



PROCEEDINGS



of the

1st INTERNATIONAL CONFERENCE

on

EXHIBITION IN INDIGENOUS MEDICINE – 2018

ICEIM 2018



October 4th and 5th

“Exploring the Innovations of Indigenous Medicine”

Organized by

Department of Indigenous Medicine, Eastern Province

With the collaboration of -

**Unit of Siddha Medicine,
Trincomalee Campus, Eastern University, Sri Lanka**

**1st International Conference and
Exhibition in Indigenous Medicine
ICEIM - 2018**

PROCEEDINGS



04th & 05th October 2018



Provincial Department of Indigenous Medicine,
Eastern Province, Sri Lanka
In collaboration with
Unit of Siddha Medicine, Trincomalee Campus,
Eastern University Sri Lanka

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and
Unit of Siddha Medicine, Trincomalee Campus, Eastern University Sri Lanka

**Proceedings of the
1st International Conference and Exhibition in
Indigenous Medicine 2018
ICEIM - 2018**

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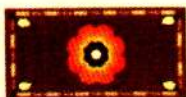
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MESSAGE FROM THE PRESIDENT DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA



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இலங்கையின் சனாதிபதி
President of Sri Lanka

Message

I am pleased to send this message to the First International Conference and Exhibition in Indigenous Medicine (ICEIM- 2018) under the theme of "Exploring the Innovation of Indigenous Medicine" organized by the Provincial Department of Indigenous Medicine of Eastern Provincial Council in collaboration with the Unit of Siddha Medicine, Trincomalee Campus of the Eastern University of Sri Lanka.

The Siddha Medicine is a natural phenomenon where universal energy is harnessed through the thoughts of individuals and directed to heal the body through a process of accumulation of energy, as taught by Sage Agashya, who is considered the father of Siddha Medicine.

This International Symposium is an Excellent Forum for academics, practitioners and researchers to exchange and share their experiences and knowledge in traditional medicine, leading to innovations and development of products, services and promotion of safe and effective use of traditional medicine and complementary medicine.

It is my pleasant duty to welcome the Foreign Delegates attending this Symposium. I sincerely wish that in addition to sharing knowledge and experience, they would be able to enjoy the hospitality of our people and the warmth of our country.

I Congratulate the International Conference and Exhibition in Indigenous Medicine 2018 every success.

Maithripala Sirisena

September 27, 2018



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இலங்கையின் சனாதிபதி
Democratic Socialist Republic of Sri Lanka

MESSAGE FROM THE MINISTER OF HEALTH, NUTRITION AND INDIGENOUS MEDICINE OF SRI LANKA



I am very much pleased to learn of the 1st International Conference and Exhibition in Indigenous Medicine (ICEIM 2018) organized by the Provincial Department of Indigenous Medicine of Eastern Provincial Council in collaboration with the Unit of Siddha Medicine, Trincomalee Campus of the Eastern University of Sri Lanka.

The 1st International Conference and Exhibition in Indigenous Medicine – ICEIM 2018, can thus be considered a timely move ushering the establishment of integrative, evidence based traditional Indigenous medical systems in Sri Lanka and beyond. I believe that this initiative would pave the way towards multidisciplinary research bringing together academic and industry from the region and beyond in an innovative platform.

While welcoming the overseas delegates attending the symposium, I sincerely wish that in addition to sharing knowledge and experience, they would be able to enjoy the hospitality of our people and the warmth of our country.

I take this opportunity to congratulate the organizing committees for making this event a reality and a success, and wish all delegates a fruitful Symposium.

Dr. Rajitha Senaratne M.P.,

Minister of Health, Nutrition and Indigenous Medicine of Sri Lanka.

MESSAGE FROM THE DEPUTY MINISTER OF HEALTH, NUTRITION & INDIGENOUS MEDICINE OF SRI LANKA



Ayurveda is a traditional Medicinal System in Sri Lanka and it is not only a system of medicine but a way of living for a complete positive health and spiritual attainments.

The 21st century has marked the beginning of a new era, it is more important to strive for research to link science and Ayurveda. Research on Indigenous medicine should be carried out for exploring innovations and future development of traditional systems.

It will be a mile stone in organizing the 1st International Conference and Exhibition in Indigenous Medicine in Sri Lanka. It is a valuable opportunity to meet and share knowledge of experts around the world.

We have achieved a lot in the health sector, under the guidance and leadership of our Hon. Minister and having these types of events will give more opportunity for new innervations.

I take this opportunity to congratulate the Department of Indigenous Medicine, Eastern Province for organizing this special event and wish this event all success.

Faizal Cassim

Deputy Minister of Health, Nutrition & Indigenous Medicine

MESSAGE FROM THE SECRETARY, MINISTRY OF HEALTH, NUTRITION AND INDIGENOUS MEDICINE OF SRI LANKA



It is with great pleasure and pride that I issue this message on the occasion of the 1st International Conference and Exhibition in Indigenous Medicine – ICEIM 2018 organized by Provincial Department of Indigenous Medicine of Eastern Provincial Council with collaboration of the Unit of Siddha Medicine, Trincomalee Campus of the Eastern University of Sri Lanka ; under the theme of “Exploring the Innovations of Indigenous Medicine” on 4th, 5th and 6th of October 2018.

Glancing at the programme, I noted that a panel of local and international reputed researchers and practitioners of Traditional and complementary Medicine are scheduled to deliver key note address and presentations during plenary.

The gathering of scientists from different parts of the country will provide an excellent opportunity for the young researchers in Indigenous Medicine, to interact with each other to enrich their horizon.

I congratulate the organizing committees for making this event a reality and wish all delegates a fruitful symposium

Mrs. B.G.S. Gunathilake,

Secretary, Ministry of Health, Nutrition and Indigenous Medicine of Sri Lanka.

**MESSAGE FROM THE ADDITIONAL SECRETARY,
MINISTRY OF HEALTH, NUTRITION AND INDIGENOUS
MEDICINE OF SRI LANKA**



I am very much pleased to hear that the Provincial Department of Indigenous Medicine of the Eastern Provincial Council is organizing its **1st International Conference and Exhibition in Indigenous Medicine (ICEIM 2018)**, collaborating with the Unit of Siddha Medicine, Trincomalee campus of the Eastern University of Sri Lanka.

The theme of the symposium, **“Exploring innovations of Indigenous Medicine”**, has been appropriately chosen to high light the importance of novel approaches to enhance the contribution of the Indigenous medical system towards health & wellbeing. The broad areas covered at this conference, including the emerging fields of geriatric care, mental health & well-being and medical tourism, underpins its relevance to the national & global challenges. This will provide ample opportunity for the local researchers to interact with international scholars in broadening their thinking through sharing of knowledge.

I congratulate the Provincial Department of Indigenous Medicine and the organizing committee on their enthusiastic effort in organizing a symposium of such a nature. I wish the ICEIM 2018 all success.

L.H.Thilakaratne

Additional Secretary (Administration)

Indigenous Medicine Sector

Ministry of Health, Nutrition and Indigenous Medicine

MESSAGE FROM HON. GOVERNOR - EASTERN POVINCE



I am pleased to send this message of the **1st International Conference and Exhibition in Indigenous Medicine (ICEIM 2018)** organized by the **Eastern Provincial Department of Indigenous Medicine** in collaboration with the **Unit of Siddha Medicine, Trincomalee Campus of the Eastern University of Sri Lanka**.

This is the time to remain the **“Sage Agashya”** is the **Father of Siddha Medicine** Gifted the **Invaluable Concept to the World** that a healthy mind can only be developed through a healthy body.

The **1st International Conference and Exhibition in Indigenous Medicine – ICEIM 2018**, can thus be considered a timely move ushering the establishment of integrative, evidence based traditional Indigenous medical systems in Sri Lanka and beyond. **I believe that this initiative would pave the way towards multidisciplinary research bringing together academic and industry from the region and beyond in an innovative platform.**

It is my **pleasant duty to welcome** the Foreign Delegates attending this Symposium. I sincerely wish that in addition to sharing knowledge and experience, they would be able to **enjoy the hospitality of our people.**

I take this opportunity to **congratulate the organizing committees for making this event a reality and a success**, and wish all delegates a fruitful Event in Eastern Province.

Rohitha Bogolagama,
Governor – Eastern Province.

MESSAGE FROM CHIEF SECRETARY EASTERN PROVINCE



Alternative Medical system is very unique in Sri Lanka and it paves way to heal diseases without any side effects and it produces permanent gentle cure for the vulnerable diseases. When compares with Western Medicine, it gives temporary relief to the patients only, but Ayurvedic System reliefs patients with permanent cure. Sri Lankans are highly involved in Ayurvedic, Siddha and Unani Medical systems and it is deeply attached by generation to generation.

Sri Lanka has its own Ayurvedic System based on a series of prescriptions handed down from generation over a period of 3000 years. The Kings, who were also prominent physicians as recorded by historical texts, sustained its survival and longevity. King Buddhadasa (398 AD) was the most prominent physician, who wrote Sarartha Sangrahaya, which is being viewed by physicians to date.

Ancient inscriptions on rock surfaces reveal the full establishment of the medical services, which existed within the country. These ancient hospital sites which were active centuries ago now attract the tourists, who view and marvel at these beautiful ruins, which have come to symbolize enjoyed a noble position in the social hierarchy in the country due to its Royal Patronage and from this stem a famous Sri Lankan saying,

“If you cannot be a King, become a HEALER” – This inter-relationship between Ayurveda and royalty has brought Buddhism and Ayurveda into a top position in Sri Lankan Politics.

The classical texts of Ayurveda in their written form are almost 3000-year-old. However, like all of the 40 areas of Veda and Vedic Literature, the knowledge of Ayurveda has been passed down orally for thousands of years. This make Ayurveda older than any other Science of Health. Even today, Ayurveda serves to maintain, promote and restore good health as well as preventing illness. The original purpose of Ayurveda was not jump to improve the health of the individual, but also to create a positive influence on the health of society as a whole.

According to the Vedic Rishi (seers), as expressed in the ancient text, the positive healthy behavior of each individual combines to produce a disease-free society.

In this juncture, I wish to express my gratitude and thanks for organizing 1st International Conference and Exhibition in Indigenous Medicine (ICEIM 2018) with the collaboration of Unit of Siddha Medicine, Trincomalee Campus, Eastern University, Sri Lanka for a motivational knowledge sharing by delegates including international keynote speakers with oral presentations by renowned speakers and poster presentations by students. I assure that this ICEIM 2018 should build up a platform for global promotion of safe and effective indigenous therapies.

