

AYURVEDIC

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RENAISSANCE

THE COMPLETE MAGAZINE ON NATURAL HEALTHCARE



Coccinia grandis. Linn

CHILDHOOD AUTISM

HEPATOPROTECTIVE EFFECT OF KAKAMACHI

KSHARSUTRA

JALAUKA AVACHARANA

CHIRUVILWADHI KASHYAM IN VARICOCELE

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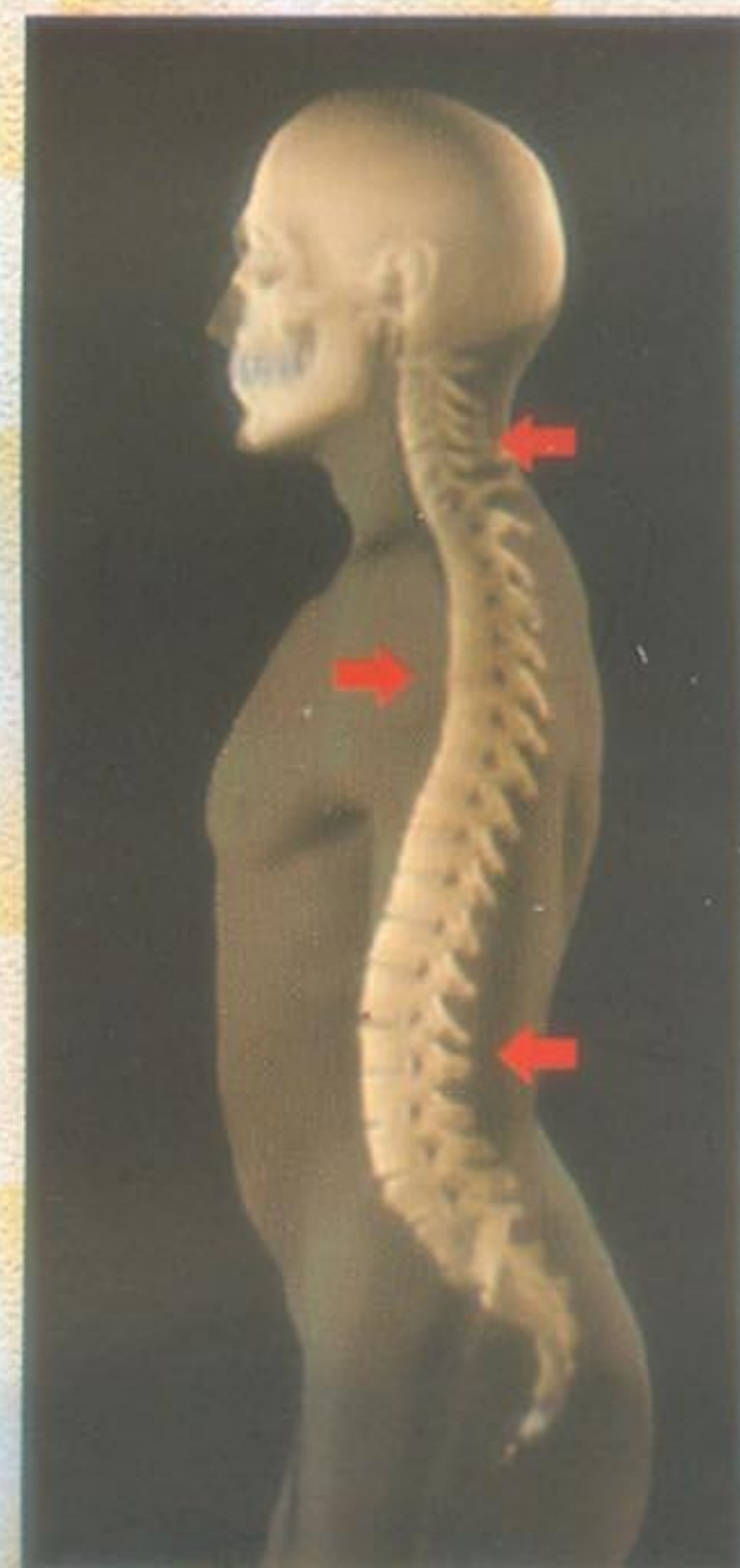
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of both theory and practice and is intel-
ligent, such a physician only is capable
of achieving the aims, just like a chariot
of two wheels is capable of performing
all its functions in the battle field*


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Editor's Page



Writing book is a penance, which needs saturated knowledge of the subject concerned and a strong will to impart it to the readers. It is a social commitment of highly calibrated scholar to record his knowledge for the use of generations to come. Lucrative offers were not there before the ancient Acharyas to write a book. Since the period of *Samhita* authors have clarified the need of a new book in that time. Charaka thought of revising *Agnivesa thanthra* to make it more understandable to the learner. Acharya Vagbhata, after pretty long period, thought it necessary to make the existing *Samhithas* more comprehensible and wrote a new book '*Ashtanga Sangraha*', comprising all the contemporary knowledge. Later Acharya Vagbhata himself wrote *Ashtanga Hrudaya* more compact and in verses. These revisions and comprehensions were milestones in the development of Ayurveda. Similarly *Sarngadhara samhita*, *Chakradatta*, *Bhava Prakasha* boosted Ayurveda at different periods. Most of these authors have testified the need of a new book in that particular period. Commentaries and compilations are exemptions.

Now hundreds of new books are reaching the shelves every year. The subject ranges from illustrative single drugs to text book on subjects as per CCIM syllabus. It seems that some of the writings follow the pattern of modern medical texts. Modern medical subjects donot have anything called "*Sabdam*" or '*Aptopadesam*'. New editions of modern medical books come out with addition- deletions and corrections. Along with the arrival of new concepts, the old ones will be outdated. This doesn't happen in Ayurveda. The fundamental principles of Ayurveda are time tested truths. They are not subjected to change. Practical as well as applied aspects of these principles can be modified through research work. Similarly there are several theoretical aspects in *Samhitas* which need clarifications and modifications. It is nearly impossible to an individual to accomplish this task. Collective efforts of like minded scholars will bring out suitable modifications and additions so that our science will remain updated and books comprising of such updated practical as well as theoretical description will be reputed as 21st centaury *Samhitas*. Authorship of a book is accountable in selection for professorship and awards. Such temptation will not bring good books.

Every new book should have some purpose to serve of which the author should be sure about. There should be some thing 'untold' or 'better told' in each new book'; not the '*Charvita- charvanam*'.

Thus comes the Renaissance.

Dr. K. Unnikrishna Pillai. BAM, MD (Ay) PhD

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AN ILLUSTRATED CASE STUDY ON CHILDHOOD AUTISM

*Dr.S.K.Ramachandran MD (Ay)

The Autism spectrum disorders (ASD) is a spectrum of psychological conditions characterized by widespread abnormalities of social interactions and communication, as well as severely restricted interests and highly repetitive behavior. There are three forms of ASD such as *Autism*, *Asperger syndrome*, *Pervasive Developmental Disorder Not Otherwise Specified (PDD-NOS)*, sometimes called atypical autism.

Autism is a disorder of neural development characterized by impaired social interaction and communication, and by restricted and repetitive behavior. These signs all begin before a child is three years old. Autism affects information processing in the brain by altering how nerve cells and their synapses connect and organize

Autism has a strong genetic basis, although the genetics of autism are complex and it is unclear whether ASD is explained more by rare mutations, or by rare combinations of common genetic variants. In rare cases, autism is strongly associated with agents that cause birth defects. Controversies surround other proposed environmental causes, such as heavy metals, pesticides or childhood vaccines. The prevalence of autism is about 1–2 per 1,000 people; the prevalence of ASD is about 6 per 1,000, with about four times as many males as females. The number of people diagnosed with autism has increased dramatically since the 1980s, partly due to changes in diagnostic practice; the question of whether actual prevalence has increased is unresolved.

Parents usually notice signs in the first two years of their child's life. The signs usually develop gradually, but some autistic children first develop more normally

and then regress. Although early behavioral or cognitive intervention can help autistic children gain self-care, social, and communication skills, there is no known cure in modern medicine. Not many children with autism live independently after reaching adulthood, though some become successful. An autistic culture has developed, with some individuals seeking a cure and others believing autism should be tolerated as a difference and not treated as a disorder. Sometimes the syndrome is divided into low-, medium- or high-functioning autism (LFA, MFA, and HFA), based on IQ thresholds, or on how much support the individual requires in daily life; these subdivisions are not standardized and are controversial. Autism can also be divided into syndromal and non-syndromal autism; the syndromal autism is associated with severe or profound mental retardation or a congenital syndrome with physical symptoms, such as *tuberous sclerosis*. Although individuals with Asperger syndrome tend to perform better cognitively than those with autism, the extent of the overlap between Asperger syndrome, HFA, and non-syndromal autism is unclear.

Asperger syndrome, named for the Austrian pediatrician Hans Asperger, is an autism spectrum disorder, and people with it therefore show significant difficulties in social interaction, along with restricted and repetitive patterns of behavior and interests. It differs from other autism spectrum disorders by its relative preservation of linguistic and cognitive development. Although not required for diagnosis, physical clumsiness and atypical use of language are frequently reported.

Case Study

For promoting awareness and discussion on

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Ayurvedic treatment of Autism the author wish to present a case diagnosed as Childhood Autism by Child Psychologists in United States

Liya was the only child of Mr. & Mrs. Jitesh and lived with her parents in Santa Clara California. The parents brought Liya in this hospital for Ayurvedic treatment of their conscience about for delayed language and agitated behavior and immature social skills.

Earlier Liya has been assisted by a team of psychologist during August 2005. At that time Liya was a warm & loving with cared aged 3 years 2 month to seemed to have a strong ear for Music. She was able to say at least 400 to 450 words and knew a pre academic concept of Alphabets, colors, numbers and shapes. Of concern, Liya was behind with her language. In fact parents switched to speak only in English with her. (Malayalam was the native language). She did not response to yes or no questions. She was not yet speaking in whole sentences, instead saying one and two word phrases. She communicated open by pulling her parents to objects and then either pointing or gesturing to show what her needs are. She was not asking questions and was inconsistent in responding when the parents called her by name.

In turn, her play was somewhat more simplistic in nature. She enjoyed inset puzzles and was playing with Barbies. It was very difficult to engage her in different types of play but this had improved since the parents had been "forcing" her to be more engaging with toys. Socially, Liya was better with turn taking. For a while she did not "get the concept". She was able to wait a moment for her turn. She has been her best relationship with a 4 year old neighbor and was willing to let this other child play with some of her items. She was interested in playing with older children, but became upset if they started to sing, especially a song she didn't like. While she was being concerned if her mother was crying she didn't seem to be concerned when others cry.

Her behavior was quite challenging. Specifically, she was very "possessive" about music refers to engage and listen to music and / or sing music exclusively. The parents reported she could sing more than 100 songs and parents had limited her access to music so as to provide her more opportunities to engage in

other activities. When frustrated, she sometimes flapped her hands, although often it was be very difficult to understand what was making her upset. The parents reported she became very upset if events occur that are not the part of the routine. For example, changing from a milk bottle to a cup was quite difficult as was stopping the car unexpectedly. Liya attended a parent co-op program. Her mother's presence eliminated drop-off difficulties and tantrums. She was calmed by music at the school. She did fairly well in circle, as it involved a great deal of Music. Liya was primarily trained for the toilet during day. Her sleep was very irregular and it helped her to fall asleep to music. She seemed to like tighter-fitting clothing while sleeping. She could be somewhat picky with food. If possible she swallowed food without chewing. Her fine motor skills are included scribbling. She was able to hooped but not able to ride a bike. There were numerous family members within Liya's community. The parents have been together and married before 6 years. The father indicated history of having Fits and breathes holding spells as a youngster. But there was no history of her family of language and behavioral difficulties. Liya didn't make eye contact when greeted by her examiners and didn't acknowledge the greeting. Liya produced raspberries, vocalization, babbling as well as one to three word and occasional four word utterances. She communicated her needs and wants through words and self initiated verbalization. However many times Liya didn't acknowledge the speaker, including when her name was called multiple times and when some questions were asked. She didn't verbally or non-verbally respond. When playing with toys Liya played in functional way. For example she pushed buttons on sesame street toy.

She also needed encouragement by her mother to play with the toys. However she was able to imitate some symbolic play, as she smelled an artificial flower, and pretended to make the toy frog eat the wooden cylinder. When playing with her mother Liya needed a encouragement and multiple prompts and directives to participate as she often didn't acknowledge speakers and also walked away at one point. She also kept stacking blocks and counting them and

HEPATOPROTECTIVE EFFECT OF KAKAMACHI-AN EXPERIMENTAL EVALUATION

Dr. Sanjeev. I. Athani M.D. (Ay) Dr. A.Hari Krishna.

ABSTRACT

Liver diseases are mainly caused due to an exposure to toxic chemical substances like antibiotics, carbon tetrachloride, chronic alcoholism, viral infections etc. In spite of the tremendous advances made in modern medicine, no effective and safe hepato protective medicines are available. Hence, an effective and safe hepatoguards are needed for the present generation.

Kakamachi is selected for the study on the basis of its wide usage in the treatment of *Kamala*. The drug is having the *deepana*, *panchana*, *saraka* and *yakruduttejaka* property as mentioned in various texts. In this present work an attempt has been made to evaluate and to establish the hepatoprotective action of this drug and its efficacy as a single drug in the management of liver disorders.

INTRODUCTION

In India more than 87 medicinal plants are used in different combination in the preparation of 33 – patented herbal formulations. Most commonly used 12 plants in herbal formulations are *Phyllanthus nirui*. Linn, *Tinospora cordifolia* (Willd) Miers, *Andrographis paniculata* Nees, *Boerhaavia diffusa* Linn, *Eclipta alba* Hassk, *Picrorrhiza kurroa* Royle ex Benth, *Oldenlandia corymbosa* Linn, *Asteracantha longifolia* Nees, *Apium graveolens* Linn, *Cassia occidentalis* Linn, *Cichorium intybus* Linn, *Embelia ribes* Burm, *Trachyspermum ammi* Linn. Some of the plant constituents possessing hepato protective activity are, *Andrographolide* (*Andrographis paniculata*), *Silybin* (*Sylibum marianum*), *Picroside 1 & 2* (*Picrorrhiza kurroa*), *Fumaric acid* (*Sida cordifolia*), *Catechin* (*Anacardium occidentale*) etc. Plants having liver protective property against toxic chemicals induced liver damage in experimental animals are *Azadirachta indica* A.Juss, *Andrographis paniculata* Nees, *Cichorium intybus* Linn, *Eclipta alba* Hassk, *Picrorrhiza kurroa* Royle ex Benth, *Swertia chirata* Buch-Ham, *Whitania somnifera* Dunal. etc. (Based on the publication of Indian authors during 1990-1998). Some of the poly herbal formulations verified for their anti hepato toxicity against toxic chemicals

induced liver damage in experimental animals are *Liv-52*, *Liver cure*, *Livol*, *B.liv*, *Stmuliv*, *Hepex*, *Levomy*, *tefroli* etc.

Development of Hepato- protective drugs:

To treat liver disease of unknown causes or multiple causes, the combination of different herbs containing extracts or active fractions (purified compounds) with activities such as anti-hepato toxic, anti hepatitis viruses, choloretic and stimulation of hepatocyte regeneration has to be developed. The same treatment may not yield positive results in both severe and mild liver damages. In the case of severe liver damages most of the liver cells would have died or fibrotic changes would have occurred.

