatimantha* / silent glaucoma, optic atrophy, blindness due to pain and headache).

Approximately 200 grams of the whole fresh plant is collected, cut into small pieces and tied up within fine cloth. The plant material is then dipped into a container of 400 ml. of pure sesame oil. The container is kept air tight and in the sun for 15 days, filtered and applied as two drops in the morning and in the evening.

7. ***Boerhaavia diffusa*** L. Mookkirattai, Family : Nyctaginaceae) (007/DBH/NL/ 96):

for *Kapha vidagdha drishti* (Night blindness), *Shukliga* and *Doomadrishti* (smoky vision)

Roots of this plant are collected, dried well and made into a fine powder. One gram of this powder is taken in the morning and evening with honey for 48 days.

8. ***Butea monosperma*** (Lam.) Taubert (murukkan, Family : Fabaceae) (008/DBH/NI/96):

for the diseases of conjunctiva and *pittaja abshyandha* (Acute conjunctivitis)

Flower juice is extracted, mixed with an equal amount of honey and applied externally into the eyes in the form of eye drops.

9. ***Carrissa carandas*** L. (Kala, Family : Apocynaceae) (009/DBH/NL/96):

for *shukliga Vatika linganash Rakta linganash* and *prastariarma* (Pterigium)

One hundred pure fresh flowers are collected, placed onto 100 ml of sesame oil and kept in the sunlight until the flowers become submerged (it may take 10-13 days). The mixture is filtered and kept in a container. One or two drops is applied externally into the eye(s).

For diseases of eye lids

Roots are rubbed with the stem juice of *Indigofera tinctoria* and applied into the eyes in the morning and evening for 5 days. For *Kapha abshiyandha* (simple conjunctivitis) and *shiraharsha* (Congestion) Fifteen fresh

flowers are taken, placed over the eyelids and tied down with fine cloth. This treatment works best in the night or savrana shukra (Ulcer cornea) and Avrana shukra (Opacity cornea) five drops of fresh flower juice are applied externally into the eye for nine days.

10. *Cassia fistula* L.

(Tamil : - Sarakkondrai, Family: Caesalpinaceae) (010/DBH/NL/96):

for Kapha vidagdha dristi (/ Night blindness) seeds are rubbed with hot water and applied in the morning as a collyrium for 3 days.

11. *Eclipta prostrata* (L) L.

(Tamil : - Karisalanganai, Family : Asteraceae) (011/DBH/NL/96)

for vision improvement and all types of eye diseases

Fresh plant leaf extract is mixed with equal amounts of coconut oil, boiled until reduced to half the initial volume, then filtered and cooled. Used as a hair oil continuously for three to six months.

12. *Ervatamia divaricata* (L) Burkill
(Tamil: - Nandhyavattan, Family: Apocynaceae) (012/DBH/NL/96);

for diseases of cornea

roots of the plant is dried, thoroughly cleaned, rubbed together with ghee and applied into the eyes in the form of anjan to cure many kinds of corneal disease.

13. *Mollugo nudicaulis* Lam.

(Tamil: - Parpadagam, Family: Molluginaceae) (013/DBH/ML/96):

for shukshashipaka (/ Cloudy vision) and for Myopia

Whole plant is ground, mixed with milk and applied to the whole body including the head. The mixture is left for one hour, after which a bath is taken.

14. *Moringa oleifera* Lam.

(Tamil – Murungai, Family: Moringaceae) (014/DBH/NL/96):

for vata abshyandha (Sub acute conjunctivitis), Pittaja abshyandha prulent conjunctivitis) and Kaphaja abshyandha (Simple conjunctivitis) Kapha netra srava (Epiphora) and Rakta srava (Chronic dachryocystitis)

Leaf juice is extracted, mixed together with honey and applied externally in the eyes.

For corneal diseases

Flowers are collected and thoroughly cleaned (collect only flowers and not the buds). The juice is extracted and applied in the eyes in both the morning and evening for 7-9 days.

15. *Phyllanthus amarus schum & Thonn.*

Tamil : - Keezhanelli. Family: Euphorbiaceae) (015/DBH/NL/96):

For Abshyandha (Sub-acute conjunctivitis)

Whole plant is ground, applied externally over both eyelids.

For Jaundice

10gms. of whole plant washed properly. Ground, thoroughly mixed with unboiled goat's milk (200ml) and taken in the morning hours for 3-5 days. Duet should be carefully controlled. Note: plant should be collected fresh each morning.

For Kapha vidagdha drishti and (night blindness) and Doomadrishti (smoky vision)

Equal amounts of the leaves of *phyllanthus amarus*, *boerhaavia diffusa*, *alternanthera sessilis* are ground together five grams of this preparation are taken in the morning and evening for 45 days.