I wish you all the very success and endeavor in this regard.

Mr. D. M. Sarath Abayagunawardana
Chief Secretary Eastern Province

MESSAGE FROM THE RECTOR – TRINCOMALEE CAMPUS



I am indeed happy to write a blessing message to the 1st International Conference and Exhibition in Indigenous Medicine 2018.

Sri Lanka is a country of rich heritage, one of which is its indigenous system of Medicine, which has been practiced by the people since ancient times; it relies significantly on herbal based medicines. The major strength of the system is the eco friendliness of the product, thus quality is monitored to enhance health promotion and prevent the diseases.

Last several decades Allopathy medicine has been popular everywhere, and now the situation is changing and the whole world is moving towards the use of Traditional System of Medicine after knowing the benefits of the treatment. Hence, we need to save up this resource for our future generation.

Therefore, the conference theme is “exploring the Innovations of Indigenous Medicine” which is most appropriate and timely important to the present world.

I am very happy to be a partner of this 1st International Conference and Exhibition with the collaboration of the provincial Department of Indigenous Medicine; Because, Universities have emerged as Central actors in the knowledge-based economy. Research is considered as core in universities. University is not an isolated organization. Academics get practical knowledge from the real-life environment and apply to the class room to upgrade their current knowledge of the industry; Industry gets theoretical aspects with intellectual advices to solve their real work life problems in the organizations. Therefore, University and Industrial linkages are needed for the development of the country, so this is a right platform to link with industries and the government.

I appreciate all who have engaged in this task to succeed this event and this kind of conference and Exhibition will be more useful to the school students, medical practitioners and academicians as well as to the society.

Wishing the conference, a great success.

Dr Vallipuram Kanagsingam

Rector, Trincomalee Campus

Eastern University Sri Lanka

MESSAGE FROM THE COMMISSIONER DEPARTMENT OF AYURVEDA SRI LANKA



I am honoured to send this congratulatory message to all the participants, foreign delegates, researchers, and industrialists of the **1st International Conference and Exhibition in Indigenous Medicine (ICEIM 2018)**.

The indigenous medical system of Sri Lanka is well interwoven with the Ceylon's ancient civilization and have its roots running back to the time of the Sri Lankan great king Ravana. Today, the indigenous medical system which based on the rich assortment of medicinal plant of the country provides nature friendly, cost effective treatments for people's illnesses and with its philosophy it helps to create physically and mentally strong healthy nation. Therefore, the theme of the symposium, "**Exploring Innovation of Indigenous Medicine**" will be suited well with the current scope of the Sri Lankan indigenous medicine system and the department of Ayurveda.

The conference will make the right platform for academics, healthcare practitioners, researchers, and industry experts to expand the knowledge base available in the indigenous medical system while exploring the avenues of research into plant-based medicine towards innovating new products.

I take this opportunity to wish the provincial department of indigenous medicine of eastern provincial council, the unit of Siddha medicine of the eastern university, organizers and the participants of this auspicious event all the success.

Mr. K. D. C. S. Kumaratunga,
Ayurveda Commissioner

MESSAGE FROM THE SECRETARY, MINISTRY OF HEALTH & INDIGENOUS MEDICINE, EASTERN PROVINCE.



It is with great pleasure and pride that I welcome you all to the 1st International Conference and Exhibition in Indigenous Medicine – ICEIM 2018 at Trincomalee held on 4th, 5th and 6th of October 2018.

The indigenous medicine has practiced a long period of time with spiritual and cultural

The gathering of scientists from different parts of the country will provide an excellent opportunity for the young researchers in Indigenous Medicine, to interact with each other to enrich their horizon

This initial, median international conference and exhibition in Indigenous Medicine will surely provide a constructive and conducive platform for the delegates and participants to enhance and enthused by the basic as well as the sustainable advanced knowledge of the scientific Ayurvedic Research on indigenous medicine.

I congratulate the organizing committees for making this event a reality and wish all delegates a fruitful symposium.

Mr.A.H.M. Anzar,

Secretary,

Ministry of Health and Indigenous Medicine, Eastern Province.

MESSAGE FROM THE CO- CHAIRS OF ICEIM-2018



As the conference co-chair and Provincial commissioner of Indigenous Medicine Eastern Province. I am indeed pleased and privileged to send my message to the event of the 1st International Conference & Exhibition in Indigenous Medicine which will be held on 4th 5th and 6th of October 2018. The theme of our conference is “Exploring the innovations of Indigenous medicine”. The department of Indigenous Medicine has 30 years of service experience in Eastern Province, but this is the 1st international conference organized by the Department with the collaboration of Unit of Siddha Medicine, Trincomalee Campus, Eastern University.

The indigenous Medicine is an important part of health and wellbeing in people’s lives all over the world, especially in the South-East Asian region. Almost 80% of people in rural areas in our region use a form of traditional medicine to treat their health problems and for some it is their main or only source of health care.

This session will promote the need for researches leading to an integrative approach and personalized medical systems through Evidence Based Practices and creating a platform to form multidisciplinary collaborations and public private partnerships. Researchers will be offered an opportunity to share their research findings through oral and poster presentations.

The one of the outcomes of this symposium will be sharing of knowledge where modern scientific methods are employed in the traditional medicines in different parts of the world

I take this opportunity to express our heartfelt gratitude to The Hon Health Minister Dr. Rajitha Senaratne, Hon Governor, Eastern Province, Chief Secretary, EP, Secretary Ministry of Health and Indigenous Medicine, EP, Vice-Chancellor Eastern University, Rector Trincomalee campus, Eastern University, Keynote speakers, resource persons, chair persons, invitees, sponsors, and participants for their support in making this conference success.

Dr. (Mrs) R. Srithar,
 Provincial Commissioner,
 Department of Indigenous Medicine,
 Eastern Province.

MESSAGE FROM THE CO- CHAIRS OF ICEIM-2018



It is indeed a great honour and pleasure us to welcome all the distinguish guests and well-wishers to the 1st International conference and Exhibition in Indigenous Medicine, 2018 (ICEIM 2018) organized by Provincial Dept. of Indigenous Medicine with the collaboration of Unit of Siddha Medicine, Trincomalee Campus, Eastern University, Sri Lanka under the theme of “Exploring innovations of Indigenous Medicine”. Indigenous Medical system is a proud of any country as

it is a treasure of healthy nation. Health is treated as the wealth and holistic approach towards wellbeing well-being has become the current universal demand. Today we present the ancient philosophical knowledge with palatable taste adding recent scientific researches, and its outcome positively may contribute for the development and implementation of the hub of traditional knowledge system of medicine all over the world. We express our deep gratitude to the Honorable Dr. Rajitha Senarathne, Minister of Health, Nutrition and Indigenous Medicine, Hon. Faizan Cassim, Deputy Minister of Health, Nutrition and Indigenous Medicine, Mr.D.M.Sarath Abayagunawardana, Chief Secretary, Eastern Provincial Council, Mr. Anura Jayawickrama, Secretary, Ministry of Health, Nutrition and Indigenous Medicine, Mr. A.H.M. Ansar, Secretary, Ministry of Health, Eastern Provincial Council, Prof. T. Jayasingam, Vice Chancellor, Eastern University, Sri Lanka and Dr.V.Kanagasingam, Rector, Trincomalee Campus for their valuable service for the advancement of the Indigenous system of Medicine, Sri Lanka. We acknowledge the Secretary, Joined Secretaries, Conveners, Chief Editor, and other members in Organizing Committee for their sincere efforts for the success of this event. Our due thanks also for every sponsor. We welcome all the keynote Speakers, speakers for the Scientific Medical Dialogue, Session chairs, Paper presenters and delegates all over the countries. We wish you a very productive conference and pleasant gathering in the most beautiful place Trincomalee in Sri Lanka.

Dr. (Mrs.) V. Paheerathan

Head,

Unit of Siddha Medicine

Trincomalee Campus, EUSL

MESSAGE FROM THE SECRETARY OF ICEIM-2018



Indigenous Medicine is becoming increasingly used to enhance general health and well-being, and it is also used alone for specific health problems or with modern medicine in globe. The focal aim of ICEIM 2018 is to explore the knowledges and innovations in Indigenous Medicine. We organize this conference to provide world platform to present and discuss the most recent research evidence, innovations and to discuss concerns and practical challenges encountered with a panel of specially selected internationally and locally reputed researchers and practitioners of Indigenous Medicine. The Symposium and Exhibition covers a wide scope of Indigenous Medicine related issues under the broad theme of “Exploring innovations of Indigenous medicine”. ICEIM 2018 is will be a forum for a total of 75 presentations which have been thoroughly screed by peer- reviewing. These will be presented in three parallel sessions during the proceedings. This will be the evidence to the string research culture and genuine enthusiasm existing among the Sihha, Ayurvedic and Unany Physicians in Eastern Province. I hope that ICEIM 2018 will enable to establish Sri Lankan Indigenous Medicine presence strongly in globe, and to widen personal contacts for the future scientific cooperation and networking. I take this opportunity to thank the Governor, Eastern Province, Chief Secretary, Eastern Provincial Council, Vice Chancellor, Eastern University, Sri Lanka, Rector, Trincomalee Campus, Head, Unit of Siddha Medicine, Provincial Commissioner, Department of Indigenous Medicine, Eastern Province, Organizing Committee, Subcommittees, Sponsors, everyone who helped in various ways to reach this summit of ICEIM 2018.

While warmly welcoming all the participants I wish you a pleasurable experience at ICEIM 2018.

Dr. R. Piratheepkumar

Unit of Siddha Medicine

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MESSAGE FROM THE EDITOR-IN-CHIEF



It is with great pleasure and vanity that the “1st International Conference and Exhibition in Indigenous Medicine (ICEIM 2018) with the collaboration of Unit of Siddha Medicine, Trincomalee Campus, Eastern University, Sri Lanka and the Department of Indigenous Medicine, Eastern Provincial Council, Eastern Province, Trincomalee for a motivational knowledge sharing by delegates including international keynote speakers with oral presentations by renowned speakers and scholar students. I assure that this ICEIM 2018 should build up a platform for global promotion of safe and effective indigenous therapies.