Therefore, the formulations should contain in addition to the therapeutic agents, potent agents that can regenerate the liver by stimulating the surviving cells to proliferate. Many anti oxidants can protect from oxidative damages. However, these anti oxidants, alone can not serve as satisfactory drug to treat liver diseases and this has to be included in poly herbal formulations or multi drug therapy. The curative potentiality of poly herbal formulations containing scientifically validated plants/ extracts has to be tested again in the formulation form against severe and moderate liver diseases caused by diverse agents. The curative as well as preventive potentialities of

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“Review of experimental studies on antihepatotoxic activity of certain medicinal plants used in Ayurveda” as follows.

Plants	Latin name	Part used	Formulation	Dose in animal
<i>Sharapunka</i>	<i>Tephrosia purpurea</i>	Leaf	<i>Swarasa</i>	1.5 ml
<i>Pippali</i>	<i>Piper longum</i>	Fruit	<i>Kashaya</i>	2ml
<i>Kasani</i>	<i>Cichorium intybus</i>	Seed	<i>Hima</i>	2.5ml
<i>Punarnava</i>	<i>Boerhaavia diffusa</i>	Root	<i>Swarasa</i>	2ml
<i>Nirgundi</i>	<i>Vitex negundo</i>	Leaf	<i>Swarasa</i>	2ml
<i>Amalaki</i>	<i>Emblica officinalis</i>	Fruit	<i>Kashaya</i>	2.5ml
<i>Nimba</i>	<i>Azadirachta indica</i>	Bark	<i>Kashaya</i>	2.5ml
<i>Saptarangi</i>	<i>Caesania esculenta</i>	Root	<i>Kashaya</i>	2.5ml
<i>Nirgundi</i>	<i>Vitex negundo</i>	Seed	<i>Kashaya</i>	2.5ml
<i>Guduchi</i>	<i>Tinospora cordifolia</i>	Stem	<i>Kashaya</i>	2.5ml
<i>Daruharidra</i>	<i>Coscinium fenestratum</i>	Stem	<i>Kashaya</i>	2.5ml
<i>Bimbi</i>	<i>Coccinia indica</i>	Leaf	<i>Swarasa</i>	2ml
<i>Patola</i>	<i>Trichosanthus dioica</i>	Plant	<i>Kashaya</i>	2.5ml
<i>Parijatha</i>	<i>Nyctanthea arbotristis</i>	Leaf	<i>Swarasa</i>	2ml

the drugs have to be evaluated. Special formulations containing immuno suppressive herbs may have to be developed to treat auto - immunity included liver disorders. (Ref: Indian Journal of Pharmacology, 1999: 31; 166-175).

EXPERIMENTAL STUDY

Selection of Animals:

Albino rats were used as experimental model in this study. The reason for selecting Albino rats is that the regeneration of liver after hepatic damage/ partial Hepatectomy is almost completes within a week.

The Sprague dawly type of Albino rats of either sex weighing between 150-200 gm breeds in animal house were selected for the study. They were housed individually in polypropylene cages in well-ventilated rooms. The rats were kept under observation for seven days with standard laboratory diet. 30 animals were selected, which have been separated into 5 groups each with six animals.

Selection of Hepatotoxic agent and Hepatoguard:

- Carbon Tetrachloride is used as hepatotoxic agent in this study.
- Kakamachi [*Solanum nigrum*.Linn.] patra swarasa is selected as hepatogaurd

Method

The experimental model suggested by Watanabe and Takita (1973) was adopted.

MODE OF ADMINISTRATION OF HEPATO GAURD

The trial drug was given in the form of Swarasa
The leaves of *Kakamachi* was taken and cleaned well in pure water. Then leaves are triturated in *kalwa* up to small pieces and that bolus of *kalka* is kept in clean cloth. Then that cloth is squeezed in vessel and swarasa is collected.

DOSE DETERMINATION

Carbon Tetrachloride –

Carbon Tetrachloride (CCl_4) was given at the dose of 0.5ml/kg, intra peritoneal (i.p) for first five days to induce hepatotoxicity.

The Swarasa of the trial drug -

The human active dose of *Swarasa* is half *pala* (24 ml) (according to *Sharnghdhara*), which has been converted into rat dose i.e. 0.04 ml orally/day by using standard rat dose converting formula.

Human dose of *Swarasa* is 24 ml/day – converted into rat dose by using the formula $0.018 \times \text{human dose} = \text{rat dose} / \text{kg}$

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KSHARSUTRA (A MEDICATED ALKALINE THREAD), A MINIMAL INVASIVE PARASURGICAL PROCEDURE OF AYURVEDA-AN OVERVIEW

*R.Govind Reddy *Dr. A.D. Jadav **M.N.Suyavamshi ***G.Venkateshwarlu

INTRODUCTION:

In the management of diseases, there are several ailments which are not curable with modern as well as conventional medicines. Skin diseases, *Bhagandra* (Fistula in ano) *Nadi Vrina* (Sinuses) *Arbuda* (Cancer) *Arsha* (Piles), *Dusta Vrina* (chronic or non healing ulcers), *Charmakeela* (wart), *Tilkalaka* (Melanomas), External abscess, Disease of Mouth, *Ranula* etc are some of the diseases in this category.

In Ayurveda *Kshara sutra* technique is being used for the treatment of fistula in ano, hemorrhoids, sinuses, warts and cancer etc. *Kshar sutra* was first used for sinuses and fistulas. The management of anal fistula with *Kshara sutra* therapy is well established (Sharma et. al (1976) and has shown recurrent less than 2%, which is negligible in comparison to operative recurrent rate. The Standard *Kshar sutra* (A medicated alkaline thread) was made up of *Snuhi* *Ksheera*, *Apamarga kshara* and *Haridra* is a well-established minimal invasive parasurgical procedure in the management of ano rectal diseases viz. fistula in ano, piles etc with a high success rate.

Kshara and its types:

“*Tatra ksharanath kshananadwa kshara:*”

Kshara performs action like *ksarana* (cutting) and *ksanana* (to dissolve), It is termed as *kshara*. *Sushruta* has described its properties as *chedana*, *bhedana* & *lekhana* simultaneously and it pacifies *tridoshas*. Hence, it is called best among *Sastra* & *Anusastra*.

Historical background of *ksharsutra*:-

It is surprising to note that the application of *Ksharsutra* has been referred by almost all the authors of Ayurvedic *samhitas* but its preparation has hardly been mentioned by any one of *brihatraye* and *laghu trayees* except *Bhavaprakasha* who enlightens on this aspect, he has described some kind of thread which is to be used in the management of *Arsha* & *Bhagandara* etc. *Sushruta* has described the application of *Ksharsutra* in *Nadivrana chikitsa* and in *Bhagandhara* it has been enumerated as one of the indications of this therapy. *Charaka* has described in the chapter of *Shotha chikitsa* where *Ksharsutra* can be used with other measures in the management of *Bhagandara*.

Chakradatta has given the idea about the preparation & use of *Ksharsutra*. *Sadanand Sharma* in *Rastarangini* has described preparation & use of *Kshar sutra*. He described that 7 coating of *Haridra* powder should be done on the thread, layered by *snuhi* latex. *Chakrapanidutta* and *Sadanand Sharma* are the backbone that has provided the basic ground for the preparation, use and further research of *ksharsutra*. They have used *Snuhi* latex mixed with *haridra*, it shows their scientific vision to avoid clotting.

Standardisation of *Ksharsutra*:-

Extensive work has been done in the Dept of *Shalyatantra* of B.H.U. regarding use of *kshar sutra* in the management of *Bhagandara* (Fistula in ano). After a long research the standard *Apamarga*

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* Astt.Director (Ay)-Inchage – R. R.A Podar Ayurveda Cancer Research Institute (Ay.), Worli, Mumbai - 18.

**Astt.Director (Ay.), Regional Research Institute (Ay.), Bangalore.

kshara sutra was developed and approved by the Indian Council of Medical Research.

1. **Thread:** - For making of *Ksharsutra*, number 20 surgical linen thread must be taken due to the retaining capacity during the process of 21 *bhavanas*.

The qualities of thread should be as follows: -

- a) It must be of sufficient strength and should retain its strength up to the period of its processing.
- b) The thread should neither be too thick nor too thin.

SELECTION OF THREAD

Different kinds of threads were subjected to gradually increasing tension on a tensiometer till a point was reached when the thread just broke i.e. the "Tensile Strength" of that thread.

Threads Tested:

1. Silk Pleated (3 Sizes).
2. Silk Twisted (5 Sizes).
3. Surgical linen (5 Sizes).
4. Cotton (1 Thick Size).
5. Nylon (Thick Size).

Ten readings were taken for each thread and mean was calculated.

2. *Kshara*: -

PREPARATION OF KSHARA:-

Apamarga (*Achyranthes aspera* Linn) is the plant used for deriving *Kshara*. The whole plant including its root, stems, leaves and the seeds / fruits are collected, preferably in the beginning of summer and should be allowed to dry in a shade. When completely dry, the plant is cut into the pieces and placed on a clean pucca platform situated in a semi closed space i.e a place which is open but does not permit entry to direct wind blasts. The whole plant is put to fire. When it is fully burnt, the ashes are allowed to cool down and finally collected in a large clean vessel of stainless steel. These ashes should be dissolved in at least six times of clean water and mixed thoroughly with gloved hands.

The mixture is kept overnight for settling down. The

supernatant fluid is collected and filtered through thick cloth for 21 times. Finally the fluid is re filtered drop by drop through double Watman filter paper. The filtrate thus received is clean, light brown and is devoid of impure suspended particles. This is now slowly evaporated on a moderate flame in a wide mouth steel container and it should be stirred continuously. When liquid starts becoming pasty or thick, the flame is reduced, and the solution is stirred vigorously and effectively in a separate vessel. This is to avoid *Kshara* to get burnt and to stick to the bottom of the vessel. Put off the flame and allow the paste to dry with continuous stirring. A white coarse powder having flakes of different sizes will remain at the end. Grind it to have uniformity and collect in a air tight container. It should be labelled with the date and batch number. Maintain the records of collecting the drug, Date of burning, Dissolving the ash in water etc..

The standardization of the *kshara* was done on the basis of four factors: -

- A) Study of the Ph values
- B) Dispersal pattern of *Kshara*
- C) Certain chromatographic studies
- D) Study of alkalinity of *Kshara*.

A). Study of Ph value: -

The study of Ph was necessary to explore the possible mode of action of *Ksharsutra* as regards its debriding and healing properties and in this way to assess the period required for the application and successive changes of threads for a particular length of fistulous tract. The ph of all ingredients of *Ksharsutra* namely *Kshara*, *snuhi kshira* & *haridra churna* were measured & determined by the Ph papers of different values.

Ph values of different ingredients of *Ksharsutra* :-

Sl NO.	INGREDIENT	Ph value
1	<i>Apamarga Kshara</i>	9.7
2	<i>Kadali Kshara</i>	9.6
3	<i>Arka kshara</i>	9.7
4	<i>Nimba Kshara</i>	9.6
5	<i>Haridra churna</i>	6.2
6	<i>Snuhi Kshira</i>	5.6

HISTOPATHOLOGICAL CHANGES DURING JALOUKA AVACHARANA - A CURATIVE APPROACH -

*Dr. Rabinarayan Tripathy

ABSTRACT

Raktamokshana being a *sodhana* procedure cures so many diseases like, almost all varieties of skin disease, Glandular swelling, Inflammation, and the diseases due to the vitiation of blood. While treating the skin diseases method of *raktamokshana* that is *Jalouka avacharana* is believed to be the best approach because of the hypothetical support, patient comfort and convenient to use.

In *Sushruta samhita* as well as in other compendia the therapeutic use, indication, the technique of using *Jalouka* is mentioned vividly but to stand on a scientific base its histopathological evaluation is still in demand, to make the therapy popularize as well as to propagate Ayurveda as a noble practice.

Keeping in view the above factors and to attain healthy world through Ayurveda an effort was made to clarify, actually what happens during *Jalouka avacharana* in tissue level.

Introduction

From the very beginning of civilization; *Jalouka* is used for sucking vitiated blood to make the human body free from several diseases. *Jalouka* was the primitive tool of surgical procedures since ages, and the importance of *Jalouka* has not been diminished in modern era also. The fast acting anti coagulant, hirudin along with other anti-coagulant substances have been derived from *Jalouka*. To expel vitiated blood from human body with the help of *Jalouka*, as a measure of treatment of different diseases is known as *Jalouka avacharan*. It was extensively used for blood-letting in different parts of the world like India, North America, South America, European countries, South Africa from ancient times. In modern times, it is also used in plastic surgery to decongest congestive skin flaps. Therefore, it also promotes ulcer healing.

Hirudin, as well as other compounds with anti-coagulant, anti-platelet and thrombolytic properties has also been extracted from the leech under processing for extensive pharmacological use as fast-acting anticoagulant. Though action of Hirudin is very short, but it inhibits disseminated intravascular coagulation, venous and arterial thrombosis more effectively than heparin in animal experiments. So, leech is valuable for medical world yet.

Benefits

- Those under going blood letting from time to time never suffer from skin diseases, inflammatory swelling & blood disorders.
- Best method of blood letting is leech application.
 - More affordable.
 - Convenient usage over the skin, once in 7 day or according to severity.
 - Better patient compliance.

Classical view

It is an animate *Anushastra* (minor sharp surgical instrument) used for letting blood from human body. According to Ayurvedic description, *Jalouka* always lives in water, i.e. aquatic. According to Sushruta & Vagbhata, *Jaloukas* are mainly classified into two groups on the basis of its therapeutic effect. Again each one is sub divided into six according to its morphological characteristics.

1. *Nirvisha Jaloukas* (*Kapila, Pingala, Shankhumukhi, Mooshika, Pundaree kamukhi, Savarika*) the non- poisonous leeches usually found in deep plenty water where flowers like lotus are commonly found. They are generally grayish in colour with rounded body blue color stripes on the dorsum of the body, white light red colour, green & gray lines are found on the ventral

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side of the body. Only *Nirvisha Jalouka* is useful for therapeutic use.

2. *Savisha Jaloukas* (*Krishna, Karbura, Alagardha, Indrayudha, Samudrika, Gochandana*) the poisonous leeches are found in dirty water and also in the parts fossils of fish, frog and snake etc., they are red, white, dark blue, smooth with rainbow colour dorsum and hairy. Further they are not used for letting of the blood.

According to their sex, *Jalouka* are of two types – 1) Female - Slender, thin skinned, small headed, large hind part, rounded mouth part & used in less vitiated *dosha*, acute conditions, traumatic conditions & diseases with a history of shorter duration. 2) Male - Heavy, thick-skinned, mouth part shaped like half moon & used in conditions of profound increase of *dosha* and in diseases which are long standing.

Attention Areas

- There are about three hundred species of leeches. Among them four types of leeches e.g. *Hirudina granulose*, *H. vridis*, *H. javanika* and *H. medicinalis* are abundantly available in India.
- Medicinal Leech (*Hirudina medicinalis*) has a slightly flattened cylindrical body, divided into 33 or 34 segments. Measuring from 5 mm to 46 cm (0.2 to 18 inch) in length the upper side is dark brown or black with long reddish strips. There is a disc shaped sucker at the head end & the mouth situated within the sucker complete with 33 pair of teeth arranged in three rows – “Y” shaped & has 5 pairs of eyes.
- Leech is amphibious, fresh water animal.
- Average feeding time – 25 minutes to 83 minutes.
- During a meal it may extract blood 10 times of its body weight & can increase up to 11 times of its body dimension.
- After a feed it can sustain for six months or more by digesting their own body tissue to avoid starvation.
- Leeches are hermaphroditic, each specimen

containing several pairs of testes and one pair of ovaries. Typical species lay their eggs in mucous cases known as cocoons on damp ground.

- Leeches are heat sensitive kept in 42 - 45°F (5 - 7°C). Maximum it can resist 68°F (20°C).