For all types eye troubles

Equal amounts of the whole plant juice of *P.amarus*, the leaf juice of *alternanthera sessilis* and sesame oil are mixed and boiled until reduced to one third the initial volume. An oil bath is taken from the preparation once every four days for at least six months.

16. ***Pongamia pinnata* (L) Pierre** (Tamil: - Thattaipungan, Family: Fabaceae) (016/DBH/NL/96):

for savrana shukra (Ulcerative keratitis) and avrana shukra (Corneal opacity)

Seed is made into a paste. Varti is then prepared. The varti is rubbed with honey and applied externally to both eyes in the form of anjana.

17. ***Ruellia prostrate* Poiret** (Tamil: - Kirandhi nayagam, Family: Acanthaceae) (017/DBH/NL/96):

for Anyatovata (Neuralgic Pain), shukshashipaka (Cloudy vision), Shiraharsha (Congestion) Hatatimantha (Silent glaucoma)

Two grams of flowers and young fruits are collected, placed into 30 ml of rose water, left for four hours, then filtered and stored. Two drops are applied externally into the eye four times a days for 5-7 days.

18. ***Sesamum orientale* L.** Tamil : - Ellu, Family : Pedaliaeae) (018 / DBH/ ML/96):
for shukshashipaka (Cloudy vision) and Doomadrishti (Smoky vision)

Fresh flowers are collected, applied over the eyelids and tied down with fine cloth in the night hours.

19. ***Strychnos potatorum* L.**

Tamil : - Thetran kottai Family: Loganiaceae) (019/DBH/NL/96)

The outside of the seeds are thoroughly cleaned, rubbed together with honey and applied to the eyes in the form of anjan in the morning for 5 days.

For Prastariarma (pterigium)

The fruit is rubbed together with honey, made into a paste and applied externally to the eyes in the form of Anjana.

20. ***Tamarindus indica* L.**

Tamil : - Puliyan, Family : Caesalpinaceae) (020/DBH/NL/96):

For shiraharsha (Congestion) and Anyatovata Neuralgic pain)

Flowers/tender leaves are collected, ground and plied externally around the eyelid.

21. ***Tinospora cordifolia* (willd) Hook.F. & Thomson** (Tamil: - Sindhil, Family : Menospermanaceae) (021/DBH/NL/96):

for potaki (Trachoma), Pittaja linganaash (Kacha (fhr<</ cataract), Kaphaja (Shukliga) savrana shukra (Ulcerative keratitis) and Avrana shukra (Opacity cornea)

The stem is dried thoroughly, rubbed with brest milk and applied into the eyes in the form of anjan.

In addition, equal amounts of the whole plant extract and sesame oil are boiled together until reduced to half the initial

volume. The mixture is then filtered and stored. This can be used regularly as a cooling hair/bath oil.

22. *Trianthema decandra* L.

(Tamil : - Sattaranai, Family : Aizoaceae0 (022/DBH/NL/96):

for *Jalasarava* (*Lachrymation*), *Kaphaja netrasrava* (*Ephphora*), *Raktra srava* (*Chronic*). *Dacryocytitis*, *Shukliga* and *Nakulandhya* colour blindness.

Root is rubbed together with breast milk and applied in the form of collyrium. For savrana shukra (Ulcer cornea)

Root is rubbed together with cow's milk and applied in the form of anjan.

23. *Trianthema portulacastrum* L.

Tamil: Vellai saradai, Family : aizoaceae) (023/DBH/NL/96):

(Can be used in the same way as *T. decandra*, but is considered more powerful).

For Eye pain (caused by excess body heat, excess sun, wind running)

Equal quantities of the roots of *T. portulacastrum* and *Amaranthus tricolor* are mixed together, rubbed with breast milk and applied into the eyes until cured.

24. *Zingiber officinale* Rosc.

(Tamil : RF – Sukku; Family : Zingiberaceae) (024/DBH/NL/96):

for *Sashkopa akshipaka* (/ *Panophthalmitis*) and *Shukshashipaka* /English : *Vision cloudy*).

Dried rhizome is rubbed with breast milk and used as a collyrium.

DISCUSSION

The marakanam bio-region contains a large diversity of medicinal plants. This paper provided a comprehensive report on the uses of twenty four medicinal plants, which are locally available, for treating 27 types of eye diseases, some of the plants mentioned in this article have broad spectrum use for example, the use of *Blepharis maderaspatensis* in treating many types of eye diseases, the majority of treatments mentioned involve simple preparation from a common single plant source. A thorough examination of the patient is crucial as many of the treatments are specific. Further investigation documenting the usage of medicinal plants in treating a whole range of ailments is urgently required, before much of this knowledge is lost.

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