The indigenous medical practices have a unique and extended history of spiritual and cultural relations in Sri Lanka. Sri Lankans are vastly consumed in Ayurveda, Siddha and Unani Medical systems and it is extremely closed by their customs.

The gathering of scientists from different parts of the country as well as globe to provide an excellent opportunity for the young researchers in Indigenous Medicine, to interact with each other to enrich their horizon.

At this juncture, I would like to extend my gratitude to all the members of the authors who provide their valuable research and review. And I privileged and honored to reviewers who had accepted our request in spite of their busy schedule and reviewed paper on time. Further I express my appreciations to the advisory, executive and editorial committee for their dedication and commitment for bring forward this abstract manuscript successfully.

I hope this this ICEIM 2018 encourage researchers with sound intellectual inspirational from in various discipline and contribute enormously to the improvement of the sector of Indigenous Medicine in Sri Lanka.

Dr. V. Anavarathan

Senior Lecture II

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KEYNOTE ADDRESS

EXPLORING THE INNOVATIONS AND CONSTRAINTS IN THE MANAGEMENT OF VARIOUS TYPES OF CARCINOMA WITH SIDDHA SYSTEM OF MEDICINE

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Modern bio medicine has successfully helped in managing communicable diseases. But, now in every corners of the world, non-communicable diseases (NCDs), especially life style disorders – are becoming a huge challenge especially among productive age span and ageing population. No system of medicine can eradicate any of the NCDs. Poor stress management and fast paced lifestyle has nurtured all the NCDs resulting in its phenomenal growth.

According to the data, NCDs are the leading causes of deaths globally and responsible for 70% of deaths worldwide. Four risk factors responsible are tobacco, unhealthy diet, physical inactivity and harmful use of alcohol. Major metabolic risk factors are obesity and raised blood pressure, blood glucose and blood cholesterol level. Cardiovascular diseases (coronary heart disease, stroke, and hypertension) contribute to 45% of all the NCD deaths, followed by chronic respiratory disease (22 %), cancer (12 %) and diabetes (3%).

Though Modern bio medicine has established enormous growth in the field of Cancer treatment and management, most of the varieties of carcinomas are not completely curable and manageable even now. As the current incidence of this disease, is increasing in the productive age span (25-45 years), it is becoming a huge burden to the family and the social. Unfortunately, poor accessibility to

achieve early diagnosis and intervention by larger number of populations, effective and curative management is becoming a greater issue of concern for many. Also, it's a bitter truth that many Carcinomas don't have solid answer and right now. Thereby, increasing the life span and improving the QOL are the core objective of existing treatments.

Integrating with the Traditional systems of Medicines with main stream modern bio medicine is one of the major ideas, globally emerging in this context. Here, the extensive experiences of Siddha medicines and some early experiments show a real ray of hope. The unexploited traits in the arena of Siddha kayakalpa herbs and regimes should be put under the analytical eyes of modern gadgets to fully comprehend its role on influences in the innate immune system, probable cytotoxicity against the atypical cells, telomeres and cell oxidation. This could effectively pave the way for healthy ageing and sometimes manage the early stages of Carcinomas. There are reasonable numbers of significant works that has happened in the Siddha kayakalpa herbs like *Eclipta alba*, *Semicarpus anacardium*, *Ocimum sanctum*, *Withania somnifera*, *Aegle Marmelos* and few more vis-a-vis managements of NCDs including Carcinomas.

Early experimental and clinical inferences in the Siddha regimes like Rasagandhi mezhugu, Chiththra moola kuligai, Neeradi muthu vallathi melugu, shows some positive path, though long way to achieve clarion call in this disease. Nearly 33 Siddha classical herbo- mineral preparations have been identified exclusively indicated for various carcinoma managements (Shanmugadevi *et al. JI. of Siddha*) The role of innate immune system, especially NK Cells, are now closely studied in the Cancer management (Imai. *et. al. lancet 2000*). Siddha Kayakalpa regime as well as Siddha formulations should be examined and systematically studied whether those have the potency to improve the innate immune system, inclusive of NK Cells. That's really the need of the hour.

Clinically there are many challenges to provide efficient treatment in carcinomas. There is no proven protocol for effective management for most of the carcinoma. Many of the Cancer has very poor prognosis, if it is not effectively managed either surgically chemically or radiologically. it's highly ethical to provide the best and fast before it reaches the stage of metastasis. Right now the only possibility in our hand, integrating best of everything, where one can

complement each other's lacuna. Effective management of pain, arresting the emaciation, combating the co morbidities, are bigger constraints for every system.

In this difficult situation, AYUSH has some strong probability to support the palliative and complementary care. Till identifying the potential modulators and probable targeted drugs, the journey should start with joined hands. Also integration within the AYUSH system, might be the first step and then with the Modern bio medicine, where we need to understand the adherence and adoptability of both systems' bioavailability.

We have heard these things over and over again – to eat right, sleep well, exercise, meditate and being in the company of loved ones will help you live better. Those are not only mentioned in the inferences of modern world researches like Lancet. Siddha places an emphasis on these in its very ancient texts like '*theran pini anuga vithi and aasarak kovai*'. The need of the hour is dispassionate research through reverse pharmacology, dedicated documentation and publications in indexed journals and lastly but not at the least we must propagate and evangelise this to the community!

Western analytical eyes have identified the significant efficacy of turmeric, black-cumin and even white arsenics already. Siddha should closely and systematically work on this line, as the entire Globe is going to face huge burden with these diseases soon.



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ABSTRACTS

CORNS MANAGEMENT WITH *AGNI KARMA* (HEAT THERAPY) - A CASE STUDY

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According to *Susrutha Samhitha* a knotty and painful hard growth raised on the sole due to vitiated local blood and fat produced by degenerated *Dosa* incidental to the pricking of a thorn etc or of gravel is called *Kadara* (corn). The seat of the disease should be scraped off and cauterized with heated oil. *Ashtanga Hridaya* mentioned to remove the hard growth without leaving any residue and then the site burnt with hot fat or oil or etc.

A localized hyperkeratosis of the skin usually occurs at the sites of pressure etc on the sole and toes. It is usually a horny induration of the cuticle with a hard centre and a deep central core which reaches the deeper layers of dermis. Corns may be painful particularly when it is rubbed. Corn has a tendency of recur after excision.

A 60 years old male patient presented to Hospital OPD with multiple hard thickened areas of skin of both feet associated with pain since 10 years. On examination they were 1cm in diameter circular in shape and tenderness, was normal skin colour but hard in consistency. Patient had under gone surgical excisions three times but they had reoccurred.

Then started *Agni karma* by *Panchlauha Shalaka* (instrument) weekly. Within two weeks it started reducing pain and softening from hard consistency. *Agni karma* (cauterization) is acts as an immune modulator and *Apunarbhavakara* (recurrence) in most of the instances in case of *Chedanartha* (excision) while the best method in *Parashalya* (para surgical) treatment methods.

Key words – Corn, *Khadara*, *Agni Karma*, *Apunarbhavakara*, *Parashalya*

LEECH APPLICATION FOR MANAGEMENT OF INFLAMED HEMORRHOIDS – A CASE STUDY

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Hemorrhoids are dilated veins occurring in the relation to the anus and origin in the sup epithelial plexus, formed by radicals of the superior, middle and inferior rectal veins. In *Ayurveda*, *Arsha* is the fleshy projections that create obstruction in anal passage, kills the life like an enemy. The food habits and sedentary life styles of modern man increases the rate of incidence of *Arsha*. The prime etiopathogenic factor of *Arsha* is *Mandagni*; which in turn leads to Constipation, prolonged contact of accumulated Mala or excretory material to *Guda Vali* (Anal sphincters) causes development of *Arsha*. It is one of the eight *Mahagada* and difficult to cure.

Inflamed pile mass can be correlate with *Piththaja Arsha*. It is type of *Sira Granthi* and *Sira vyadana* is a one of treatments for it. Narrow based, projective and moistures pile masses must be treated by *Shashtra Karma*. *Jalaukavacharana* is a noble painless method of bloodletting because this procedure can be applied for Peadiatric to Geriatric. Advantage of leech application is anti-inflammatory, immuno-stimulating, increase nutrition of tissues and strengthens tissues immunity.

A 48 years old male patient presented to hospital OPD with masses per rectum associated with burning sensation and pain for 10 months. He had increased problem for two weeks and unable to sit, walk and sleep also. Then started leech application for masses every other day for three days. Then gradually the size of masse reduced and burning and pain also reduced totally within one week.

Keywords: *Arsha*, Hemorrhoids, Leech therapy, *Jalavukavacharana*

THE VENE PUNCTURE TREATMENT IN THE MANAGEMENT OF VARICOSE VEINS - A CASE STUDY

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In weak patients, due to more physical exercises, *Vata* get aggravated, invades the network of the veins, constricts, squeezes, and gets dried up and gives rise to the elevated quick developing and round swelling of the veins called *Siraja Granthi*.

It is difficult to cure, painful and movable veins. Large size immobile edematous veins situated on vital spots even though painless should be rejected from treating. According to *Ashtanga Hradaya* in initial stage or in recent originated *Siraja Granthi*, as treatment should drink *Sahachara Taila*, *Upanaha* (Local applications) with *Vathahara* drugs, *Vasthi* (medicated enema) and *Siravyadana* (bloodletting). *Susrutha Samhitha* and *Ashtanga Sangraha* mentioned that *Siravyadana* (vein puncture) is half of *Shalya Chikithsa* (Surgical treatments)

A lady aged 54 years presented to hospital OPD with elongated veins associated swelling above ankle joint with itchy and blackish in colour on calf region of left lower limb for five years. *Shothahara* (reduce swelling) and *Raktha shodaka* (Blood purification) treatments done and awaited progress for three months but it was not given much progress. Finally, *Siravyadana* had done weekly by surgical needle. Within one month the swelling started to reduce and skin colour stated to lighter and venous prominence started reduced gradually. After three months treatment, the patient got 50% relief from all symptoms.

Bloodletting reduce the stagnant blood from the region and its leads to reduce the swelling and its reduced deoxygenated blood volume and it reduce the itching sensation and dark colour of skin.