Disease Manifested In Various layer by Skin

- *Avabhasini* :- *Sidhma kusta*, *Padma kantaka* (Lucoderma, Papiloma of the skin)
- *Lohita* :- *Tilakalaka*, *Nyachha*, *Vyanga* (Non elevated black mole, hemangioma etc)
- *Sweta* :- *Charmadala*, *Ajagalika*, *Masaka* (Eczema, Fungal infection, viral wart)
- *Tamra* :- *Kilasa*, *Kusta* (skin patch)
- *Vedini* :- *Kusth*, *Visarpa* (Different lepratic conditions, erysipelas)
- *Rohini* :- *Granthi*, *Apachi*, *Arbuda*, *Sleepada*, *Galaganda* (Lymphadenitis, cyst, Granuloma, tumor, Filarial swelling, Goiter)
- *Mamsadhara* :- *Bhagandara*, *Vidradhi*, *Arsha* (Sinus, Fistula, Haemorrhoids, Absces).

The above diseases can be best treated by leech application. The diseases are the response of the body to the damage, done by harmful agent. Those can be broadly classified into

- Inflammatory - Eczema, Fungal infection, Viral wart, Skin patch, Different lepratic conditions, Erysipelas, Lymphadenitis, Filarial swelling, Goiter, Sinus, Fistula, Hemorrhoids, Abscess
- Degenerative. - Dry & wet gangrene
- Neoplastic. - Lucoderma, Papiloma of the skin, Non-elevated black mole, hemangioma Granuloma, tumor.

Leech alleviates inflammation, regenerates & decreases hyperplasia.

Inflammation

Inflammation is a complex pathological reaction of the body, to tissue injury or infection. The injured site becomes red and warm because of increased blood flow; swelling and tenderness result from fluids

ROLE OF CHIRUVILWADHI KASHYAM IN VARICOCELE - A CLINICAL TRIAL

*DR. L. Prasannakumar. MD (Panchakarma)

Varicocele is an abnormal enlargement of the veins in scrotum draining the testicle area. The testicular vessels starts in the abdomen and course down through the inguinal canal on their way to the Testis. Defective valves, or compression of the vein by a nearby structure, can cause dilatation of the veins near the testis, leading to the formation of a varicocele. **Etiology:** The idiopathic varicocele occurs when the valves within the veins along the spermatic cord don't work properly.

Age

Varicoceles develop slowly and may not have any symptoms. They are most frequently diagnosed when a patient is 15–25 years of age, and rarely develop after the age of 40. They occur in 15-20 % of all males, and in 40 % of infertile males.

Symptoms:

Symptoms of a varicocele may include:

- Dragging-like pain in Scrotum.
- Feeling of heaviness in the testicles
- Atrophy (shrinking) of the testicles
- Visible or palpable (able to be felt) enlarged vein, likened to feeling a bag of worms.
- In-fertility Recently several scientific researches have shown that in over 90 % of the cases in male infertility the main cause is bilateral varicocele.

Diagnosis:

Upon palpation of the scrotum, a non-tender, twisted mass along the spermatic cord is felt. Palpating a varicocele can be likened to feeling a bag of worms. When lying down, gravity may allow the drainage of plexus and thus make the mass not obvious. This is

specially true in primary varicocele, and absence may be a sign for clinical concern. The testicle on the side of the varicocele may or may not be smaller compared to the other side. Recent studies have shown that varicocele is a bilateral disease and the diagnosis of the right side is missed by physical examination and even by ultrasonography. The examination should be performed by Ultrasonography - color flow doppler performed by highly experienced radiologist that will diagnose varicocele by demonstrating back-flow in the right and in the left spermatic veins

Treatment:

Sew up wound after varicocele surgery. Varicocelectomy, the surgical correction of a varicocele, is performed on an outpatient basis. Possible complications of this procedure include Hematoma (bleeding into tissues), Hydrocele (accumulation of fluid around the affected testicle), Infection, or injury to the scrotal tissue or structures. In addition, injury to the artery that supplies the testicle may occur.

Prognosis:

Varicocele is usually harmless except in cases of infertility. If surgery is required because of infertility or testicular atrophy, the outlook is usually excellent. Removal of varicocele can lead to normal testicular temperatures and an increased sperm production. An Inguinal hernia can sometimes be misdiagnosed as a varicocele by an untrained eye.

Varicocele and Infertility

Recently several scientific researches have shown that in over 90 % of the cases in male infertility the main

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cause is bilateral varicocele that leads to persistent hypoxia in the testicular tissue that causes with time, deterioration in the quantity and in the quality in the production of the sperms. All other factors like genetic problems, obstruction of sperm transport systems due to inflammation in the pelvis, include not more than 5-10% of all male infertility cases.

A Case Study with *Chiruvilwadi Kashaya* in Clinical Varicocele:

Male Patient Aged 28 years

Occupation : L.I.C Agent.

Place : Tiruppur, Tamil Nadu.

Religion : Hindu.

Sex : Male

Treatment Started : 19-08-2009.

Treatment Ended : 13-10-2009.

Diagnosis : Azoospermia due to Clinical Varicocele

(Surgeons Opinion)

Complaints & Duration: Patient complaints of not having issue since 3 years.

Past Illness: Patient had an attack of Chicken pox before ten years and got treated from an allopathic hospital.

History of Present Illness: Before 2 years the patient was asymptomatic, one day immediately after coitus he developed pain and mild heaviness in scrotum, and approached the nearest doctor and got diagnosed.

History of Treatment History: Once taken NSAIDS from a local physician, and got temporarily relief.

Ayurvedic Point of view:

Varicocele was co-related as *sira grandhi* and *sthana* for varicocele is *Apana vata*, so by considering this *Chiruvilwadi kashaya* and *kaisora guggulu* was tried as *chiruvilvam* acts on *Apanavata* and *Kaisora guggulu* acts as *shophagnam* and *shoolaharam*, so these medicine was continuously given for 3 months.

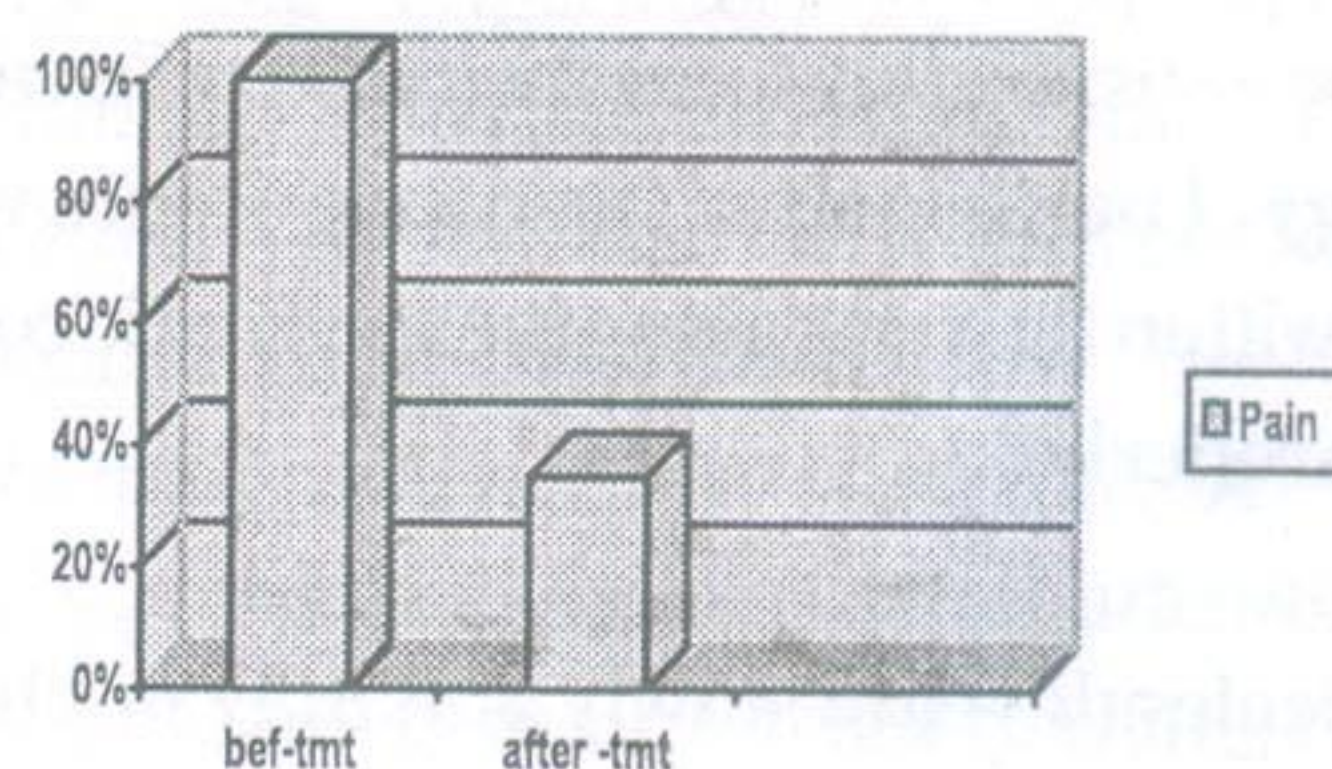
With in few days the patient feels reduced pain after coitus, as the patient felt comfortable same medicine was advised to continue next 3 months.

Clinical Symptoms like Pain, Heaviness, got reduced with in few days.

Visible palpable veins also got reduced more than 90%. Before and After treatment Parameters colour Doppler of scrotum was taken.

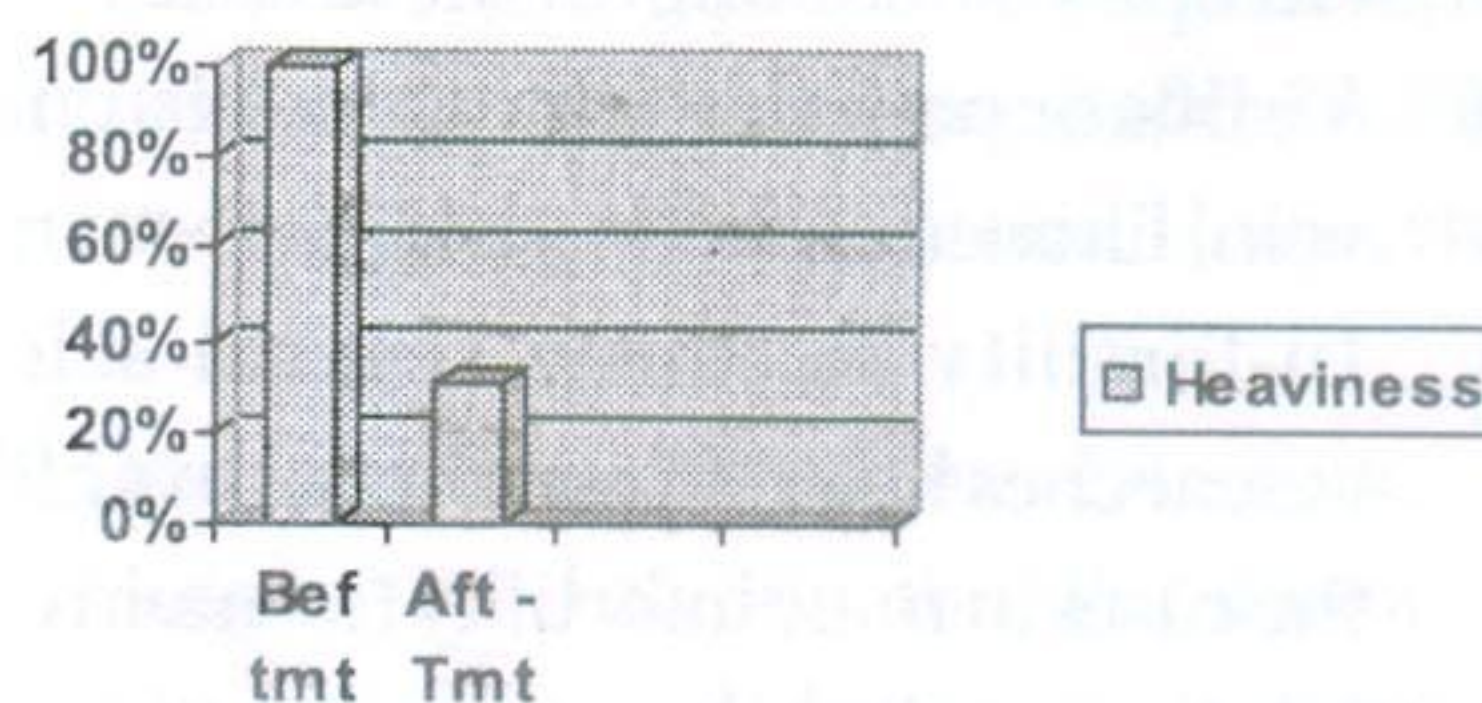
Effect on Pain :

Pain, one of the cardinal symptoms of Varicose relieved by 65% as the initial score of Pain which was 100% reduced to 35% after the treatment with *Chiruvilwadhi Kashaya*. This improvement when analyzed found to be highly significant ($P < 0.001$). Graph No. 19 provides the details.



Effect on Heaviness:

69% of improvement was observed in the symptom Heaviness. 100% was the initial mean score of Heaviness recorded in this patient was brought down to 31% after the administration of *Chiruvilwadhi kashaya*. This improvement after the treatment is found to be highly significant ($P < 0.002$). The detail of the different values is shown in the Graph No. 2.



CONCLUSION:

- Varicose is becoming more common these days and it plays an important role in Primary and Secondary Infertility.
- Surgery is the only option in allopathic system of medicine.
- When the disease is recent onset Ayurveda can cure completely.
- No adverse effect was observed in this study.
- Even though varicose is a surgical disorder in allopathic system of medicine, it can be treated in OPD levels and is even cost effective too.

ANTIBACTERIAL EFFECT OF GANDHAKA RASAYANA - AN INVITRO EVALUATION

*Dr Raghuveer

** Dr (Smt) P P Dindore MD

***Dr Suprabha MD

ABSTRACT

A broad classification of the pharmaceutical preparations serves the purpose of *dehaveda* are four, of which *kharaliya rasayana* accounts majority of preparations. *Gandhaka rasayana* is one such preparation which has a wide range of therapeutic applications. *Gandhaka rasayana* said to be having the properties like *Kushtaghna*, *Kandughna*, *Visarpahara*, *Dadrughna*, *Vishaghna* etc. So the present study intends to evaluate the effect of *Gandhaka Rasayana* on Gram +ve and Gram -ve micro-organisms which cause common skin infections. Study revealed that *Gandhaka rasayana* has significant Antibacterial and Antifungal activity.

KEYWORDS: *Gandhaka Rasayana*, Antimicrobial

INTRODUCTION:

Gandhaka Rasayana is a well known *kharaliya* preparation, and has many therapeutic applications. It is mainly indicated in skin diseases like *kushta*, *kandu*, *dadru* etc¹. It signifies *Gandhaka Rasayana* may possess antimicrobial properties, and *Gandhaka* is said to be having *krimighna karma*². So in the present study *Gandhaka rasayana* is studied for its bacteriostatic and bacteriocidal activity with *staphylococcus aureus*, and *E-coli* and antifungal activity on *Candida albicans*, and *Aspergillus fumigatus* which are opportunistic pathogens in common skin infections.

Materials and Methods:

Raw materials like *Gandhaka*, *Godugdha*, *Chaturjata* (*Twak*, *Ela*, *Patra*, *Nagakeshara*), *Guduchi*, *Haritaki*, *Bibitaki*, *Amalaki*, *Bhringaraja*, *Ardra* were collected from market and get authenticated from experts.