Key words – Varicose veins, *Siraja Granthi*, Bloodletting, *Sira Vyadana*

PHYLLANTHUS NIRURI LINN GROWN IN SRI LANKA: EVALUATION ON PHYTO AND PHYSICO-CHEMICAL PROPERTIES OF THE WHOLE PLANT

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Phyllanthus niruri Linn is a small, erect annual herb belonging to the family Euphobiaceae. It is widely distributed in Asia and used for the treatment of jaundice, asthma, hepatitis, diabetes, fever causing by malaria. Though it is commonly used in Ayurveda and Traditional Systems of Medicine in Sri Lanka, very few scientific experiments were carried out using *P. niruri*. Therefore, an attempt was made to evaluate phyto and physico-chemical properties of *P. niruri* grown in Sri Lanka.

According to the results, $7.7 \pm 0.2\%$ of total ash, $3.4 \pm 0.1\%$ of water-soluble ash and $0.9 \pm 0.0\%$ of acid insoluble ash was present in the whole plant of *P. niruri*. Phytochemical screening reveals the presence of tannins, flavonoids, steroid glycosides, coumarins, saponins and cardiac glycosides in both hot water and hot methanolic extracts of *P. niruri*. TLC fingerprint profile of the methanolic extract of *P. niruri* consists of 8 and 9 prominent spots at 254 nm and 366 nm respectively. Heavy metals such as Cd, Hg and as were not detected in the *P. niruri* grown in Sri Lanka. However, 0.5 mg/kg of Pb was detected in the plant.

In conclusion, physico and phytochemical properties of *P. niruri* grown in Sri Lanka was investigated for the first time and these results can be used as a reference standard for quality control of *P. niruri* grown in Sri Lanka.

Key words: *Phyllanthus niruri* Linn, fingerprint profiles, heavy metals

EFFECTIVENESS OF *THAKRADHĀRĀ* IN THE MANAGEMENT OF *KLAMATHA*

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According to Ayurveda, *Pragnāparādha* (intellectual error), *Parināma* (time factor), *Asātmēndriyārtasamyōga* (unwholesome contact of senses with its objects) are caused all the physical and mental diseases. At the chronic decline of *Satva guna* in the *manas* leads to the mind become stressed. Imbalances in, *Rajas* and *Thamas Guna* also leads to the psychological stress. *Thakradhārā* prepared using medicated buffalo curd which conduct at the *Āgnyā Chakra* is known as effective in mental disturbances. The present study was designed to determine the effectiveness of *Thakradhārā* in the management of stress with referring to Ayurveda *Manōbhāva* concepts. 90 individuals with psychological stress were randomly selected and grouped in to 2. The study was conducted for 21 consecutive days with 45 minutes of *Dhārā Karma* and 30 minutes of supportive psychotherapy (SPT). Follow up was 60 days. Study group (SG) were subjected to *Thakradhārā* and SPT. The control group was subjected only to SPT. The assessment was taken place at before and end of the treatment with the basis of the relief in the subjective and objective signs and symptoms of stress and *manōbhāva* according to a grading system. Data were statistically analyzed. SG was found in highly significant in each *manōbhāva*, $p < 0.001$. *Thakradhārā* elaborated better results in *Manobhāva*. Pacification of provoked *Dōsha* using *Thakradhārā* promoted the *Mēdhya*, *Sthairya Mana*, *Harsha*, *Shraddhā* and *Smruti*.

Key Words: *Thakradhārā*, *Manōbhāva*, Psychotherapy

A REVIEW ON *VAITARANAVASTI* WITH SPECIAL REFERENCE TO *AMAVATA* (RHEUMATOID ARTHRITIS)

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Vaitarana Vasti is mentioned in *Chakradatta* and *Vangasena Samhita*. According to our clinical experience, it is a very effective *Vasti* in treatment of *Amavata* (Rheumatoid arthritis). Therefore, it was decided to gather details on *Vaitarana Vasti* from authentic Ayurveda texts and through web search. It is a type of *Niruha Vasti* and indicated in treatment of *Amavata*, *Anaha*, *Grudrasi*, *Kati Prushta Uru Shoola* and *Shota*. It is prepared with rock salt, sesame oil, jaggery, cow's urine and fruits pulp of *Tamarindus indica*. Some Ayurveda physicians add fresh milk instead of cow's urine in treatment of *Vata Roga*. *Amavata* is a disease occurred by vitiation of *Kapha* and *Vata Dosha*. The *Ama*, when combined with *Vata Dosha* and occupies *Shleshmasthanam* (*Asthi Sandhi*), results in a painful disease called *Amavata*. The clinical presentation of *Amavata* closely resembles that of Rheumatoid Arthritis. With their similarities on clinical features like pain, swelling, stiffness, fever, redness and general debility *Amavata* and rheumatoid arthritis are almost identical. *Chakradatta* describes therapeutic measures such as *Deepana*, *Langhana*, *Swedana*, *Virechana*, *Vasti*, and administration of drugs with the properties of *Tikta katu Rasa* in treatment of *Amavata*. *Yogarajnikara* had mentioned *Upanaha Sweda* also. Ingredients of *Vaitarana Vasti* possess *Katu Tikta Rasa*: *Laghu*, *Ruksha*, *Theekshana Guna* and *Ushna Veerya*. Therefore, it pacifies vitiated *Kapha Dosha*. These ingredients pacify vitiated *Vata Dosha* as they possess *Madhura*, *Amla* and *Lavana Rasa*; *Madhura Vipaka* and *Ushna Veerya*. It helps to reduce *Ama* as these ingredients have the properties of *Deepana* and *Pachana*. Analgesic and anti-inflammatory properties of these ingredients are scientifically proven. Hence *Vaitarana Vasti* is beneficial in treatment of *Amavata* (rheumatoid arthritis).

Keywords: *Vaitarana Vasti*, *Amavata*, Rheumatoid arthritis

CASE STUDY ON SPASTIC DIPLEGIC CEREBRAL PALSY BY INDIGENOUS SYSTEM

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Cerebral palsy (CP) is the leading cause of chronic disability in children, making them physically and mentally handicapped and socially apart. The worldwide incidence of CP is approximately 2.5 cases per 1000 live births. Recent statistics show that an estimated 40,000 people suffer from Cerebral Palsy in Sri Lanka. In the present study, indigenous treatment procedures like *Shiro Abiyanga*, *Shiro Pitchu*, *Shiro Dara*, *Shiro Vasti* and *Pinda Sweda* were undertaken without the internal medication to evaluate the effect in the management of spastic diplegic type of CP. Patient with spastic diplegic cerebral palsy was selected for this study. The study was conducted for one *mandalam* (48 days). The study outcome assessed as follow: baseline, 12th day, 24th day, 36th day and 48th day of treatment. The study outcome assessed through the following criteria's; The Gross Motor Functional Classification Scale (GMFCS) is a universal classification system applicable to all forms of Cerebral Palsy and The Gross Motor Function Measure (GMFM) is an observational clinical tool designed to evaluate change in gross motor function in children with cerebral palsy. The treatment protocol included with certain external indigenous treatment procedures used with specific oils. The selected treatment modality shows effective in relieving the signs and symptoms and thus reducing the disability in children with Spastic diplegic cerebral palsy. It shows effectiveness without the internal treatment.

Keywords: cerebral palsy, indigenous and *mandalam*

SIDDHA MANAGEMENT OF POLYCYSTIC OVARIAN SYNDROME PCOS- A CASE STUDY

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Polycystic ovarian syndrome (PCOS) encompasses many associated health conditions and has an impact on various metabolic processes. According to modern science exact cause of disease is unknown. It has high incidence amongst young women in reproductive age. It is now increasingly perceived as disorder of changed life styles. History of 40% of gestational diabetes is cases at PCOS. It is almost ranging between 5.10% of young women coming for infertility due to an ovulation; therefore, the present case study was carried out to evaluate the efficacy of Siddha management on PCOS. 40 years old patient presented with hyper pigmentation, hirsutism, obesity and irregular menstruation. Treatment was initiated with *pethi*, followed by administration of *Kazhatchi Churanam* with breathing exercise and walking. The treatment was conducted for duration of 60 days and the result revealed that PCOS can be cured successfully by using siddha management.

Keywords - Polycystic ovarian syndrome, *Kazhatchi Churanam*, infertility

A SERIES OF CASE STUDIES ON THE EFFECT OF *VASTI* ON *GRIDHRASI* (SCIATICA) W.S.R. TO *SEPALIKA* LEAVES *NIRUHA VASTI*

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Ayurveda described Sciatica as *Gridhrasi* (*Griha* means Eagle), as the gait of the affected person resembles that of an eagle's walk and the inflamed nerve appears like eagle's beak. *Gridhrasi* is characterized by piercing pain, pain going down the leg from lower back, stiffness and numbness beginning from buttock region and gradually radiates down to *kati*, *janu*, *jangha* and foot region leading to disability in walking. This study is a randomized clinical study on *Gridhrasi*. The objective of this study was to evaluate the effect of *Vasti* on *Gridhrasi*. Patients were selected from Vavuniya Siddha Base Hospital and selected fifteen (15) patients were treated with *Sepalika* Leaves *Niruha Vasti* (*SLNV*) at the dose of 500 ml for a period of eight days after obtaining their written consent. All the clinical symptoms were graded and evaluated before and after treatment. Collected data were analyzed by using SPSS statistical software. The majority of patients were in 25-34 age group (35%), male (53.3%) and considering occupations drivers, farmers and laborers were more affected. *SLNV* reduced pain, difficulty in walking distance (time) and pricking/numbness sensation and increased strait leg raising (SLRT) in statistically highly significant manner ($p < 0.001$). *SLNV* consists of *Madhura rasa*, *Sukshma guna*; *Ushna virya* and *Madhuara vipaka*. When considering the pharmacodynamic properties, *SLNV* possess *Vatashamaka* effect. Scientific studies have proven that most of the ingredients of *SLNV* has anti-inflammatory, analgesic and muscular relaxant effects which may relieve the symptoms of *Gridhrasi*. Finally, it is concluded that *Sepalika* Leaves *Niruha Vasti* is effective on *Gridhrasi*. Further studies on the effect *Vasti karma* in order to validate the treatment of sciatica.

Key words: *Vasti*, *Gridhrasi*, *Niruha-vasti*, *Matra-vasti*, *Sepalika* Leaves, SLRT

THE SCIENTIFIC INTERPRETATION IN HIJAMAH THERAPY

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Cupping is an ancient, holistic method of treatment of a variety of diseases. The suction and negative pressure can loosen muscle, encourage blood flow, and sedate the nervous system which makes it an excellent treatment for many diseases like high blood pressure, back and neck pains, stiff muscles, anxiety, migraines, and rheumatism etc. There are two types of cupping practiced such as dry and wet cupping. The objective of this study is to interpret the age-old cupping therapy which is being treated many ailments successfully even today. Therefore, it needs to be scientific interpretation to update the knowledge of cupping therapy from ancient time to date. This scientific interpretation describes the history of cupping, historical definitions, types of cupping, instruments used in cupping and mechanism of action with scientific interpretation. Cupping therapy has currently been used around the world and cupping therapy with a good safety profile has a checkered history and is a well-recognized therapy is expanding, and a growing body of research is providing additional evidence-based data for further advancement of cupping therapy in the treatment of variety of diseases.

Keywords: cupping, history, wet cupping, holistic method.

CASE OBSERVATIONAL STUDY ON LEPROSY

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This study was an observational case study conducted to understand how leprosy was manifested in the patient, cause, mode of transmission, response for treatment and prevention of the disease. The study was carried out through several field visits to the MOH, Trincomalee and the subjects' home.

As the main causative factor of the disease is *M. leprae* and the complications resulted due to neglecting treatment and care is very serious and life threatening. Although there is a unique treatment for leprosy which prevents the spread, complications and relapse of the disease occurs. It is due to the lack of awareness of the disease.

This study was carried with a 9 years old female child. Visited the patient's home and observed her physical, social and mental health. The details of daily life style, family and personal hygiene were taken through the direct interview and questionnaire. According to the details derived from patient advices were given. During the study, the advices were supported to reduction of the distribution of patches but still the social stigma was noted. Though the patches were reduced, because of social stigma expected support was not obtained.

Key Words: Leprosy, Communicable Disease, Social stigma

YOGA & DIETARY HABITS FOR MENSTRUAL DISORDERS

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Menstrual disorders are common problems amongst women in the reproductive age group. That irregular period is a very common problem amongst adult women. Irregularity in period dates, high flow, less flow, period cramps only some of the common problems many women face during their menstrual cycle. While irregular periods can be a sign of some underlying conditions like, Ploy cystic ovarian syndrome, overactive thyroid / uterine fibroids, in most of the cases it is hormonal imbalance in the body which is responsible for irregularities. Yoga interventions may decrease the physical & psychological problems related to menstrual disorders. Yoga is great way to address a lot of different health conditions and physical disorders. Yoga & meditations are the most effective treatments for regularizing menstrual cycle without medicines. You can perform yoga asanas for menstrual cramps or other menstrual problems. A large part of yoga is about the breathing techniques. When we perform yoga asanas / posses, your transition from one pose to another pose is easier with the help of various techniques. The increased lung capacity as well as the controlled rhythm of breathing helps the body fine great relief. It will also help relieve stress & anxiety. This is the one of the primary causes of hormonal imbalance in the body that triggers irregularities in menstruation. During that time of the month, women can get more stressed out and suffer from mood swings. By eating the right foods like iron & folic acid rich diet, fiber contents, vitamins, minerals & avoiding the wrong ones, you can help reduce stress, and stay bright & breezy. Because menstrual disorders have most important relationship with dietary habits. Especially Ginger tea can be useful to prevent nausea & abdominal bloating. Water retention is one of the main causes of congestive symptoms like cramps, which cause sharp pains. One of the best ways to reduce water retention, though it might seem contradictory, is to drink enough, her body has to compensate for the deficiency by retaining additional water. When we discussed about dietary habits it is includes not only foods but also home remedies too. Luckily there are plenty of home remedies right in our environment that will help to reduce the pain & regulate the bleeding.

Keywords: Yoga, Food habits, Menstrual disorders

THE STUDY OF POTENTIAL MEDICINAL USES, PHARMACOLOGICAL ACTIVITY AND PRECAUTION DURING USING OF *RAUVOLFIA SERPENTIA*- LITERATURE REVIEW

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Rauwolfia serpentina belongs to family Apocynaceae, an herbaceous ever green erect, glabrous, perennial shrub with long, vertical, yellowish, tuberous, nodular root stock and simple, woody stems, leaves in whorls of three, exstipulate fruit dark purple, flowers white, regular, bisexual Flowers from March to May and November. Its distribution Occurs in the tropical regions of India, Ceylon, Burma, Andaman, Islands and Java. In Ceylon, it grows commonly in shady places among grass and as an undershrub in moist areas up to 2000 feet altitude. Whole part of this plant use in traditional medicine. The objective of this study is to identify the medicinal uses and pharmacological activity of this plant. *Rauwolfia serpentina* contains lots of medicinally value compositions like, the root contains more than 200 alkaloids of the Indole alkaloid family, ajmalicine, ajmaline, ajmalinine, alkaloids A, C & F, alloyohimbine, chandrine, 3-epi- α -yohimbine, isoajmaline, iosoruhimbine, serpentinine, rauwolfinine, etc. The seeds also contain alkaloids. These Alkaloids are very important in medicine and constitute most of the valuable drugs. This herb is a good source of minerals such as Ca, P, K, Mg, Na, Fe & Zn. Its leaves, seeds, roots, fruits are used in treatment of various ailments. The juice of the leaves is used on the eyes to remove opacities of the cornea. Root extract of this plant use in following conditions to increase uterine contraction in child birth, Ptosis, Sedation, Tremors and snake - bite remedy. Specially in Ceylon the root taken internally for fever, cholera, Blood pressure & also in snake - bite remedies. *Rauwolfia serpentina* root is bitter & acrid and uscs as Laxative, Diuretic, Anti dote for snake venom, Expectorant, Febrifuge and also has good anti-hypertensive action that has been used for control of high blood pressure. Its roots contain reserpine which is useful in insomnia and it was used as a pharmaceutical drug from 1954 to 1957 to treat high blood pressure. It is one of the 50 fundamental herb used in traditional Chinese medicine. The fruits and leaves are used in the treatment of snake-bite. *Rauwolfia* roots are of immense medicinal value and have

steady demand in both domestic and international markets. In folk and tribal medicine, the root of this plant is used during delivery to stimulate uterine contractions and promote the expulsion of the foetus. Crying babies are put to sleep by working mothers by making them to suck the breasts, which are smeared with the root-paste. It is also a valuable remedy in treatment of painful affections of the bowels. Roots are used for treating various Central Nervous System disorders.

The root extracts are used for treating intestinal disorders, particularly diarrhoea and dysentery and also used as anthelmintic. It is used for the treatment of cholera, colic and fever. This plant is traded in various levels viz., local, regional, national and global markets. The crude drug sold in the local markets comes largely from wild sources. Knowledge on medicinal uses of *Rauvolfia serpentina* is not limited among Sri Lankan physicians. Data was gathered from siddha and traditional medical books, journals and internet.

Key words: *Rauvolfia serpentina*, Pharmacological activity, Medicinal uses

A REVIEW ON PREVENTION AND MANAGEMENT OF NON-COMMUNICABLE DISEASES IN SIDDHA SYSTEM

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Siddha system is a holistic and philosophy-based medicine system in India. This system not only deals to treating the disease, it also explains the hygienic principles and dietary habits. Non-Communicable diseases are more common in few decades due to altered dietary habits and life style modification. As per siddha concept, there is a vitiation of three humours namely *Vatham*, *Pitham* and *Kapham* because of changes in food habits & life style. According to Siddha system, derangement of tri humours triggers the diseases in our body. The measures of non-communicable diseases by regular sleep, regular physical activities, proper diet & stress level. In siddha literatures, comprises the cleansing mechanism, hygienic measures, yogic principles, sleep pattern and dietary regimen. The rules and regulations of siddha principles followed properly as per regarding, the occurrence of NCD's are preventable. The rules and principles of siddha along with proper life style, physical activity, dietary habits may help to prevent the NCD's and gives a healthy life.

Key words: Siddha system, NCD's, Tri humours, *Kaaya karpam*,

EFFECT OF SELECTED YOGA ON MAINTAINING BLOOD GLUCOSE LEVELS IN TYPE II DIABETES (*MADHUMEGAM*), A CASE SERIES

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Yoga is being emerged worldwide for its effectiveness and supports from the authorities. Though we are well aware of that, Sage *Thirumoolar* was the father of Therapeutic yoga. In India, AYUSH department has stated a new separate branch for Yoga as *Siddhar Yoga Maruthuvam* in Postgraduate Siddha Medical Institutes running from the year 2017.

Though it is the right time to preach our siddharyogam for the most prevailing non-communicable diseases like diabetes, hypertension etc. In that way, we have selected diabetes 6 patients (two males and 4 females) who are taking siddha medicines aged between 45-60 year based on inclusion and exclusion criteria. After that, counseled the patients about their diabetic state, provided awareness regarding their health and yoga maruthuvam.

Based on the prior Informed consenting process, they were recruited and instructed to perform yoga procedures especially *Thirumoolar Pranayamam* for 40 cycles a day, *Dhanurasanam* (bow pose) and *Bhujangasanam* (cobra pose) for 3 cycles a day for the period of 4 weeks.

This specific yoga technique was finalized based on the Siddha literature review and systematic reviews. Being abdominal stretching techniques, this may probably stimulate the pancreatic secretions. The result of the study significantly maintains the blood glucose level and associated tiredness, numbness was reduced.

Keywords: *Thirumoolar Pranayamam, Thirumanthiram, Siddhar Yoga maruthuvam*

ANCIENT SIDDHA MEDICAL MEASUREMENTS EQUALIZATION WITH INTERNATIONAL STANDARD UNITS (ISU)

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Ancient Siddha System of Medical classical texts have described Weights and Measures. Many people are now not recognized with them. For that kind of the things sharing and re – searching to compare and standard like equalization with Modern Metric Standard as International Standard Unit (ISU). There are; **I. WEIGHTS AND MEASURES II. LINEAR MEASURES III. MEASUREMENT OF TIME and METRIC SYSTEM: Measure of Mass (Weights), Measures of capacity (Volumes), Relation of capacity of Weight (Metric)** all Tamil siddha text books refer to written in ancient Tamil language numeric measurement system with day today life style things specially in weights denoted with commonly available Grains, Seeds such as; *ulunthu* (Black Gram), *payaru* (Green Gram), *nel* (Paddy), *kundri* (Seed of *Abrus precatoris* Linn.) In this all measures, only 19 were analyzed comparative digital by some researchers already. However, this research proved as comparative literature review of ancient Tamil Siddha medical measurement with International Standard Units by analysis with original specimen and digital weight measuring machine such as *ulunthu* (Black Gram) is 65mg proved by 10 *ulunthu* (Black Gram) indicated 650mg by electronic scale. This research proved ancient measurements updated with International Standard Units.