Test microorganisms employed for in-vitro antimicrobial assay were obtained from Maratha Mandal Microbiology dept, Belgaum.

Gandhaka rasayana was prepared as per the reference *Yogarathnakara*³.

Procedure: *Gandhaka shodhana* is carried out by the process *Dalana*. Thus purified *gandhaka* is taken in *khalwa yantra* and triturated with *Godugdha*

followed by *Chaturjata phanta*, *Guduchi swarasa*, *Haritaki kwatha*, *Vibhitaki kwatha*, *Amalaki kwatha*, *Bhringaraja swarasa*, *Ardra swarasa*, 8-8 times *bhavana* with each drug. Then it is dried completely and mixed with equal quantity of *sita* (*Sharkara*) and preserved in airtight container.

Thus prepared *Gandhaka rasayana* subjected for parameter tests of standardization like, % of Sulphur, LOD, Ash value, Acid insoluble ash. As per standard procedures⁴.

Then standardized *Gandhaka rasayana* is subjected for antimicrobial study using **disc diffusion method**⁵ as follows :

The test solution was prepared by dissolving 10 mg of *Gandhaka Rasayana* in 1 ml of DMSO (Dimethyl Sulphoxide). Then 0.2 ml of this solution was used for testing. Petridishes containing 10ml of Nutrient Agar medium were selected with 24 hrs culture of selected bacterial strain. Sterile filter paper discs (5mm) containing 100µg/disc of *Gandhaka Rasayana* were placed on the surface of the medium. Petridishes were incubated for 24 hrs at 37° C for bacterial strains.

The assessment of antibacterial activity was based on the measurement of zone of inhibition observed around the discs.

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RESULTS:

Table No.1 Physico-chemical analysis of Gandhaka Rasayana:

Sl.No.	Sample	Sulphur content
01	Gandhaka Rasayana	36.91% w/w
02	pH Value	3.49
03	Loss on Drying	12% w/w
04	Ash Value	7.79% w/w
05	Water soluble extractives	69.69% w/w
06	Alcohol soluble extractives	90.32% w/w
07	Average particle size	65µm

Table No.2 Organoleptic characters at

Sl.No.	Parameter	Observation
01	Colour	Grey
02	Odour	Aromatic
03	Touch	Soft
04	Consistency	Solid
05	Appearance	Powder
06	Taste	Pungent/Astringent

DISCUSSION & CONCLUSION:

The results suggest that *Gandhaka Rasayana* possess potential inhibitory activity at all three i.e. 50 µg, 100 µg, 200 µg concentrations tested against Gram +ve and Gram -ve organisms, and for fungal strains it showed inhibitory activity at two i.e. 500µg and 250µg concentrations on the strains used for the experiment. *Staph aureus* shows maximum zone of

Table No.3 Antibacterial screening by Disc diffusion method:

G.R. in various	Zone of inhibition in mm	
	Staph aureus	E-coli
50 µg	10mm	10mm
100 µg	12mm	11mm
200 µg	16mm	13mm

Table No.4 Anti Fungal Screening

G.R. in various concentrations	Zone of inhibition in mm	
	Candida albicans	Aspergillus Fumigatus
500 µg	13 mm	15 mm
250 µg	11 mm	12mm
125 µg	R	R
62.5 µg	R	R
31.25 µg	R	R

inhibition (16mm) at a concentration of 200µg where as at same concentration E-coli was 13mm. *Aspergillus Fumigatus* showed maximum zone of inhibition (15mm) at a concentration of 500µg where as at same concentration *Candida albicans* was 13mm.

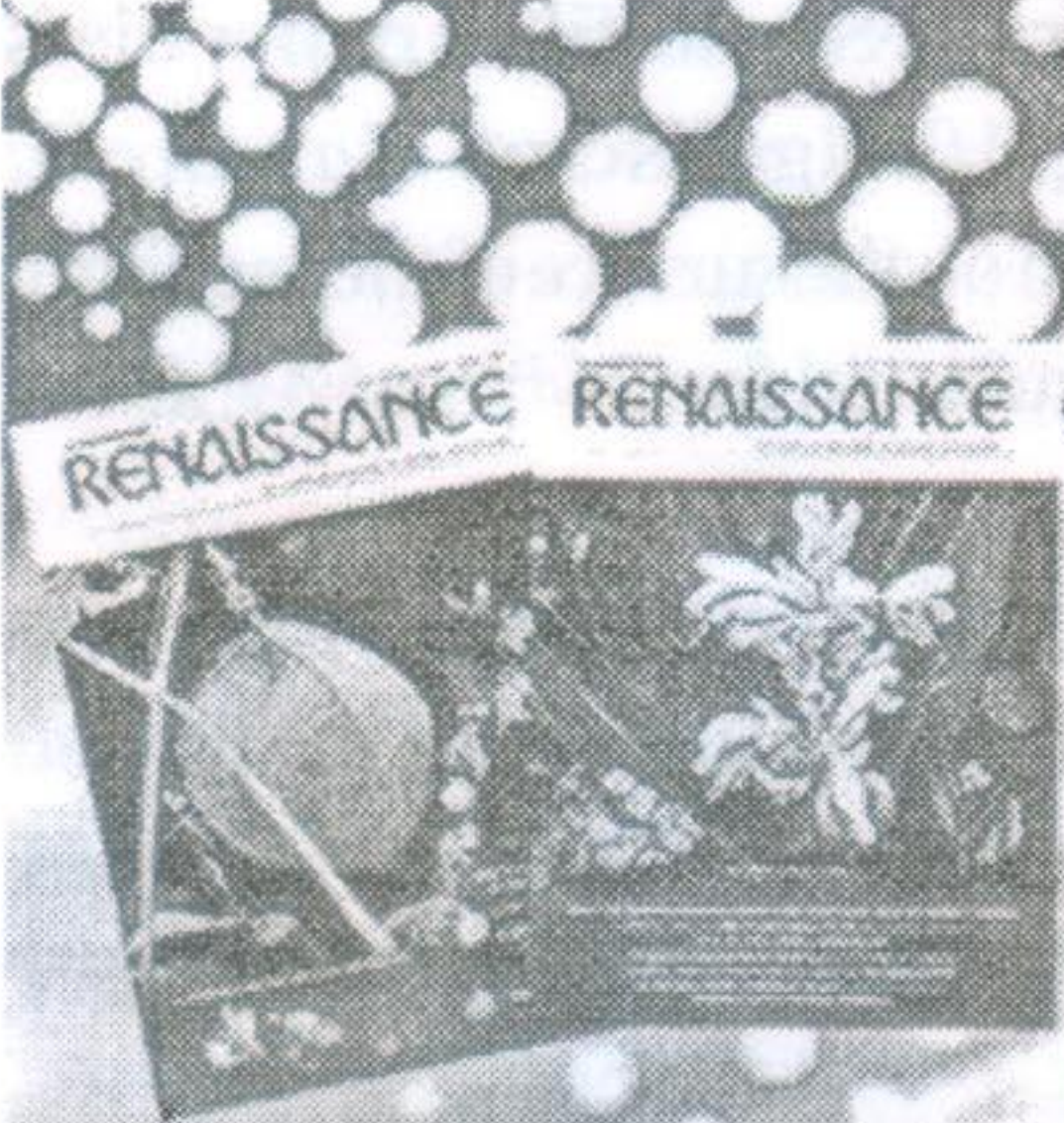
The *Gandhaka Rasayana* showing significant antimicrobial activity against tested organisms, substantiating the use of *Gandhaka Rasayana* in the management of common skin infections.

REFERENCE:

- 1) Shastri laxmipati, Yogaratnakara Uttarakhand, Varanasi, Chaukamba sanskrit samsthan 7th edn.
- 2) Ambikadatta Shastri, Rasaratna samuchaya Chaukamba Amarabharati Prakashana, Varanasi, 3rd Sholka16.
- 3) Shastri laxmipati, Yogaratnakara Uttarakhand, Varanasi, Chaukamba sanskrit samsthan 7th edn.
- 4) Pharmacopoeal standards for Ayurvedic Formulations.
- 5) Ananta Narayan, Panikar 'Text Book of Microbiology' Chennai orient Longmann Pvt Ltd 7th edn, 2005.

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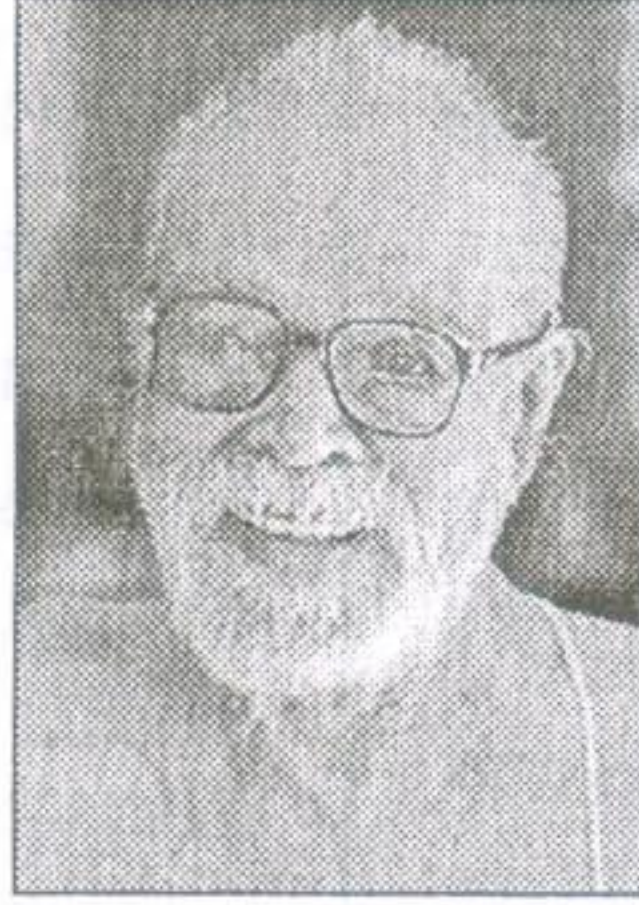
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NAVATHIPRANAMAM

Ninetieth birth day celebration of
Living legendary scholarly physician

VAIDYABHUSHANAM K RAGHAVAN THIRUMULPAD

Raghavan Thirumulpad is one of those rare *Acharyas* in Ayurveda who link traditional wisdom with contemporary medical practices and education. Learning Ayurveda under *gurukula* system, he carried its vibrant legacy to our generation in all fronts, by making seminal contributions in the fields of practice, theory, education and conscientisation. Ayurveda was not a mere profession, for him, it has been a way of life and an overarching philosophy of life. For over seven decades, he has been its worthy practitioner healing and curing countless number of patients. He has written various theoretical and clinical treatises on Ayurveda that are treasured by scholars and students, while his prolific writings on the principles and relevance of Ayurveda contributed a lot to popularize and vitalize it. He has been a teacher par excellence, an inspiring and illuminating presence to generations of Ayurvedic practitioners. Moreover, throughout his life he has been a model of simplicity, wisdom and virtue. A Gandhian



to the core, he always endeavoured to make knowledge useful and affordable to common people. Thirumulpad is a public intellectual in the true sense of the term, a great Ayurveda Acharya, activist, writer, orator and translator whose life and work are a great source of inspiration and energy.

Nagarjuna Ayurvedic Group has been fortunate enough to be gifted with the blessings of Shri. Raghavan Thirumulpadu in various forms. He was an active member of the advisory board of Nagarjuna Herbal Concentrates Ltd from the very beginning. Later he became member of board of directors. At present continuing as the trustee of Nagarjuna Research Foundation.

In connection with the *Navathy* celebrations Nagarjuna Research Foundation got the privilege to publish the book, *Chikilsaprakasam*, a collection of his treatment experiences, *Ashtangahrudaya* - *Roganidana* - in Malayalam and some other articles.



Dr. K.G. Poulse Vice Chancellor,
Kerala Kalamandalam, Deemed University
Inaugurating the Celebration

Dr. Rajan Gurukkal, Vice Chancellor,
MG. University, Joining the
Lamp Lighting

Sri Raghavan Thirumulpadu with Dr. C. Retnakaran,
Pro Vice Chancellor, Kerala University of Health & Allied
Sciences Dr. K.G. Poulse & Dr. Rajan Gurukkal



Vaidyabhushanam K Raghvan Thirumulpad foundation for Ayurvedic studies, Chalakudy, Trissur, Kerala organized the ninetieth birth day celebration of the reputed *Guru*, *Vaidyabhushanam* K Raghvan Thirumulpad, at his birth place, Chalakudy on 23rd May 2010. Academicians, physicians, students and common mass across the state reached Chalakkudy for offering birthday greetings to the *Guru* and attending the various functions of the celebration. The inaugural session began at 9.00 a.m. with invocation by the singing of *Ashtapadi* in the traditional style by Master Murali. Dr. Rajan Gurukkal, Vice Chancellor, Mahatma Gandhi University, Kottayam in his presidential address, explained the socio-cultural aspects of Ayurvedic tradition in Kerala and appreciated the multi faceted personality of Sri. Thirumulpad.

Dr. K.G. Paulose Vice Chancellor *Kerala Kalamandalam* Deemed University inaugurated the programme by lighting the conventional holy lamp. He also delivered an informative speech on 'tradition and modernity'. Dr. C. Retnakaran Pro Vice Chancellor, Kerala University of Health and Allied Sciences was the Chief Guest. He spoke on the contributions of Sri Thirumulpad to the Ayurvedic academic world.

Nine books authored by Sri Thirumulpad in three languages and published by different publishers were released on the occasion. This was done by Sri P.R. Krishnakumar of Arya Vaidya Pharmacy Coimbatore. Nagarjuna Research foundation has published one of the books, *Chikilsa prakasam*.



This was followed by *Acharyavandanam* which was a formal honoring the stalwarts of Ayurveda. Those who really contributed to the Ayurveda through years of clinical practice, authoring books, etc. were selected.

The scientific session became unique in selection of topics for discussion and resource persons. 'Clinical Methodology in Ayurveda', a discussion on *Bheshajavacharaneeya*, the Twenty third chapter in the Sutrastana of *Ashatngasangraha*, was the central theme.

Presentations and discussion on '*tat pratipaksham oushadham prayujyamanam aasu sidhaye*' with stress on the importance of *hetuvipareetha-chikitsa*; '*stanavisesheha cha bheshajavisheshah paryeshitavyah*'; *Bhaishajyapramanavikalpah vyadhi-vyadhitabalapekshah*; '*yogyamapi chaushadham pareeksheta*'; *bheshaja-kala*; '*dehe margeekrite doshaseshah sukshah evalanah*'; *Kriyasankara* were highly thought provoking.

Dr. M.R. Vasudevan Namputhiri Director Ayurveda Medical Education, Kerala, Dr. K. Sankaran Former DAME and Dr. V.C. Deep Research Officer, National Research Institute of *Panchakarma* (CCRAS) were the moderators of the session.

Also there was an exhibition highlighting the milestones during last century of Ayurveda in Kerala

needed physical assistance to roll a ball and knock down the block towers instead. Liya may also didn't give her mother a turn to roll the ball. However at times there were nice interaction and participation. Liya sat on her mother's lap when listening to a story and responded to the questions about the pictures. Liya also displayed some unusual behavior. For example, she walked around the toys in circle and sang the 'Rubber Ducky' song.

The psychological assessment of Liya was as follows.

- Liya performed best when in her mother's lap. Left her own devices she tended to wonder and needed the structure of being in her mother's lap to co operate and to attend. She demonstrated excellent non verbal imitation. There were significant amount of echoing and verbal imitation.
- Liya needed visual information in order to comprehend questions addressed to her.
- She didn't point to pictures, rather touched or rubbed picture to indicate her response. She had some difficulty imitating the clinician on demand. She didn't appear aware of having to copy different models produced by the clinician in a block design task. In one task she repeatedly chooses pictures in a same column despite being directed to look all the pictures.
- A video of she has play activities revealed that most of the play involved in gross motor component.
- Liya often watched peers and nicely imitated the sound / motions of that peer. And when peer said "Hi" to the camera. Liya copied this by saying "Hi" to the camera
- Liya didn't initiate any play ideas, simply copying the actions of those around her. Occasionally her language appeared more jargon in nature and didn't have a communicative in turn

Diagnostic Formulation

Liya has a history of social immaturity, delayed language and behavioral rigidity. While she had much strength and had some cognitive skills at an age appropriate level, her pragmatic skills are scattered up to 18 to 21 months, her receptive language skills

scattered up to 33 to 36 months. In terms of pretend play skills, Liya needed models for symbolic play, as her play with toys was more functional than imaginative. She also needed cues and directives for turn taking and pretend play scenarios. In addition, Liya displayed some unusual behaviors such as counting frequently. Walking around toys in circles and singing and verbally listing an array of children's songs.

Liya meet the criteria for Autism in following manner.

1. Liya was demonstrating a qualitative impairment in social interaction , as manifested by the following:
 - A. Marked impairment in the use of multiple non- verbal behaviors such as sustained eye- to- eye gaze, facial expressions and gestures to regulate social interactions.
 - B. She showed a lack of sustained social and emotional reciprocity (e.g., turn taking was not possible without models, prompts and physical guidance).
2. As well Liya was demonstrating qualitative impairments in communication, as manifested by:
 - A. Delayed in development of spoken language;
 - B. Lack of varied, spontaneous make-believe play appropriate to her developmental level
3. Finally, Liya does seem to demonstrate some restricted repetitive and stereotype patterns of behavior and interests, such as:
 - A. Encompassing preoccupation with restricted patterns of interests(e.g., music)
 - B. Apparent in flexible adherence to specific, non functional routines or rituals

Autism explains many of the concerning behaviors observed, including inconsistent response to her name poor receptive / expressive language, preference for independent play, difficulties with turn taking and changes in routine and continued use of jargon. Her other difficulties (e.g., pickiness with food) also are fairly typical with children with Autism. She does not present with as many behavioral difficulties when with adults, especially her parents

and other family members, as a make more accommodations for her and can more readily structure her environment and anticipate her needs to avoid frustration.

Asperger versus Kanner

There is a great deal of overlap between Asperger's and Kanner's views of Autism. Both recognized the impairment of social interaction and failure of communication as the prominent features. Both have highlighted stereotypic behavior, isolated special interest outstanding skills and resistance to change in their children. Both have insisted on a clear difference from childhood schizophrenia.

Kanner through his patients first described teenage peculiarities such as pronoun reversal and difficulties in generalizing word meanings. In the other hand Asperger first described clear sounding language, in valid words and speech similar to grown-ups in his cases. He has reported oddities of nonverbal communication, eye gaze, gestures, postures, voice quality, prosody and word choice. He highlighted the lack of humor and pedantry, obsessive collection of meaningless objects and severe homesickness in his syndrome. Both Kanner and Asperger overestimated autistic children with possibilities of social adaptation and academic achievement. Kanner believed that only the relation to people was disturbed in Autism but Asperger believed that there was a disturbed relation to objects also.

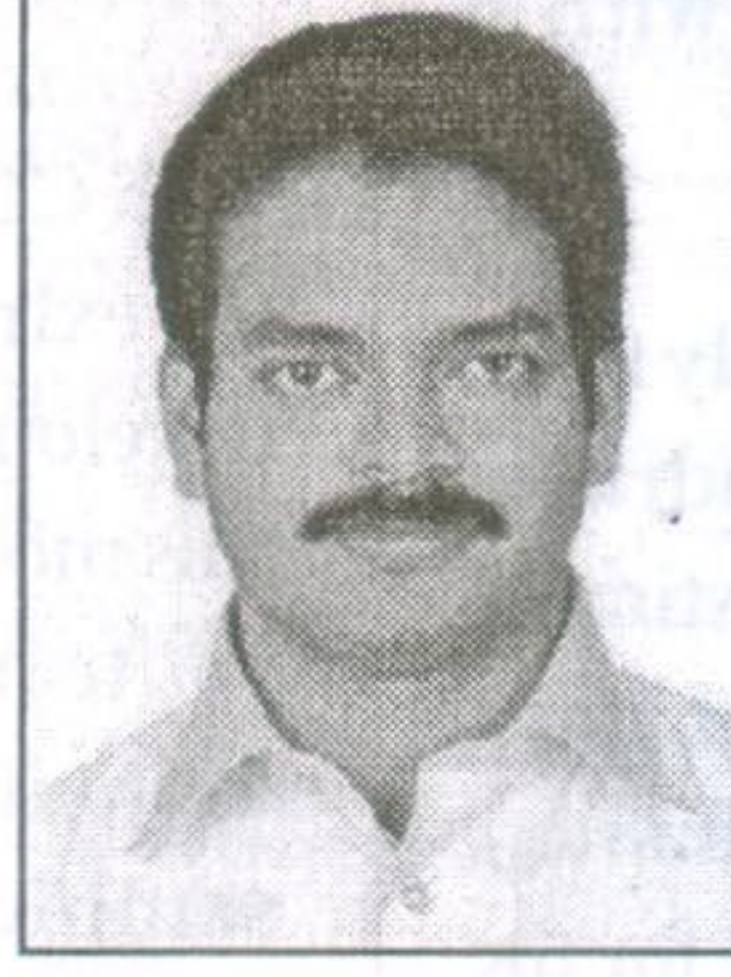
Children who do not talk or who parrots speech and use strange idiosyncratic phrases, who he give up toys in long rows, who are oblivious to other people, who remember meaningless facts, these will rightly conjure up Kanners memory. Children and adult who are social inept but often socially interested, who are articulate yet strangely ineloquent, who are gauche and impractical, who are specialist in unusual fields, these will always evocating Asperger's name. Asperger syndrome is sometimes labeled high functioning Autism due to excellent progress observable that at least some cases undergone Ayurvedic treatment 2-3 years. There are also certain similarities between Asperger Syndrome and Schizophrenia such as poverty of speech and ideas and flattening of affect bear a striking resemblance to the prevailing features of some types of Autism in adulthood. The Schizophrenic patients seem to show

progressive loss of contact, while the Autistic lack contact from the start.

Ayurvedic Treatment

During the first course of treatment she was administered a package of treatment encompassing *Kallyanaka ghritam*, *Mridweekadi kashayam* and *Manasamithravadakam* as internal medication and a mixture of *Vatasani tailam* and *Pancha gandha choornam* as head application over anterior fontanel daily for two months. Water boiled with dried *amalaka* fruit and *Pancha gandha choornam* was used for bathing. The parents were advised to continue speech and language therapy, play based treatment and other environmentally based interventions. By the end of second month Liya showed significant improvement in social interaction and communication skills. Then she was admitted in the hospital and provided intensive therapy by increasing the quantity of *Vatasani tailam* overhead. All other medication continued during this period. After another four weeks, a paste made with medicated *amalaka* in *takra* (butter milk) was applied over head for 14 days. Simultaneously she was given *Matravasti* and *Pratimarsa nasya* with *Vatasani tailam* and *Kachooradi choornam* respectively. After the intensive therapy she was taken back to United States where they continued the internal medication as well as speech and language therapy and behavioral interventions. In the United States, the special educators at this point of time reported that Liya is doing well in social interaction and communication. Her behavioral problems also regressed at the end of the six month period. The parents brought back the child to India four more times and repeated the treatments. One year after the last treatment she with her parents visited my office and Liya talked to me normally more than one hour explaining her disease and treatment experiences in the past. She sang a few classical musical items for me what the parents had trained her according to my earlier advice. She was devoid any of her restricted interests and tantrums now except in the interest and skill for classical music. The condition of Liya indicated that she was in the state of mild Asperger syndrome on the way back to normalcy. The parents were advised to continue Liya's internal

Congratulations!



Dr. S. Anilkumar

First Ayurveda doctor to win UPSC Civil Services examination

Dr. S. Anilkumar working as Assistant Insurance Medical Officer in ESI Dispensary, Palakkad coming under the Insurance Medical Services Department, Government of Kerala, has triumphed in the UPSC civil services examination 2009. He is the first Ayurveda doctor to join the prestigious Indian Administrative Service. It is indeed a proud moment for Ayurvedic professionals!

He hails from Alleppey district in Kerala and is the son of Sri. Vasudevan Achary, a former Govt. servant and Smt. Saraswathy Ammal a retired High school Assistant. He has two elder brothers employed in Kerala Government service.

Having completed schooling and Pre-degree in his home down, Anilkumar went on to pursue BAMS in Govt. Ayurveda College, Thripunithura, Kerala and passed out with flying colours in 2003. Later in 2006, he joined

Govt. Ayurveda College, Trivandrum for post graduate studies. In 2007 he got appointed as Assistant Insurance Medical Officer.

Besides excelling in academics, he involved actively in various extracurricular activities too during his college days. He was the General Secretary of College Union; was the winner of the Best actor and Kalapraphipa titles, and also won elocution competitions in College and AYURFEST levels.

In an interview with Ayurvedic Renaissance editorial team, he reminisced about his close association with the Nagarjuna Ayurvedic Group in Ernakulam, with whom his career began as Consultant Physician prior to joining P.G studies.

Hearty congratulations to Dr. Anil on achieving this fete!

We are proud of you!

medication for another year and so for nothing special was reported about Liya's life by her parents.

Bibliography:

- Arogya Kalpadrumah (English), Dr.Lalkrishnan, Chowkhamba Sanskrit Series, First Edition 2006*
Ashtanga Hrudayam, Vagbhata, Sarvanga Sundari Commentary, 6th Edition Published by Nirnay Sagar Press, Bombay (1939)
Ashtanga Sangraha, Hindi Commentary, Kaviraj Atrideva Gupta, Published by Krishnadas Academy, Edition 2002
Caraka Samhita of Agnivesa, Ayurveda Deepika Commentary of Chakrapanidatta, Edited by Vaiya Yadavji Trikamji Acharya, Fourth Edition 1981, Published by Munshiram Manoharlal Publishers Pvt. Ltd.
Developmental and Behavioral Pediatrics, Steven Parker; Barry Zuckerman; Marilyn Augustyn, Second Edition: Published by Lippincott Williams and Wilkins (2005)
Developmental Disabilities: Atiology, Assessment, Intervention and Integration, Edited by W. Larry Williams, 2004 Context Press
DSM-IV Made Easy, James Morrison, Published by the Guildford Press, New York, 1995 Revisions 2001, 2006
Nelson Text book of Pediatrics, Robert M Kliegman, MD, et.al, 18/E International Edition 2007 by Saunders Elsevier, Philadelphia
Sahasra yogam (Malayalam), K.V.Krishnanvaiyan et.al, Vidyarambham Publishers, 21st Edition August 1996
Susruta Samhita, Acharya Priyavrita Sharma, Pub: Chowkhambha Orientalia 4th Edition Reprint: 1980.

EXPERIMENTAL PROCEDURE

The animals divided into six groups with 6 animals each.

Group 1 (Control / Normal):

To this group distilled water was given orally from 1st day to 5th day. Blood samples were withdrawn on the sixth day by intra cardiac route to estimate the normal Biochemical analysis (Alk phosphataes, SGOT, SGPT, Total serum bilirubin, serum albumin). The animals were sacrificed on the same day for the histopathological observations of the liver.

Group 2 (Intoxicated Control – Liver Damage) Toxicated Group:

Carbon tetrachloride (CCl₄) 0.5ml/kg i.p administered for 5 days. Blood samples were withdrawn on the sixth day by intra cardiac route and Biochemical analysis (Alk phosphataes, SGOT, SGPT, Total serum bilirubin, serum albumin) were carried out. Animals were sacrificed for histopathological studies to assess the extent of the liver damage.

Group 3 (Natural Recovery) Intoxicated Control Group:

Animals were administered with CCl₄ 0.5ml/kg i.p for 5 days. No drugs were administered for next 5 days and kept as intoxicated control group. Blood samples were drawn only on 11th day for Biochemical Analysis of alkaline phosphatase, SGOT, SGPT, Total serum bilirubin, serum albumin and the animals were sacrificed for histopathological studies (to assess the natural recovery).

Group 4 (Curative group) Treated with Kakamachi:

Animals were administered with CCl₄ 0.5ml/kg i.p for 5 days which was followed by *Patra Swarasa* of *Kakamachi* orally for 5 days in the dose of 4.32 /kg, that is from 6th to 10th day. Blood samples were withdrawn on the 11th day and the Biochemical Analysis of alkaline phosphatase, SGOT, SGPT, Total serum bilirubin, serum albumin were determined. On the same day, these animals were sacrificed for histopathological study (to assess the curative effect of the drug).

Group 5 (Preventive group) Treated with Kakamachi:

6 animals were treated with the *Kakamachi Patra Swarasa* or the standard drug (4.32 mg / kg) along with CCl₄ (0.5 ml/kg) simultaneously. The effect of the extracts and the standard drug to prevent the development of liver damage with CCl₄ is tested in this model. Blood was withdrawn by intra cardiac route on the 6th day and serum enzymes were estimated. The animals were sacrificed, and liver samples are collected on the same day for histopathological studies. (to assess the preventive effect of the drug).

Experimental Parameters:

This experimental study requires investigations like:

1. Biochemical Changes in blood.
2. Histopathological studies.

Biochemical Parameters:

Blood samples were withdrawn from albino rats at different intervals that are on 6th day for 1st 2nd and 5th group while on 11th day for the remaining two groups (3rd and 4th). The serum enzyme activity was estimated by standard bio-chemical procedure using an auto-analyzer for all the groups.

Following enzyme levels were estimated for the study.

1. Alkaline phosphatase.
2. SGOT (Serum glutamic oxalacetate transaminase)/ AST
3. SGPT (Serum glutamic pyruvate transaminase)/ ALT
4. Total serum bilirubin.
5. Serum albumin.

Histo-pathological Studies:

Animals were sacrificed on the day of withdrawal of blood from all the five groups and liver was isolated, sliced and washed with saline. Then it was preserved in 10 % of formalin, for histopathological studies. Later the microscopic slides of the liver cells were photographed.

Routine staining procedures using haematoxylin and eosin stain were done in the histopathological studies.

The results of the present study are based on the bio-chemical values like Alkaline Phosphatase, Serum Glutamic Oxalacetate Transaminase (SGOT), Serum Glutamic, Pyruvate Transaminase (SGPT), Serum Total Bilirubin, Serum albumin and also Histopathological changes (microscopic) present in the section of the liver sample of all animals.