Key Words: Ancient Measurements, Tamil Language, International Standard Unit

UTENSILS POISON IN *SIDDHA* TOXICOLOGICAL ASPECT

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Siddha Medical practitioners to Guide for food contact utensils for cooking. The variety of materials shapes and sizes currently available means it can easily find the utensils which need for a particular style or method of cooking. Through a careful combination of cooking tools and methods, it can expertly "amalgamate" knowledge and flavors to produce delicious, safe and healthy food for adults and children alike. As the World Health Organization (WHO) and the European Union are at pains to underline, the health of the population and food safety is a joint responsibility. In other words, they are dependent on synergic actions and strategies by the various stakeholders involved in the same process. In this research scientific way of discussed with present available utensils such as; *Aluminium, Aliminium with Nonstick coat, Aluminium with a ceramic coating, steel, Steel with Nonstick coating, copper, iron, earthenware, porcelain, Iron cast, soapstone, glass, silicon.* The possibility of carrying out reliable laboratory tests in specific conditions (time, temperature, appropriate simulant, etc.) also enables manufacturers and supervisory bodies to carefully evaluate the possibility of substances being transferred from the utensil to the foodstuff and the possible nature of the contamination and, where possible, the results of the transfer of the substance directly on the food. The *earthenware* is better for others and in specific condition of diseases and specific dishes used in special utensils such as copper, iron in scientific and siddha medical view.

Key Words: Utensils, Earthenware, Amalgamate.

TREATED TO AIR POLLUTION IN HOME LEVEL BY INDOOR PLANTS

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Air pollution is a result of industrial and certain domestic activity. An ever-increasing use of fossil fuels in power plants, industries, transportation, mining, construction of buildings, stone quarries had led to air pollution. **Air pollution** may be defined as the presence of any solid, liquid or gaseous substance including noise and radioactive radiation in the atmosphere in such concentration that may be directly and indirectly injurious to humans or other living organisms, plants, property or interferes with the normal environmental processes. Air pollutants are of two types (1) suspended particulate matter, and (2) gaseous pollutants like carbon dioxide (CO₂), NO₂ etc. Pollutant Sources Effects: Suspended particulate Smoke from domestic, depends on specific composition matter/dust industrial and vehicular soot Reduces sunlight and visibility, increases corrosion, Pneumoconiosis, asthma, cancer, and other lung diseases. Fly ash Part of smoke released from Settles down on vegetation, houses. Adds chimneys of factories and to the suspended participate matter (SPM) power plants in the air. Leachates contain harmful material Contemporary and Environmental Issues. Particulate Home Air Pollutants are: *Ammonia, Benzene, Carbon Dioxide, Carbon Monoxide, Electro-magnetic Radiation, Formaldehyde, Trichloroethylene and xylene.*

Home level air pollution treating with air cleaning plants which are useful to medicines also. In this research collected **36 Air Cleaning Plants** such as; *Adiatum, Alo Vera, Areca Plant, Bamboo Palm, Boston Fern, Cacti, Golden Pothos, Cholorophytum, Philodendron, Monster, Moth Orchids, Weeping Fig, etc.* for indoor gardening and appreciate to public for create interest of indoor garden in modern world as air cleaners.

Key words: Air pollution, Home Air Pollutants, Air Cleaning Plants

EFFICACY OF POWDER OF *MYRISTICA FRAGRANCE* ON MANAGEMENT OF INSOMNIA

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Insomnia is very common especially to people have disturbed minds and have emotional problems. Even though there are lot of Allopathic medicine and Phytomedicine available in this market, in one way all these Medicines are failed to treat Insomniac patient safely. As the available Allopathic medications will cause additional side effects on insomniac patients and coming to Phytomedicine especially in this case, there also a failure except in two or three medications as the clinical data of these medicines is not well established.

In present study, fourteen patients with Insomnia were selected according to the inclusive and exclusive criteria and treated with *Myristica fragrans* powder 1000 mg orally with seven patients and treated with diazepam 5mg with seven patients, night times a day. Evaluation visit were made at base line and 1st, 3rd, 6th, 9th, 12th, 15th, 18th and 21st days. The treatment was stopped when signs and symptoms disappeared but patients were observed and monitored until 21st day.

Clinical study showed statistically highly significant improvement on parameters like sleep induction, awakenings during the night, final awakening earlier than desired, total sleep duration, overall quality of sleep, sense of well-being during the day, sleepiness during the day, functioning (physical and mental) the day. It was observed that there was a significant reduction in all symptoms in end of the study. The stanza for general character of *Myristica fragransis* has proven scientifically from this clinical study for Insomnia.

Key words: Insomnia, *Myristica fragrans*

THE PRELIMINARY STUDY OF PSYCHOLOGICAL DISEASES AND TREATMENT IN SIDDHA MEDICINE - A REVIEW

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Mental illnesses are the condition that affect cognition, emotion and behavior. They are psychobiosocial in origin. 1 in 5 adults (17.6%) experienced a common mental disorder within the past 12 months and 29.2% across their lifetime. At present psychiatric diseases are considered as a global burden disease. As it seeks the attention of complementary medicine. Siddha Medicine is an ancient science encompasses the psychiatric medical approach still very early period. The drawback remains due to inadequate knowledge and practices in Siddha psychiatry. This literature review based on generating new knowledge and provide scientific basis to understand the effectiveness of Siddha medical treatment for mental diseases. Review of classical literatures, the peer reviewed journals are the major source. Psychological diseases are known as *veri noi / ullapini noi*. It occurs due to imbalance of tri humours, especially predominance with *azhal* humour. The major classification of the *ulappini* diseases are *Kirigai, Piramai, Unmatham, Matha azhivu, Matha noi, Vallipu noi, Moorchai noi, Mayaka noi, Soothika vatham, Kaaki valipu*. The treatment approach focusses on internal medications and external therapies of *Thalai mulluku, thuvali, pugai pidithal* (steam application), *nashyam, kalikam* and chanting *manthras* with life style modifications. Some of the herbs commonly used in siddha formulations such as *neemoil*, castor oil, *Withania somnifera*, *moringa oleifera*, *Terminalia chebula*, *Ocimum sanctum*, *Lemon juice*, *Plumbago zeylanica*, *Alternanthera sessilis*, *Acorus calamus* and *Cedrus deodara* possessed the pharmacological activities such as anxiolytic, anti-oxidant, antidepressant, neurodepressive, nootropic, neuroprotective, cognitive and memory enhancing effect. This study concludes ancient philosophies and formularies used in Siddha psychiatry are compatible with modern psychiatric protocols and diagnostic criteria. Thus, the active principles in the herbal preparations possess anti-psychiatric activities which give many links to develop the future trials.

Key words: Siddha psychiatry, *ulapini noi, veri noi*, global burden disease

PAKKAVATHAM (HEMIPLEGIA) IN SIDDHA PERSPECTIVE - A REVIEW

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Non-communicable diseases are increasing in every year. There were 17.3 million people reported death because of Cardio Vascular Diseases, in 2008 which has been represented 30% of all global deaths. There were 6.2 million of these due to hemiplegia and related complications. Hemiplegia is termed as *Pakkavatham* in Siddha which is paralysis of the one half of the body. The objective was to determine the diagnosis of *Pakkavatham* in the Siddha aspect and in modern medical perception. The study was carried out on the literature review which was collected from various 8 texts books, 20 journals, 5 health bulletins and electronic sources

Pakkavaayu, and Patchavaatham are other names of *Pakkavatham* mentions in 4 books. In Siddha literatures causes of *Pakkavatham* were includes altered diet pattern, heavy intake of alcohol, excessive angry, *meganoi*, heart diseases, post-delivery activities and also other factors which precipitating *Valikuttram*. Pathogenesis of *Pakkavatham* has been mentioned, that exaggerated *vaatham*, which is it irritates *azhal* and *iyam* and vitiated *vaatham* affects as *keelnokukaal, melnokukaal, paravutkaal* and *nadukaal. Silethumethilvaatham*" *Naadi* is most dominant in *Pakkavatham*

The *Pakkavatham* has been described according to Siddha System in some text books such as *Yugimuniyaithiyasintamani, Noinadalnoimuthalnadal, Sarabendra vaithiyamuraikal vaatharogachikitchai, and Pararajasegaram part 5 and 6*. Regarding my study aetiology, pathogenesis, clinical features and *nadi* of the *Pakkavatham* are important to predict the diseases. This will be given benefits to the society to get awareness and prevention of non-communicable diseases and also reducing the severity of disease and mortality. Further literary and clinical studies are essential in future.

Key words: *Pakkavatham, Pakkavaayu, Patchavaatham, Vaathadisese, Hemiplegia.*

NON-PHARMCOLOGICAL APPROACHES FOR PAIN MANAGEMENT

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Pain is an unpleasant emotional situation – pain is a complex phenomenon which varies causes and issues associated with its occurrence. Non – pharmacological pain management is the management of pain without medications. Non-pharmacological approaches can be classified as behavioral, cognitive, integrative and physical therapies. Core principle in developing a treatment plan are explaining the nature of the chronic pain condition, setting appropriate goals, and developing a comprehensive treatment approach and plan for adherence. Effective noninvasive treatment modalities for chronic pain includes behavioral therapy for short-term pain relief, cognitive behavioral therapy for reducing long-term pain and disability; hypnosis as adjunctive therapy; TENS & PENS; diaphragmatic breathing and muscle relaxation, massage, endurance exercise, manipulation and mobilization, aroma therapy, hydrotherapy, musical therapy and psychological intervention. Thus, method utilizes way to alter thoughts and focus concentration to better manage and reduce pain. This article reviews that the aim of treatment is manage pain and restore functionally.

Key words: Pain, Non-Pharmacological,

THE ROLE OF *KETPARATSANI* ON THE MANAGEMENT OF DISORDERS & ORGANOGENESIS IN PREGNANCY

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The Siddha system of medicine mainly deals with the prevention of diseases. *Ketparatsani* is a series of symptomatic and preventive medicine used on first three days of each month of pregnancy from conception to delivery which prevents the complication of mother during pregnancy and aids in full term natural delivery. This review was done in the purpose of bringing out an awareness on the *Ketparatsani*. This review was based on the ancient Siddha textbooks, modern textbooks of medicine and web sources. The collected data were analyzed scientifically. The plants in the *Ketparatsani* such as *Cannabis sativa* and *Zingiber officinale* has anti-emetic property, *Tinospora cordifolia*, *Cassia tora* and *Cyperus rotundus* contain anti-inflammatory, anti-ulcer, cardioprotective, neuroprotective and hepatoprotective. The chief nutrients such as, Calcium and Vitamin D present in it, is responsible for healthy bone developments. Fe, Cu, and Vitamin C help to form blood cells while Zn supports development of immune system and healthy cell divisions and folic acid helps to develop fetal neural tube. This review showed that the ingredients of *Ketparatsani* were supportive for the prevention of complaints and complications arise during each trimester of pregnancy and the nutrients present in *Ketparatsani* were also important for the organogenesis of the fetus in the intra uterine life. This review showed that, the ingredients of active chemical compositions of the *Ketparatsani* and their pharmacological actions are similar with the modern medicines which are used during the pregnancy time now a days.

Key word: *Ketparatsani*, Siddha system, Pregnancy

IN VITRO STUDY TO EVALUATE THE ANTIFUNGAL AND ANTIBACTERIAL ACTIVITY OF *TRICHOSANTHES CUCUMERINA* LINN. LEAF EXTRACTS

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Trichosanthes cucumerina Linn (Family: Cucurbitaceae) is a climber grown in Asian countries including Sri Lanka, India, Malay Peninsula and Philippines. The present study was conducted to evaluate whether aerial parts of *T. cucumerina* can exert antibacterial and antifungal activity. The antibacterial and antifungal activity of a hot water extract (HWE) and a cold ethanolic extract (CEE) of *T. cucumerina* aerial parts was evaluated by disc diffusion techniques against *Staphylococcus aureus* and *Candida albicans*. Results of the present study reveal that *T. cucumerina* has components that can fairly inhibit the growth of *Staphylococcus aureus* and *Candida albicans*. Of the two extracts tested, CEE was found to exert consistently better antibacterial activity than HWE. In conclusion, *T. cucumerina* extracts exhibited antibacterial activity against *S. aureus* and *C. albicans*.

Key Words: *Trichosanthes cucumerina*, *Candida albicans*, *Staphylococcus aureus*

EVALUATE THE EFFICACY OF AYURVEDIC TREATMENT PROTOCOL IN THE MANAGEMENT OF *VATA KANTAKA* (CALCANEAL SPUR): A CASE STUDY

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Aggravated *vata* is lodged in ankle joint especially in dependent parts like heel and hence the pain is caused due to reduced strength of muscles and joints. '*Kantaka*' refers thorn. The pricking pain felt due to vitiated *vata* is termed as *vata kantaka*. This condition is usually seen in the case with calcaneal spur. Calcaneal spur is a common cause for pain in the heel region, which occurs in about 10% of the general population and represents 10% - 15% of foot problems requiring professional care. Purpose of the present study was to ameliorate the clinical manifestation of *vata kantaka*. A 45 years old patient was suffering from *vata kantaka* of the pain, numbness, and localized tenderness to both heels, difficult in walking pain may worsens in posterior aspect of heel during standing or walking for 6 months. Patient was treated with *sthanika abyanga*, using *Nirgundyadi thaila*, *patrapinda sweda* and followed by application of *Erandadi lepa* daily for 21 days. *Rasnaerandadi kashaya* ½ cup and *rasnadi guggulu* 2 tablets twice a day were given for 21 days as oral medicine. Severity of the symptoms were recorded before the treatment and reassessed after completion of the treatment. The assessment was carried out on the basis of relief found in the cardinal signs and symptoms of the disease adopting scoring, depending upon severity. Significant reduction in pain and other symptoms were seen at the end of the study. This case report showed that Ayurvedic regimen is acceptable and safe in the treatment of *vata kantaka*. It is also recommended that a detailed study be carried out on the 21 days treatment regimen for its efficacy for different individual patients.

Key words: *Vata kantaka, nirgundyadi thaila, patra pindasweda, erandadilepa, rasnaerandadi kashaya, rasnadi guggulu*

METABOLIC SYNDROME AND THE MANAGEMENT: AN APPRAISAL WITH SIDDHA SYSTEM OF MEDICINE

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Visceral obesity syndrome also known as metabolic syndrome X is the bunch of medical conditions characterised by hypertension, hyperglycaemia, dyslipidemia and atherosclerotic cardiovascular disease affecting, nearly 240 million people worldwide. In India nearly 10000 people were affected per year and overall it goes on escalating steadily due to amplified adulterated human behaviours. There is a need of exigency at this juncture by knowing its complex pathology to condense human anguish and financial load. Siddha system of medicine primarily describes as it may arise due to provocation of the humours of the body. When our moral code of demeanour is deprived including intemperance and deficit physical activity, there is a flawed tissue metabolism leading to metabolic syndrome (MS). The speculative backdrop, broad set of strategy in aetiology, pathogenesis and management of MS are discussed at extent through Siddha system, in the paper which would be creditable in managing in an effectual and gainful approach.

Key words: Metabolic syndrome (MS). *Paci iyya noi, Noi varum yazhi, Maruthuva muraigal.*

ROLE OF ANJARAI PETTI (SEASONING RACK) IN BALANCING TRIDOSHA- A REVIEW

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Siddha system of medicine is one of the unique traditional system followed in southern parts of India. Siddhars the iconic heroes of Tamilnadu found the siddha system of medicine for the longevity of life. They with their internal bliss identified the composition of the human body both physically and mentally to be based on 96 *thathuvas*. All the *thathuvas* ultimately deals in balancing the *tridosha* (*Vatha, Pitha, Kapha*) for both the healthy mind and body. With the eternal feelings Siddhars for the wellbeing of the human in the world incorporated those behavior and healthy food habits in culture to be followed by every individual. The topic depicts one among the healthy habits in which the *Anjarai petti* (seasoning rack) holds a special space in the South Indian kitchen. The ingredients in the individual compartments of *Anjarai petti* like *milagu* (pepper), *sombu* (fennel seeds), *venthayam* (fenugreek), etc... obviously helps in balancing *tridosha*.

Key words: Siddha system, *Anjarai petti*, *tridosha*

ETHNO BOTANICAL SURVEY IN KONESAPURI, MANGANAI AND SAMPALTHIVU NORTH IN TRINCOMALEE DISTRICT

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An ethno botanical survey has been conducted in Konesapuri, Manganai and Sampalthivu north areas of Trincomalee District, during the period of June to October 2016. These areas are near the Trincomalee campus. In the present survey, Siddha medicinal plants are photographed and documented with the help of structured oral interviews and books. Oral interviews conducted with village old people and collected the details of plants, soil type, water sources and medicinal qualities of endemic plants. Photographs of identified plants are named and categorized in digital mode. In this survey, 160 medicinal plants from 55 families were identified. 13.750% of plants from Leguminosae family, 8.750% of plants from Euphorbiaceae family, 4.375% of plants from each Cucurbitaceae and Malvaceae families, 3.750% of plants from Labiatae family, 3.125% of plants from each Apocynaceae, Asclepiadaceae, Moraceae, Palmae, Rutaceae and Solanaceae families, 2.500% of plants each from Acanthaceae, Compositae and Rubiaceae families, 1.875% of plants from each Amaranthaceae, Convolvulaceae, Gramineae, Oleaceae and Verbenaceae families, 1.250% of plants from each Aizoaceae, Anacardiacae, Boraginaceae, Cappariaceae, Cleomaceae, Liliaceae, Myrtaceae, Oxalidaceae, Rhamnaceae, Salvadoraceae and Zingiberaceae families and 0.625% of plants from other families. The identified plants are used for treating ailments of respiratory system (24.6%), gastrointestinal system (15%), musculoskeletal system (13.5%), skin diseases (9.4%) and other ailments (37.5%). This study may helpful for the students, traditional practitioners and researchers to conduct further researches on pharmacological studies and conservation of medicinal plant varieties. The people in survey area have good knowledge in usage of plants for ailments.

Keywords: Ethno botanical, Siddha medicine, endemic plants

HOME REMEDIES USED IN HEEL FISSURE A LITERARY REVIEW

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Cracked heel also known as heel fissure is a common problem affecting men and women all over the globe. Cracks on the soles can develop on one or both feet. Cracked heels caused by dryness of the foot skin and accumulation of dead skin. The skin on our feet is naturally dry unlike the skin on the rest of the body.

This is more common in those who are elderly. The prevalence of deep foot fissure was 3.8% in diabetic patients with 85.7% of the fissure located in the heel. The problem is more severe among women, who report the condition at a rate more than 50% higher than men. One study found that 29% of women claimed to have experienced cracked heel. Most cases of cracked heels can be easily treated with help of simple home remedies and self-care measures.

The aims of this research are to study about home remedies used in heel fissure, understand the treatment methodology and maintenances of healthy heel and identify the herbs which are mostly used to treat the cracked heel in the traditional system of medicine.

Data for my literature review was collected through traditional text books from library of institute of indigenous medicine, public library of Meeravodai Batticaloa, authentic websites (pub med, Google scholar etc.), journal articles and some prescriptions from native physicians. My data collection was done from the date of October 2016 - May 2017

Herbals have great potential to cure different kinds of skin diseases. Most of people are depend on traditional health care and use different plant-based products for curing skin related problems. In this research I found some specific herbs such as Neem, Henna, Turmeric, Lemon which are widely used in the condition of heel fissure. These herbs give relief from heel fissure by its wonderful actions such as anti-inflammatory, anti-septic, wound healing, cooling and moisturizing actions.