TABLES SHOWING SUMMARY OF BIO CHEMICAL VALUES RATS OF GROUP (G1)

Parameter	Alk-p IU/Lt	SGOT IU/Lt	SGPT IU/Lt	Total Bil. mg/dl	Albumin gm%
R1	100	70	29	0.34	2.58
R2	108	76	32	0.37	2.69
R3	95	65	28	0.42	2.72
R4	105	68	34	0.32	2.37
R5	102	73	35	0.28	3.3
R6	117	71	27	0.30	4.7

RATS OF GROUP (G2)

Parameter	Alk-p IU/Lt	SGOT IU/Lt	SGPT IU/Lt	Total Bil. mg/dl	Albumin gm%
R1	161	108	67	0.62	1.9
R2	184	112	71	0.88	1.7
R3	150	99	57	0.77	2.4
R4	172	96	65	0.68	2.3
R5	176	110	66	0.97	2.1
R6	169	105	69	0.80	2.6

RATS OF CONTROL GROUP (G3)

Parameter	Alk-p IU/Lt	SGOT IU/Lt	SGPT IU/Lt	Total Bil. mg/dl	Albumin gm%
R1	159	96	66	0.68	1.9
R2	152	100	72	0.80	1.6
R3	173	107	60	0.70	2.6
R4	165	109	65	0.68	2.2
R5	163	99	69	0.96	2.0
R6	156	105	60	0.86	2.5

RATS TREATED WITH KAKAMACHI CURATIVE GROUP (G4)

Parameter	Alk-p IU/Lt	SGOT IU/Lt	SGPT IU/Lt	Total Bil. Mg/dl	Albumin gm%
R1	107	77	36	0.39	3.6
R2	113	80	40	0.46	3.4
R3	122	79	38	0.42	3.8
R4	126	82	45	0.42	4.0
R5	190	83	46	0.49	4.2
R6	115	86	39	0.50	3.9

RATS TREATED WITH KAKAMACHI PREVENTIVE GROUP (G5)

Parameter	Alk-p IU/Lt	SGOT IU/Lt	SGPT IU/Lt	Total Bil. mg/dl	Albumin gm%
R1	128	104	65	0.52	1.8
R2	125	114	60	0.69	2.2
R3	131	90	59	0.63	2.6
R4	130	98	63	0.57	2.3
R5	120	100	66	0.66	2.0
R6	123	99	69	0.49	2.1

SUMMARY OF BIO CHEMICAL VALUES OF ALL GROUPS

Group	Drug and Dose	Duration of Treatment in days	Bio-chemical Parameters(mean &SD)				
			Alkaline phosphate	SGOT	SGPT	Total Bilirubin	Albumin
G 1	Vehicle	1-5	112.83	72.67	30.833	0.338	3.06
			5.4056	3.834	3.311	0.50	0.351
G 2	CCl ₄ 0.5 ml/kg	1-5	175.83	105	65.833	0.786	2.166
			4.0386	6.324	4.833	0.128	0.332
G 3	CCl ₄ 0.5 ml/kg	1-5 6-10 no drug	159.83	102.66	65.33	0.78	2.133
			4.5321	5.08	4.802	0.114	0.377
G 4	CCl ₄ 0.5 ml/kg	1-5	117	81.16	40.66	0.446	3.816
	Kakamachi curative group 2ml/kg	6-10	4.4351	3.188	3.983	0.043	0.285
G 5	CCl ₄ 0.5 ml/kg	1-5	126.1	100.83	63.66	0.593	2.166
	Kakamachi preventive group 2ml /kg	1-5	5.6533	7.909	3.777	0.07	0.273

CONCLUSION

1. In present era Viruses, Antibiotics, Anabolic steroids, Anti-Inflammatory, Chemotherapy and Alcohol are the prime responsible factors in the causation of Hepatotoxicity. On the experiment study, by following the protocol the trial drug showed highly significant anti-hepatotoxic activity against CCl₄ induced hepatotoxicity on albino rats, which shows that this is very effective to reduce drug induced hepatotoxicity, causes from, anabolic steroids, anti-inflammatory, chemotherapeutics, alcohol in which similar hepatocellular damage occur. And these two trial drugs showed in this experiment anti-hepatotoxic property along with liver generation activity.
2. By comparing biochemical, histological and statistical analysis of all groups, the *Kakamachi* showed significant therapeutic effect on hepatotoxicity. Among the two when it analysed

statistically, the hypothesis of equal effective is rejected only for alkaline phosphate at 5% and accepted for the all other parameters at any level. But the observations reveal that the values are closer to the normal values for the *Kakamachi* group than the other groups.

Therefore on the basis of analysis it is concluded that *Kakamachi* is more effective drug.

3. Effective formulations can be prepared by using this drug. So that it can be used in various hepatic disorders.

4. To prove the efficacy found on this experiment study a well planned clinical evaluation may be followed.

The efficacy of trial drug can be carried out for chronic hepatotoxicity as this experimental study mainly concentrated on acute hepatotoxicity only.

REFERENCES

1. Abhidana Ratnamala (Shadrasa Nighantu) - Edited by Sharma.P. V, Chaukamba Orientalia, Varanasi 1st Edition - 1977.
2. Evaluation of liver function in clinical practice - Published by, The Lilly Research Laboratories, Indianapolis, Indiana.
3. The Wealth of India - A Dictionary of Indian raw material and Vol-IX, CSIR products, New Delhi. 1988.
4. Indian Medicinal plants - A compendium of 500 species - Arya Vaidya shala Kottakkal, Orient Longman, and Hyderabad. A.P. 1995.
5. Sahasra Yogam - Hindi commentary by, Sharma. Ramanivas and Sharma. Surendra, Chaukamba Sanskrit Publication, Delhi - 3rd Edition.
6. Medicinal plants used in Yakrit Roga in Ayurveda - Edited by Chunekar. K. C and Yadav Chote Lal - Rashtriya Ayurveda Vidya Peetha.
7. Bhavamishra - 'Bhavaprakasha Nighantu' - commented by Chunekar K. C, Chaukambha Bharati Academy Varanasi publication. Page no. 438, 10th edition.
8. Bopadeva - Hrudaya Dipika Nighantu (Siddhanta Prakasha) - Edited by Sharma. P. V, Chaukamba Amaabharati Prakashan, 1st Edition - 1977.

Five tips to get started on a heart healthy plan

1. **Drop the smokes.** Yes, smoking has been shown to be one of the biggest risk factors in heart disease.
2. **Walk, walk, walk.** If finding time for a structured exercise program is just too much of a challenge right now, just start by walking.
3. **Calm down.** By this I mean, don't stress about the stuff you don't have to.
4. **Do not go on a low-fat diet.** Your heart condition may get worse in your attempts. Drop the bad fats (like hydrogenated oil and the nasty oil in French fries and donuts) and start eating more healthy fats like coconut oil, olive oil, salmon, walnuts and whole organic eggs.
5. **Do not be afraid to eat saturated fat.** Eating saturated fats is not what is causing people to get heart disease. It is processed foods, sugars and an over abundance of refined carbohydrates that is making people sick.

A *Kshara* denoting at Ph value less than 9.6 or more than 9.7 should be rejected. It is well to infer that the resultant ph of *ksharsutra* shall always be less than 9.6 because the ph of other 2 ingredients is acidic in nature i.e. *Haridra churna* and latex of *snuhi*.

B) Study of dispersal pattern of *kshara* :-

It is to identify each *kshara* separately on the basis of its peculiar spread on a specially designed turmeric paper.

By routine chemical & physical analysis *ksharas* are not easily identifiable

C) Study of chromatographic migration: -

As the capacity to expand differs with different *Ksharas*, their pace of migration in one direction also differs. Its main object was to establish the mark identification of each *kshara*. The distance traveled by an individual *kshara* in 6 hrs was measured & recorded. 8 readings taken & mean calculated.

The findings were almost constant for particular *kshara*.

D) Study of alkalinity:-

The caustic action of *kshara* must be due to its high alkalinity.

The experiment carried out to determine the action of *kshara* in relation to their alkalinity.

The method of titration of *kshara* solution against N-HCL with indicator was adopted.

A marked degree of difference was observed.

Arka kshara - 31.2

Nimba kshara - 316.9

Kadali kshara - 126.5

Apamarga - 66.7

The clinical activity of *kshara* is not in proportion to its alkaline activity.

3. *Snuhi* latex: - (*Euphorbia nerifolia*)

Incising the stem of *Snuhi* plant collects the latex.

The secreted milk (latex) should be stored in a pot.

The latex has the tendency to coagulate to avoid this *haridra* powder should be mixed in latex. Best season for collection is *Sarad ritu*.

4. *Haridra* powder: - (*Curcuma longa*)

Dry rhizomes of *Haridra* plant are cut into pieces & make them powder Sieve this powder through a fine cloth. The fine powder should be kept in a clean jar for use.

5. Percolator: -

It is used to filter the solution. To prepare the *kshara* in large quantity for filtration purpose.

6. *Ksharasutra* cabinet:-

It is used for drying *ksharasutra* A box measuring '4/1/1*1.5*3' i.e. 4 feet length 1.5 feet breadth and 3 feet depth is designed. The inner space of the box cabinet is divided into two chambers, a smaller and a bigger.

In smaller chamber

a) Hot air fan for drying the threads and

b) An ultra-violet lamp for sterilization of the threads.

The bigger chamber on the other hand can accommodate as much as 25 *ksharsutra* hangers where each hanger is capable of providing 25 units of thread at a given time.

The cabinet has an inlet for the entry of fresh air and an outlet for the exit of warm air impregnated with moisture. The internal temperature of the cabinet can be controlled with the help of a thermometer. After coating on the thread, they should be put again in the cabinet for drying in this manner subsequent coating can be done quickly

7. Incubator: -

It is used for placing the *kshara* etc. to avoid the harmful effect of moisture present in the open environment. The *apamarga kshara* is highly hygroscopic, so in open air, it is quickly moistured.

8. Steel utensils:-

These pots are used for evaporation of solution to get *kshara*.

9. Skill hands:-

Skill hand is very important in preparation of *ksharasutra* quickly, effectively and in equal thickness, as required.

10. *Ksharasutra* preparation:-

1) The thread is spread out length wise in the hangers.

- 2) The *snuhi* latex is now smeared on the thread on its whole length with the help of a gauze piece. Hands should be gloved before doing smear.
- 3) The wet thread hanger is now placed inside *ksharasutra* cabinet. It is dried for a day.
- 4) The dried threads are again smeared with *snuhi* latex. This process is repeated for 11 days. On the 12th day, the thread is again smeared with *snuhi* latex, then in the wet condition; thread is spread over with *Apamarga kshara* powder.
- 5) The thread is now allowed to dry in the cabinet.
- 6) The same procedure is repeated seven times.
- 7) At 19th day, the dried thread is smeared again with *snuhi* latex and in wet condition, *Haridra* powder is spreaded over the thread
- 8) The process is repeated for 3 consecutive days.
- 9) In this way thread has total 21 coatings of *snuhi* latex, 7 coatings of *apamarga kshara*, and 3 coatings of *haridra* powder.
- 10) After 21 coatings are completed, each thread measuring about 10-11 inches should cut away from the hangers and sealed in glass tube or polythene pack.

ACTION OF KSHARA

- SODHANA
- LEKHANA
- ROPANA

MODE OF ACTION OF *Ksharasutra*

- Mechanical Action
- Chemical cauterization
- Antibacterial Action
- Local drug delivery system

INGREDIENTS

Snuhi ksheera - Proteolytic Action

Apamarga kshara Caustic Action

Haridra churnam - Antiseptic and Anti-Histaminic action

11 coatings with *Snuhi*

7 *Apamarga*

3 *Haridra*

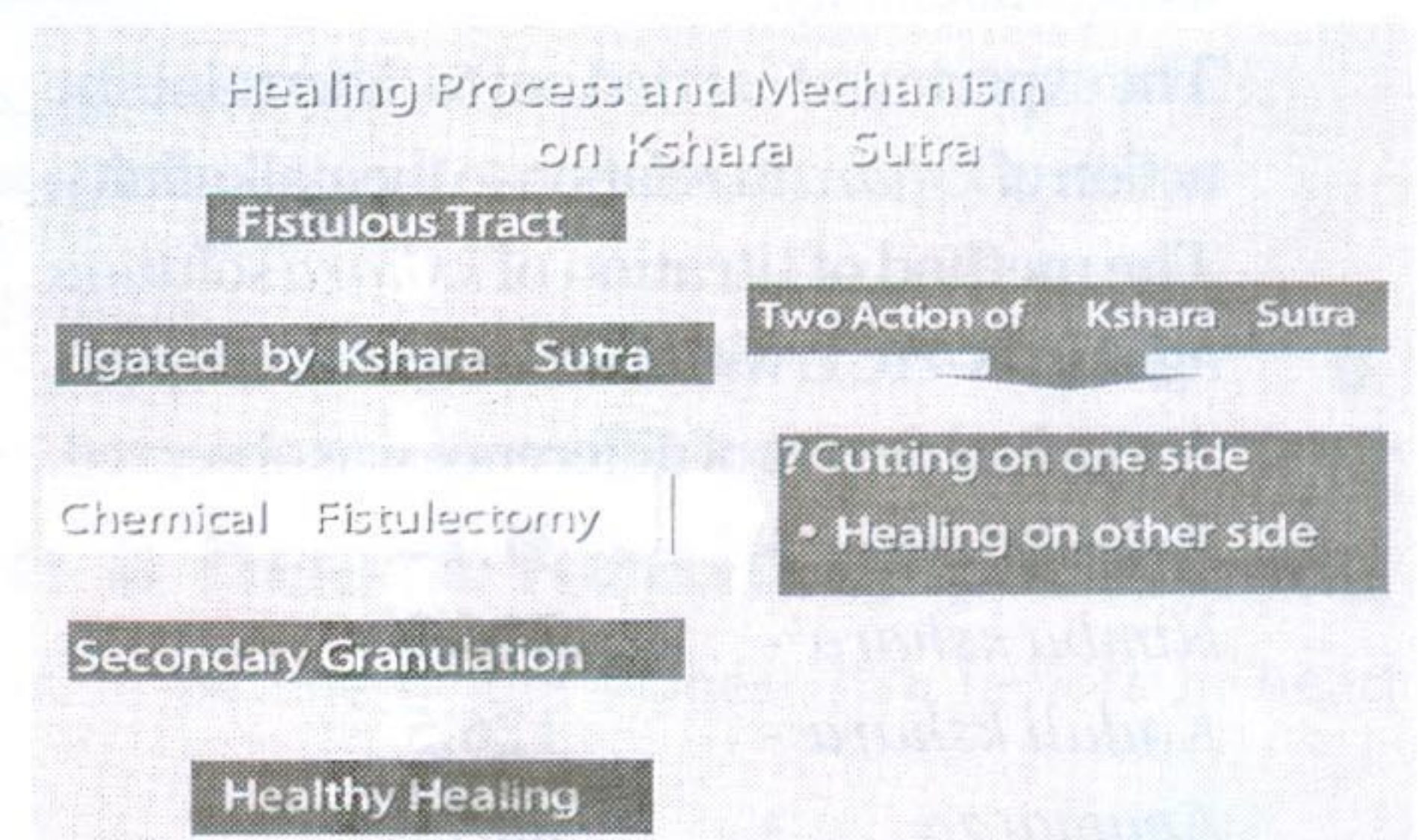
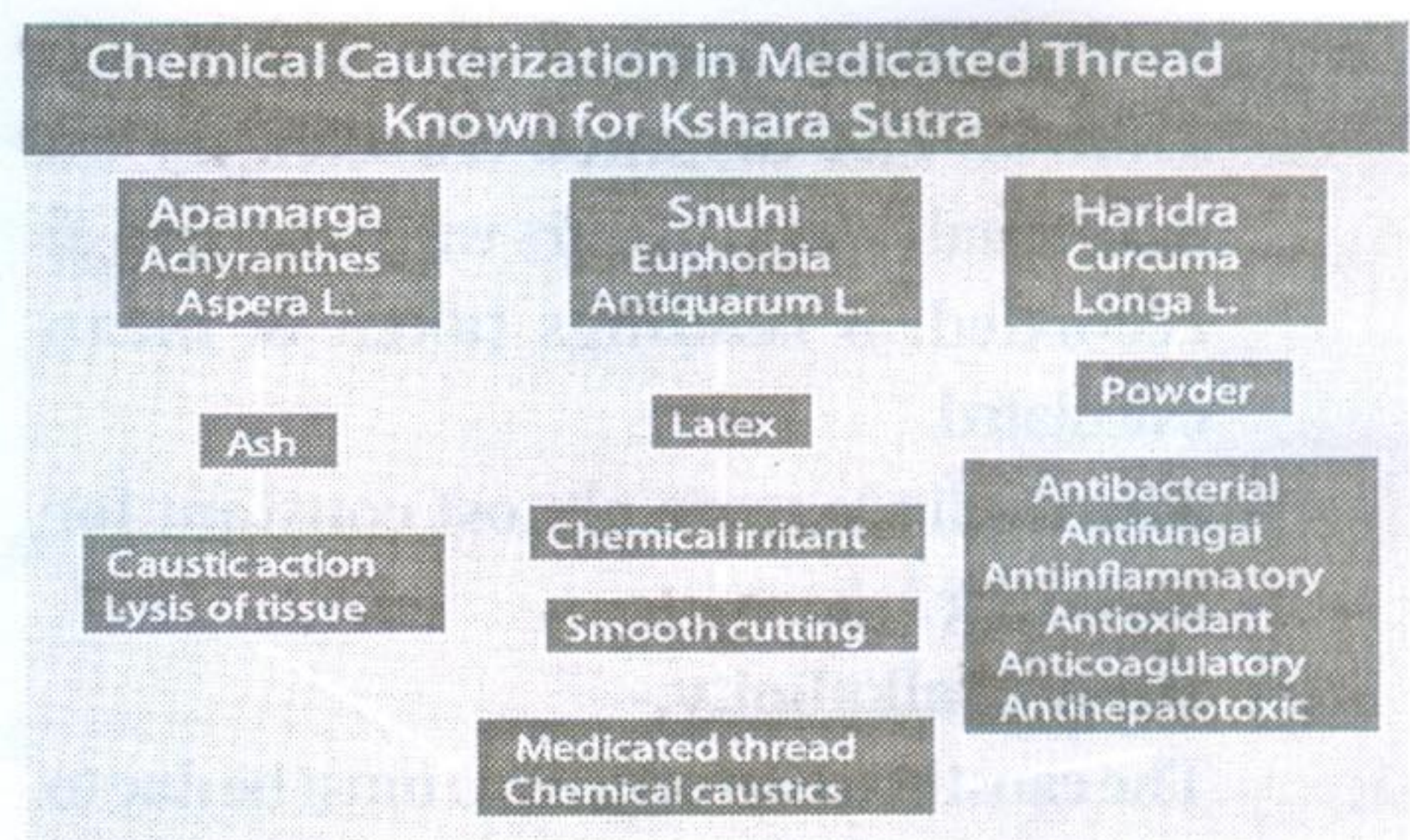
Gauge No.20 NgA Surgical Thread Posses a sufficient Tensile Strength.

Standard *Ksharasutra*

- Ph. Value : 9.6 to 10.
- Gauge of the Thread : 14 to 16.
- Tensile strength : 5 Kg.
- Expiry Date : 6 months from the date of manufacture

Chemical Analysis of *Kshara sutra*:

Euphol, 3,12-di-O-acetyl-8-O-benzoylingol, 3,12-di-O-acetyl-8-O-tigloylingol, curcumin, p-coumaroylferuloylmethane and di-p-coumaroylmethane were isolated and characterized. In addition, GLC and GC/MS confirmed the presence of euphol, antiquol B, cycloeucalenol and 24-methylene cycloartanol in the thread (Gewali MB et.al.)



11. Preservation of *Kshara sutra*: -

After processing and exposure to ultra-violet rays each thread is sealed into a glass tube. At the time of its use in a patient or for experimental purposes this tube is broken and thread taken out.

Ksharasutra that is sealed inside a glass tube can retain its properties and the potency for longer

periods than the one, which has come in contact with atmosphere.

***Physico chemical Characters of Kshara sutra:**

Sl.No.	Character	Value
1	Length of thread	29-31cm
2	Weight	0.9 to 1g
3	Diameter/Thickness	1.75 to 2.0mm
4	Tensile strength	Breaking load
5	Loss on drying at 105°C	Not less than 5%
6	Water soluble extractive	Not more than 5%
7	Hexane soluble extractive	Not less than 6%
8	*Sulphated ash	80-82%
9	*pH (1% aqueous solution)	9.3 to 10.5
10	Total alkalies Calculated as carbonates	Not less than 20% w/w

*For these tests and assays, collect sufficient quantity of the coated material from a set of Kshara sutra, by scraping gently with a spatula 7

12. Indications:-

- Bhagandara (Fistula in ano and other fistulae of perianal region)
- Nadvirana (Sinuses)
- Arsha (Hemorrhoides)
- Dusta nadvirana (Chronic infected, non healing ulcers)
- Vidhradhi (abscesses of different location, Pilonidal sinus, Injection sinus)
- Arbuda (tumors),
- Adhimansa (external growth of muscle and skin)
- Yoni arsha (vaginal polyps)

13. Contrindications:

The sinuses, which are connected with the following lesions away from the ano-rectal canal.

- Osteomyelitis of pelvic bones, femur
- Tuberculosis of hip joint, spine
- Intra abdominal cold abscesses
- Chronic/acute ulcerative colitis
- Regional ileitis
- Appendicitis
- Intestinal & pelvic malignancies
- Venereal diseases
- Strictures of urethra causing urethral sinuses
- Cases of RVF and VVF and Crohn's disease etc.

Need for research in ksharsutra

There is a need to do the research on following aspects:

- Uniform standardization of ksharsutra should be made available at commercial and professional level.
- Number of coatings & Uniformity of coatings of ksharsutra varies from institute to institute.
- Ph values varies from place to place
- Components of ksharsutra (pH value)
- Eg. Complications of ksharsutra must be notified
- Feasibility of other ksharsutra like papaya, udumbara, Gugulu etc. should be worked out.
- Sterilization of Ksharsutra-U-V & Gama radiation.
- Packing of Ksharsutra.
- Databases should be nationalized unification

Acknowledgement:

Authors are extremely thankful to the **Director General, & Director (Tech) CCRAS, New Delhi** for his encouragement.

References: -

- 1) Diagnosis and the management of Ano- Rectal diseases by Dr. Praveenkumar and Dr. K.K. Sijoria. Dept of Shalyatantra, Govt of NCT, Delhi.
- 2) Management of Bhagandara (Fistula in ano) with ksharsutra by Prof. P.J.Deshpande published by CCRAS New Delhi.
- 3) Susruta samhita
- 4) Bhavaprakasha
- 5) Rasatarangini
- 6) Chakra data
- 7) Ayurvedic Pharmacopoeia of India-Part.2, Vol.II. pp149
- 8) Kshara Sutra Therapy in Fistula in ano and other Ano rectal disorders-RAV, New Delhi.

seeping into local tissues, causing increased skin tension. Certain body chemicals involved in inflammation also add to the local pain. Within the inflamed area, special defence cells accumulate, including white blood cells, macrophages, and lymphocytes. The white blood cells break down the damaged tissue and signal macrophages; the latter ingest and digest foreign substances and dead tissue. In some diseases this process may be destructive to the host. Treatment depends on the cause. Often treatment or the body defence mechanism causes repair either by fibroblastic & vascular proliferation or by regeneration. Otherwise it may go towards pus formation or chronicity.

Sucking mechanism of leech increases blood flow (Hyperemia), vascular dilatation without stasis, tissue perfusion & Phagocytosis. Saliva contains anesthetics, anti-coagulant (Hirudin), & bacterium Aeromonas Hydrophila (antibiotics). This relieves pain & tissue tension, Serve as a chemical which increases diffusion through out the local tissue, kills bacteria & prevent putrefaction

Degeneration

Usually degeneration occurs due to direct toxic action upon the components of the cell and secondary changes resulting from deranged intracellular metabolism. Hence there will be accumulation of substances resulting into lack of circulation, venous congestion & lack of oxygen which ultimately ends with fatty infiltration and / or necrosis. Sucking mechanism enhance tissue perfusion, stimulated by hirudin keeps oozing up to 24hrs Leeching promotes healing by enabling fresh, oxygenated blood to enter the affected area until veins can re-grow & establish circulation.

Neoplasia (Hyperplasia)

In neoplasia especially hyperplastic growth is due to increased functional demand, increased trophic hormonal activities or due to presence of embryonic tissue. So the size, number & functional capacity of the cell increases. Sucking initially causes decongestion to disturb hyperplasia, hence stimulates normal growth. Spreading factor present in anti-coagulant break down

the cement that binds cell together.

Histopathological changes

During bite of leech, removal of some amount of blood gives dramatic relief of pain. Sucking creates -ve pressure, hence dilatation of vessels & dislodgement of platelet plug. These altogether increases blood flow, & increases escape of platelets, neutrophils, monocytes, lymphocytes (Increased phagocytosis). Homeostasis is stimulated. Hence contraction of damaged vessels, platelet aggregation & coagulation by fibrin & platelet takes place.

Saliva contains hirudin & hementin which is fibrinolytic, converted to fibrinolysin. This act upon plasminogen present in blood & body tissue to produce plasmin. The plasmin is responsible for fibrinolysis and digestion of other protein. The digestion of protein releases polypeptides, kinins & amines (wound hormones) and fibrinolysis limits clot deposition, haematoma formation & thrombosis.

Repair or wound healing starts with successive formation of wound collagen and ground substances. Collagen formation further triggered by polypeptide and amino acids released from digestion of protein. Matrix formation stimulated by amino acids. The entire series of events are supported by antibacterial effect & chemical diffusion effect of leech saliva.

Recommended method

The leech should be applied in adequate numbers to the area of maximum congestion. One or two leeches are sufficient for a considerable area of lesion or it depends upon the clinical response, because one leech may drain 2 / 3 cm³ area. The head or biting end can be recognized by its searching movement, while the tail end is mostly used as sucker for attachment. Patient's skin should be cleaned thoroughly by soap water followed by distilled water or luke warm water. Antiseptic solutions, saline water or chlorinated water must not be used.

One 5cc disposable syringe is taken after removing its plunger. The leech is placed in the barrel of the syringe & the barrel is inverted on the lesion. Once feeding commences, the neck become horse shoe shaped, remove the syringe. Otherwise dampened square gauze is placed over the wound with 1cm cut hole at its middle to prevent wandering of leech.

If the leech is reluctant to bite, a small needle prick is made to produce a tiny droplet of blood, or try another leech. Persistent denying for feeding indicative of poor arterial supply, a little hot fomentation may be beneficial.

When the leech has finished its meal (usually 45 minutes) it will detach itself or put a pinch of turmeric powder at the mouth end. Dressing is done by turmeric powder and elastic adhesive tape to prevent continuous bleeding.

Recent advancement

1. Leech therapy for complicated varicose veins: - Evaluation of the effectiveness of medicinal leech therapy in producing venous decongestion, reversal of edema, hyper pigmentation and healing of varicose ulcers is good.
2. The failing flap in facial plastic and reconstructive surgery - Role of medicinal leech: - Review of literature indicates that, the removal of the compromised venous congested flap is improved by early intervention of medicinal leech.
3. Aeromonas species isolated from medicinal leech: - Which digest blood clots and produce an antibacterium.
4. Cholesterols and its derivatives are the principal steroids isolated from the leech species, *Hirudo medicinalis*.
5. Experimental study done on Cataract surgery concludes as: - Intra corneal injection of Hirudin

prevents post-operative fibrin formation.

6. The three-jawed freshwater parasites, approved in July 2004, as medical devices by the Food and Drug Administration (FDA), can be indispensable tools when reattaching a thumb, a nose, a finger or toe, says University of Missouri Health Care plastic surgeon Matthew Concanon.
7. LONDON - By Deirdre Lee - Leeches – the “must-have” for any self-respecting medic up until the last century – could be making their way back into medical fashion. A pilot study suggests that they may help relieve the pain of osteoarthritis.

Conclusion

Skin ulcers (epithelial ulcers) can be best treated by leech application. Leech can be applied to any type of skin disease, but inflammatory origin disease may show good prognosis. It enhances healing by natural process of wound healing & maintains the normal texture of skin due to less fibrin formation. It is a conceptual study; hence need further experimentation and exploration.

Acknowledgement

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References

1. Dey N.C. & Dey T.K. – a text book of pathology – 15th Edn. : New Central Book agency (P) Ltd. – Calcutta – 1995
2. Guyton AC & Hall, J.E. Text book of Medical Physiology 10th edition, Elsevier, a division of Reed Elsevier India (P) limited New Delhi-1956
3. K. Sambulingam & Prema Sambulingam “Essentials of Medical Physiology” 11th edition. Jaypee Brothers Medical publisher (P) Limited New Delhi-2000
4. “Leech”, Microsoft® Encarta® Encyclopedia 2001. # 1993-2000 Microsoft Corporation.
5. Murthy, K.R.S. – Astanga Hridaya – Vth Edn: Krishnadas Academy Varanasi (U.P.) – 2001
6. Roussels R.C.G. - Bailey & Love's – Short Practice of Surgery - 23rd Edn.: Arnold a member of Hodder headline group Co-Published in the U.S., A by oxford university press Inc, New York- 2000.
7. Shastri, Shambhunath Pandey – Sushruta Samhita, 11th Edn: Krishna Das Academy, Varanasi (U.P.) 1985.
8. Sharma P.V. - Sushruta Samhita with Dalhana Commentary, 1st Edn. Choukambha Vishawa Bharati Oriental Publishers & Distributors Varanasi (U.P.): 1999.
9. Tripathy, Ravidutta- Astanga Sangraha- Choukambha Sanskrit Pratisthana – Delhi – 2001.
10. Williams Peter L., Warwick Roger, Dyson Mary, Bannister H. Lawrence, Grey's Anatomy- 37th Edn: - Churchill Living Stone Medical Division of Longman group U.K. Limited- 1989.
11. www.leechesusa.com
12. www.biopharmleeches.com
13. www.orkiveleeches.com
14. www.health-secure.net

Depression

It's natural to feel down sometimes, but if that low mood lingers day after day, it could signal depression. Major depression is an episode of sadness or apathy along with other symptoms that lasts at least two consecutive weeks and is severe enough to interrupt daily activities. Depression is not a sign of weakness or a negative personality. It is a major public health problem and a treatable medical condition.

Emotional Symptoms

The primary symptoms of depression are a sad mood and/or loss of interest in life. Activities that were once pleasurable lose their appeal. Patients may also be haunted by a sense of guilt or worthlessness, lack of hope, and recurring thoughts of death or suicide.

Physical Symptoms: Pain, Appetite

While depression is known to wreak havoc on the emotions, it is also linked to the body. About 65% of patients report their depression is accompanied by pain. This may include headaches, back pain, tender muscles, and sore joints. Fatigue, dizziness and sleeping too much or too little are also common.

Changes in appetite or weight are another hallmark of depression. Some patients develop increased appetite, while others lose their appetite altogether. Depressed people may experience serious weight loss or weight gain.

Impact on Daily Life

Without treatment, the physical and emotional turmoil brought on by depression can derail careers, hobbies, and relationships. Depressed people often find it difficult to concentrate and make decisions. They turn away from previously enjoyable activities, including sex. In severe cases, depression can become life-threatening.

Suicide Warning Signs

People who are depressed are more likely to attempt suicide. Warning signs include talking about death or suicide, threatening to hurt people, or engaging in aggressive or risky behavior. Anyone who appears suicidal should be taken very seriously. Do not hesitate to call one of the suicide hotlines: **800-SUICIDE (800-784-2433)** and **800-273-TALK (800-273-8255)**. If you have a plan to commit suicide, go to the emergency room for immediate treatment.

Patients at Risk

Anyone can become depressed, but many experts believe genetics play a role. Having a parent or sibling with depression increases your risk of developing the disorder. Women are twice as likely as men to become depressed.

Causes of Depression

Doctors aren't sure what causes depression, but a prominent theory is altered brain structure and chemical function. Chemicals called neurotransmitters become unbalanced. What pushes these chemicals off course? One possibility is the stress of a traumatic event, such as losing a loved one or a job. Other triggers could include certain medications, alcohol or substance abuse, hormonal changes, or even the season.

To Page 31

Coccinia grandis. Linn



*Baby Joseph, Sophy Paul

Malayalam Name	: Koval
Sanskrit Name	: Bimbi
English Name	: Ivy gourd
Hindi Name	: Bimb
Family	: Cucurbitaceae

Distribution & Habitat:

A climbing perennial herb growing wild throughout India.

Habit and General features:

A perennial much branched handsome tendril climber, roots tuberous, leaves deltoid or subrotund, angled or lobed, bright green above and pale beneath, palmately 5 nerved from a cordate base with circular glands between the nerves, flowers white, large, unisexual, fruits ovoid or ellipsoid berries with white streaks, white scarlet red when ripe, seeds ovoid, compressed, yellowish grey.

Part used: Roots, Leaves, Fruits

Actions and Uses : The plant possesses antiseptic and antitubercular properties and its tincture used in gonorrhoea. Various preparations of root, stem, fruit and leaves are used in the treatment of skin diseases, bronchitis and diabetes. The fruits are prescribed for throat trouble. The juice expressed from the fresh fruit or a powder of fruit is given for reducing blood sugar. Powder of juice of leaves and root are given for controlling diabetes. Leaves and stem are antispasmodic and expectorant.

The plant is used in gonorrhoea (Raj & Patel, 1977-78), slow pulse, convulsions, sores, syphilis (Jain and Tarafder, 1970), diabetes (Srivastava et al, 1986), jaundice (Srivastava et al, 1986), anaemia (Phatak and Oza, 1958), skin diseases (Mukhopadhyay and Ghosh, 1992), and on burns

and scalds for cooling effect (Chelvan 1998), Plant juice cures ear pain (Rao, 1978).

The flowers are used in bile disorders and jaundice (Phatak and Oza, 1958). Fruit is used in bronchitis, catarrh (Bgadhe and Pandey, 1990), as aphrodisiac, blood diseases (Ahmad and Siddiqui, 1985), throat trouble (Singh et al, 2002), as galactagogue, in cough and respiratory tract infection (Sharma et al, 2001). Fruit juice is used to reduce blood sugar (Alam et al 1990), in cough and cold (Shah and Gopal, 1986). Fruits and leaves are used as anthelmintic (Chetty and Rao, 1989). The leaves are used as antiseptic (Badhe and Pandey, 1990), psoriasis (Banerjee and Banerjee, 1986), Leaf juice is used in eye diseases (Chetty and Rao, 1989), muscle sprains, painful swellings (Reddy and Rao, 2002). Leaves and root powder is used in diabetes (Chandra and Pandey 1984). Leaves, fruit and stem are used in cough.

The bark is used as laxative (Banerjee and Banerjee, 1986), in gonorrhoea and as cathartic (Islam, 2000). Bark juice is expectorant, antispasmodic and used to reduce sugar in urine (Subramaniam, 1999).

The root is used in urinogenital diseases, jaundice (Bhandary and Chandrasekhar, 2002), kidney stones (Singh et al, 1997), to stop vomiting and headache (Kumar et al, 1980). Root, leaves and fruits for diabetes (Rana et al, 1999).

Antidiabetic : The alcoholic extract of the root powder left after ether extraction and aqueous

*Department of pharmacognocny, R & D, Nagarjuna Herbal Concentrates Ltd, Alakodu, Thodupuzha

extract of the residue exhibited *hypoglycaemic* activity in normal rabbits.

The *ethanolic* extract of root at 100 mg/kg p.o showed inhibition of *hyperglycaemic* response induced by anterior *pituitary* extract in glucose fed rats that was comparatively less than *tolbutamide* (50mg/kg p.o)

The aqueous extracts of the leaves and fruits showed reduction in blood sugar level in the first hour of observation in normal value in the second hour in case of fruit extract.

The effect of the suspension of the leaves prepared in milk was studied on blood glucose levels in normal and diabetic dogs at 500 mg/kg p.o dose level.

Feeding of rats with dried fruit powder (15 %) and pectin 2 % isolated from the fruit for 45 d showed significant *hypoglycaemic* activity.

Hepatoprotective : The aqueous light petroleum chloroform alcohol, benzene and acetone extracts of the leaves, each at 200 mg/kg p.o were screened for *antihepatotoxic* activity against carbon tetra chloride induced liver damage in rats. Light petroleum extract was found to be less effective than the alcoholic extract while the remaining extracts were found to be ineffective (Gopalakrishnan et al, 2001).

Hyperlipidaemic: The pectin (5 %) isolated from the fruit when administered orally for 45 d produced a significant decrease in cholesterol levels in serum, liver and aorta but not in heart and kidney of rats.

The aqueous extract of the leaves at 300 mg/kg once daily for 8 week significantly lowered the altered levels of total *cholesterol*, triglycerides and phospholipids in *hyperlipidaemic* rats (Eshrat, 2003).

Cholinesterase inhibition: The cholinesterase activity was found to be absent in the leaves and stem (Gupta and Gupta, 1997).

Antioxidant: The tender as well as mature leaves showed the presence of antioxidant enzymes *catalase*, *peroxidase* and *SOD* (Padma et al 1998).

Antibacterial: The alcoholic extracts of leaves and roots showed antibacterial activity against

Staphylococcus aureus while the aqueous extract were devoid of it.

The floral petals exhibited antibacterial activity against *Escherichia coli* CA 8000 (Darokar et al)

Antifungal : The pollen exhibited 64.3 % inhibition of germination of *Cylindrocarpon lichenicola*.

Insecticidal : The 5 % fruit extract exhibited 9.05 % egg mortality of *Spodoptera litura*, the castor infecting pest.

Ayurvedic Properties:

Rasa	-	Madhura, kashaya, tiktha
Guna	-	Laghu, Tikshna, Ruksha
Virya	-	Sitha
Vipaka	-	Katu, madhura

Important Formulations:

Vasthyamyantaka ghrutham, Vidaaryaadi ghrutham, Vidaaryaadi lehyam, Amruthapraasa rasayanam, Brahma rasayanam, Mahaa kalyaanaka ghrutham, Mahapaisachika ghrutham.

Chemical constituents:

Lupeol, cycloartanol, taraserol. Aerial parts yield alcohol, cephalandrol, tritriacontane, cephalandrine A & B. Young green immature fruits of bitter variety, a glycoside of cucurbitacin B. Ripe fruit carotinoids. Seed fat rich in palmitic, oleic and linoleic acids. An orally effective hypoglycaemic principal, comparable to tolbutamide isolated from roots.

Cultivation and Collection:

Coccinia is a weak stem plant and stem cuttings used as planting material. It needs good organic content soil and sunlight. 1 feet pit filled with dried *cowdung* and stem cutting can plant in it. During summer irrigation needed. For spreading coir net needed with few months after planting. Fruits collection from the plant done after six months.

PHARMACOGNOSY

Materials & Methods

Plant materials were collected from different parts of Kerala and Nagarjuna Herbal Garden. For *Macroscopical* characters Stereomicroscope is used and for *microscopical* studies, the compound microscope. For physical constants rotary shaker,

muffle furnace, UV – cabinet, moisture balance were used

RESULTS AND DISCUSSIONS

Macroscopic features:

Roots are available in cut pieces with a few lateral roots, surface rough due to longitudinal striations and lenticels, cylindrical, grayish brown.

Microscopic features:

Root shows 7 or more rows of thin walled cork cells having lenticels at places, secondary cortex 4-7 layered, oval to elliptical, tangentially elongated thin walled, parenchymatous cells, phloem fibres absent, fibres simple pitted, medullary rays 6-10, starch grains present and compound having 2-4 components present in secondary cortex, phloem and xylem parenchyma and ray cells.

PHYSICAL CONSTANT VALUES

No	Parameters	Values
1	Foreign matter	Max 2 %
2	Total Ash	Max 21 %
3	Acid Insoluble Ash	Max 2%
4	Alcohol Soluble Extractive	Min 3%
5	Water Soluble Extractive	Min 14%

Thin Layer Chromatography

Powder - 5 gm
Extract - Ethyl alcohol
Solvent system - Chloroform: Methanol: Ammonia – 90:18:2

Rf values	Colour in UV rays
0.23	Blue
0.47	Red
0.61	Blue

References:

1. Dr. K.M Nadkarni - Indian Materia Medica - Vol I Page 300-302
2. P.K Warriar, V.P.K Nambiar, C. Ramankutty - Indian Medicinal Plants- Vol II Page 133 -137
3. A.K Gupta, Madhu Sharma, Neeraj Tandon – Reviews on Indian medicinal Plants Vol V II Page 194-218
4. S.G Joshi – Medicinal plants – 154
5. Anonymous – The Ayurvedic Pharmacopoeia of India – Vol III – 32-35

Depression from Page 28

Seasonal Depression

If your mood matches the season – sunny in the summer, gloomy in the winter – you may have a form of depression called seasonal affective disorder (SAD). The onset of SAD usually occurs in the late fall and early winter, as the daylight hours grow shorter. Experts say SAD affects up to 3% of the U.S. population, or about 9 million people, mainly in the northern part of the country.

Postpartum Depression

The “baby blues” strikes as many as three out of four new mothers. But nearly 12% develop a more intense dark mood that lingers even as their baby thrives. This is known as postpartum depression, and the symptoms are very similar to those of major depression. An important difference is that the baby’s

well-being is also at stake. A depressed mother may have trouble enjoying and bonding with her infant.

Depression in Children

Depression clouds the days of one in every 40 American kids. It interferes with the ability to play, make friends, and complete schoolwork. Symptoms are similar to depression in adults, but some children may appear angry or engage in risky behavior, called “acting out.” Depression can be difficult to diagnose in children.

Good Outlook

In the midst of major depression, you may feel hopeless and helpless. But the fact is, this condition is highly treatable. More than 80% of people get better with medication, talk therapy, or a combination of the two. Even when these therapies fail to help, there are cutting-edge treatments that pick up the slack.

WHO Annual Events April -June

World Health Day - 7 April 2010

World Health Day is celebrated on 7 April to mark the founding of WHO. Each year, the Organization selects a key global health issue and organizes international, regional and local events on the Day and throughout the year to highlight the selected area.

World Health Day 2010 will focus on urbanization and health. The theme was selected in recognition of the effect urbanization has on our collective health globally and for us all individually.

With the campaign 1000 cities, 1000 lives, events will be organized worldwide during the week of 7 – 11 April 2010. The global goals of the campaign are:

- 1000 cities: to open up public spaces to health, whether it be activities in parks, town hall meetings, clean-up campaigns, or closing off portions of streets to motorized vehicles;
- 1000 lives: to collect 1000 stories of urban health champions who have taken action and had a significant impact on health in their cities.

World No Tobacco Day - 31 May 2010

On 31st May each year WHO celebrates World No Tobacco Day, highlighting the health risks associated with tobacco use and advocating for effective policies to reduce consumption. Tobacco use is the second cause of death globally and is currently responsible for killing one in 10 adults worldwide.

WHO created World No Tobacco Day in 1987 to draw global attention to the

tobacco epidemic and its lethal effects. Tobacco is the number one preventable epidemic that the health community faces.

World Blood Donor Day - 14 June 2010

WHO chose 14 June as the day to recognize the millions of people who save lives and improve the health of others by donating blood. The Day highlights the need to regularly give blood to prevent shortages in hospitals and clinics, particularly in developing countries where quantities are very limited. Out of 80 countries with low blood donation rates (fewer than 10 donations per thousand people), 79 are developing nations.

The annual event focuses on motivating more people to become blood donors. It demonstrates how health systems and policy-makers work to make blood transfusions safe and accessible to people worldwide.



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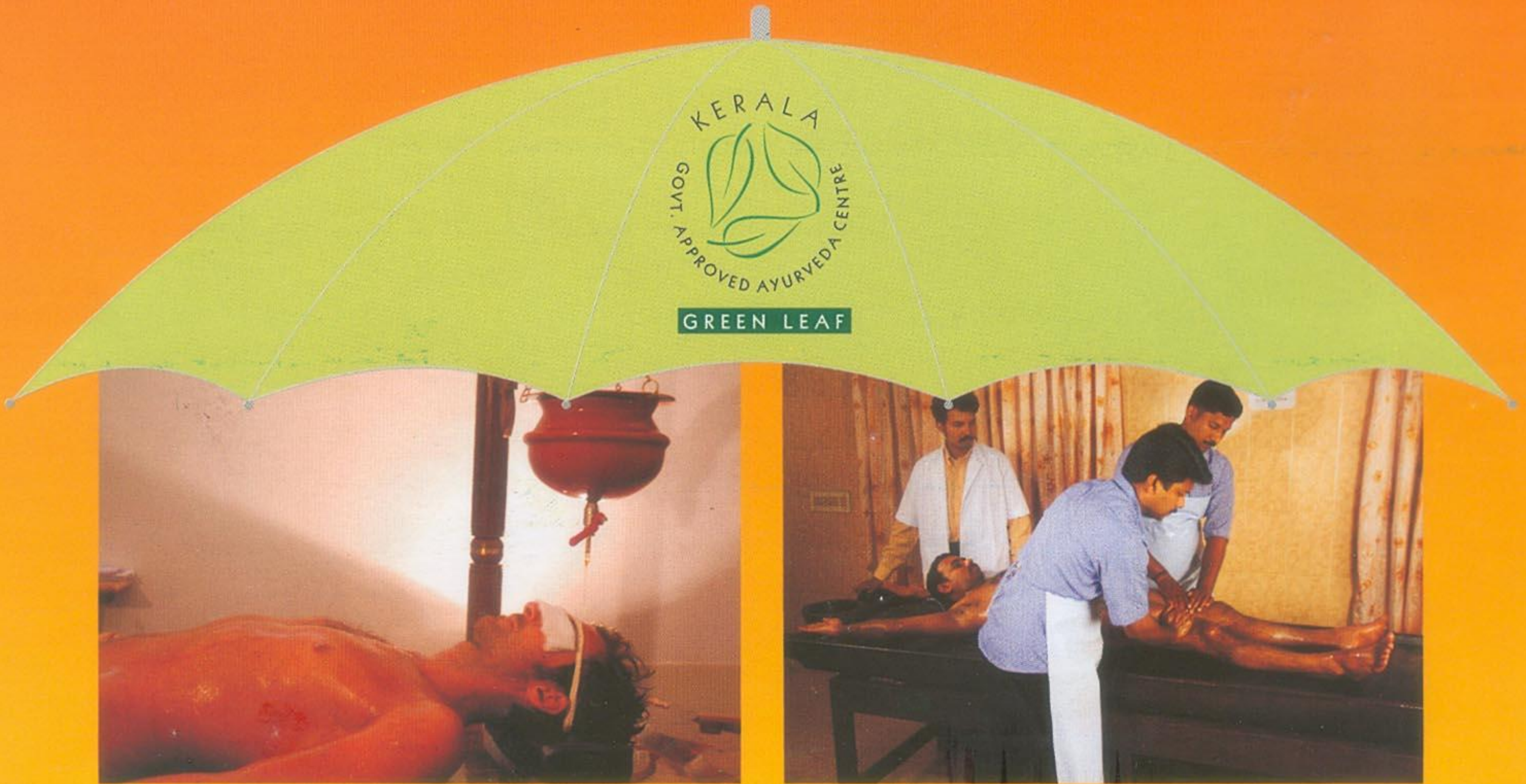


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