ANATOMICAL APPROACH OF *AGNIKARMA* LOCATIONS IN SRILANKAN INDIGENOUS MEDICINE

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Agnikarma/Pilissum wedakama is an important treatment method in both Ayurveda and Indigenous medicine. Acharya *Susruta* described, *Agnikarma* is the greatest among *chikitsa karma* due to the rapid healing and less replacing property. The *Agnikarma* use after the proper examination of the patient including body constitute. Skin, muscles, vessels and bones/joints are the places where *Agnikarma* is applied, and the instrument which use for the *Agnikarma* is "*Agni Shalaka*". The locations, *Shalaka* and procedures are varying according to the diseases and patient's body constitute. Application of *Agnikarma* in present era is very rare. Lack of written evidence on *Agnikarma*, absence of enough knowledge in present practitioners and absence of anatomical identification of these places are the main reasons for that. The aim of this study was proper anatomical knowledge about the locations of *Agnikarma*, it will be a motivation to apply this treatment method and to develop clinical research on *Agnikarma*. 25 locations which was used for *Agnikarma* were collected from the *Sarartha samgraha* and analyzed. 30 well practicing traditional practitioners were randomly selected from five provinces and data were collected by using a pretested questioner. The collected data were analyzed and the locations were correctly identified. Anatomical structures of the identified places were described according to modern anatomy. 21 places were correctly identified by more than 50% of selected physicians, from the 25 *Agnikarma* places selected from *Sararta samgraha*. All those points were identified anatomically and all the anatomical structures of those points were described using modern anatomy texts, dissected human bodies and models. Finally, all those 21 *Agnikarma* locations were drafted. All identified locations are associated arteries, veins, nerves and tendons, though the explaining of pathophysiology between identified locations and relevant diseases are quite

difficult. Therefore, it will be useful to find this pathophysiology with referring to fundamental of Sri Lankan traditional medicine and Vedic literature. Most of the locations are associated *Marma* according to Ayurveda. Therefore, the physician should have proper anatomical knowledge and identification about *Agnikarma* locations.

Key words: *Agnikarma*, *Pilissum*, Indigenous medicine

TREATMENT FOR *INDRALUPTA* (*ALOPECIA AREATA*)- A CASE REPORT

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Alopecia areata is a common auto immune skin disease causing hair loss on the scalp, face, sometimes on the other areas of the body, but scalp is involved in most of the cases. In Ayurveda it can be correlated to *indraluptha*, one of the "*ksudra roga*". *Vatha*, *Pitta*, *kapha* and *Rakta* are involved in *indraluptha* as mentioned in the text. This was a case report of a four-year, old male patient who presented with the chief complaints of a symptomatic loss of hair of multiple sites over the scalp for a past three years. The area was smooth with no associated skin changes. During the treatment in the 1st four weeks" *tripala* oil" was applied, and continue it throughout the treatment. During the 2nd month onwords flash of "*Elabatu*" (*Solanum Aurattense*) with seeds was applied and before applying the application the hair losing area was rubbed with the rough side of the "*Seppalika*" (*Parlium arbor*) leaf. After the 2nd month, small hair follicles applied in hair loss area, and gradually developed. In 3rd month onwords apply above mentioned treatment in the morning, and in the afternoon apply a past which prepared with a lime fruit imbedded with five "*Olida seeds*" (*Abrus precatorius*) put it under the hot ash about thirty minutes and grinded it as a past and apply it on hair losing area. Those reamend had been continued at the end of the 4th month. Regrowth of hair was achieved completely all over the scalp, but after a fore month patient came with a complain that there was a loss of hair in the small area of the scalp. This case study reveals alopecia can be cured completely by the above treatment, in farther research this treatment has to be developed, to minimize the reactants attacks.

MANAGEMENT OF *ACNE VULGARIS* BY SPECIAL AYURVEDIC TREATMENT MODULE: A CASE STUDY

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Acne vulgaris is a chronic inflammatory condition of skin in youth. Typical lesions of acne include comedones, inflammatory papules, pustules, nodules and cysts occur in more severe acne and can cause scarring and psychological distress. According to Ayurveda acne is called as *yuvanapidaka*, *tharunyapitika* or *mukhadushika*. *Kapha dosha*, *Vata dosha* and *Raktha dhatu* are main pathological components (*samprapti gataka*) in the development of *mukha dushika*. It is increasing day by day due to consumption of junk food, fast food and cold drinks etc. This case is an ideal example of *mukha dushika* and is successfully managed with Ayurveda therapy. Patient was suffering from acne on face, blackish spot, itching and burning sensation over facial skin along with pain for 3 years. Considering clinical features and *doshas* involved in pathology, patient was treated with oral administration of *manibhadra churna* and *gandhak rasayan* with external application (*lepa*) of powder of *lodhra* (loth), *dhanyaka*, *vacha* and *manjishtha* on face. After 15 days bee honey was added in *lepa*, considering poor response to burning sensation. Treatment was continued for next 15 days. At the end of the treatment there was complete disappearance of acne, relief in itching, burning sensation and pain. Significant improvement was also observed in discoloration over face. Hence it was concluded that *lepa* of *lodhra*, *dhanyaka*, *vacha*, *manjishtha* and bee honey along with oral administration of *manibhadra churna* and *gandhak rasayan* are highly effective in the management of *mukha dushika*.

Key words: acne, *mukha dushika*, ayurveda, *manibhadra churna*

LITERARY REVIEW ON ANTI- CANCEROUS EFFECT OF *QURS- E- SARTAN*.

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Cancer is considered as incurable disease as it occupies the most leading cause of death. Unani medical system is a one of great medical system which can cure and prevent many diseases of human. *Qurs-e-sartan* is a pill used to treat cancer and several diseases in Unani system of medicine. But the usage of this pill to treat cancer is very limited and does not have any definite cancer type. This study is to study about the ingredients and its anti-cancerous qualities of each ingredients in *Qurs-e-sartan*. Data was collected regarding *Qurs-e-sartan* and studied the pharmacological properties of each ingredients related to Ayurveda, Unani and modern point of view. Data was analysed according to the pharmacological properties which enables the *Qurs-e-sartan* to act against cancer. Mainly *Pancha padartha* concept of Ayurveda was used to analyse data. Modern pharmacological properties and previous research papers were studied to collect data regarding the anti-cancerous effect of each drug. According to the analysed data and the previous research papers, it can be concluded as *Qurs-e-sartan* is a very effective formulation in treating cancer because the properties of these drugs act against the abnormal cancer cell growth and its spreading rate. In other hand it clear srotas, purify vitiated blood, increase appetite, detoxify *ama dosha*, absorb accumulated fluid, restore the damaged layer of skin and nourish seven tissues. The chemicals of these drugs have anticancer, antitumor, anti-mutagenic, antioxidant, immunomodulator, cytotoxic and anti-proliferative properties. Soapstone and Magnesium carbonate found in *Qurs-e-Sartan* can act as supplement for the magnesium deficiency that can lead to the initiation and proliferation of cancer.

Key words: Cancer, *Qurs-e-sartan*, Unani medicine

A STUDY ON PHARMACOLOGICAL ACTIONS OF 'VĀTABHANGA POTTALI', AN INDIGENOUS FORMULATION USED IN THE MANAGEMENT OF PAKSHĀGHĀTA: A REVIEW

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Sri Lanka has its own indigenous scheme of traditional medicine. *Desheeya Cikitsa*, the indigenous medicine of Sri Lanka developed with its own a series of prescriptions handed down from generation to generation over a period of 3000 years. Ayurveda and *Desheeya Cikitsa* systems use mainly plant and herbal preparations for the treatment of diseases. Among those formulations '*Pottali Swedana*' is also taken a part of the treatment procedures of some kind of diseases. *Swedana* or fomentation (Sudation, Steaming treatment) is specialized in providing unparalleled relief in pain, swelling and stiffness associated with diseases. Hemiplegia is a condition which affects one side of the body due to damage in specific parts of the brain caused either due to trauma, tumor or blood clots. It is characterized by weakness, stiffness or spasticity of the muscle and loss of control of the affected side. It is commonly called Paralysis and co-relates with *Pakshāghāta* in Ayurveda and category of *Sanni roga* in indigenous system. It is caused due to disruption in *Vāta dosha*, which controls the motor and sensory activities in the body. There is a special *Swedana (Pottali Swedana)* preparation used belongs to a tradition specialized for *Pakshāghāta Cikitsa* in Sri Lanka which named as *Vātabhanga Pottali*. It consists with '1 *Path*' (quantity equal to full of both hands) of each one, the Barks and the Seeds of *Azardirecta indica*, Seeds of *Madhuca indica*, '1 *Mita*' (quantity equal to full of one hand) of *Allium sativum* and one fruit of Copra; *Cocos nucifera* as the main ingredients and they ground together and mixed with the powders of sub ingredients called '*Saraku*' and ground again. It contains with '2 *kalan*' of each drug; *Zingiber officinale*, *Brassica nigra*, *Acorus calamus*, *Curcuma longa*, *Curcuma zedoaria*, *Piper nigrum*, *Cinnomomum zeylanica*, *Vernonia anthelmintica*, *Ferula foetida*, *Caesalpinia bonduc*, *Gardenia crameri*. This study has been designed to find out the pharmacological actions of above ingredients according to both Ayurvedic and

Western Medical perspectives. Data collection was done by scientific and medical e-journals including Journal of pharmacy and pharmacology, Pharmacological reviews, Journal of research in Ayurveda and Siddha, Mayo clinic proceedings, Journal of pharmaceutical Biology etc. which published within the range of 10 years duration since 2018 June backwards. Data was analyzed according to the percentages. According to above survey study, in Ayurvedic approach, all the ingredients have *Kapha* and *Vāta shamaka* action along with their properties including mainly *Tikta* and *Kashāya Rasa*, *Laghu*, *Tikshna Snighda Ruksha Guna*, *Ushna Veerya* and *Katu Vipāka*. According to Western medical approaches, Anti-inflammatory, Analgesic, Immunomodulatory, Anticonvulsant, Anti-microbial, Antioxidant, Neuroprotective actions take a major part of the results. According to above details, it is clearly that this formulation should be effective in the management of the conditions involving with the vitiation of *Kapha* and *Vāta doshās*.

Key words: Pharmacology, Hemiplegia, *Pottali Swedana*

A STUDY ON THE APPLICATIONS OF PRĀNAYĀMA VARIETIES FOR HEALTH IMPACTS FOUND IN NON- COMMUNICABLE DISEASES: A REVIEW

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Yoga originated in India from thousand years ago. It is spread in all over the world including Sri Lanka at present. *Prānāyāma* has been proven an effective method for improving health. 'Prāna'; the Sanskrit word is explained in various ways like breath, soul, vital air, life force, vital energy, force or power. 'Āyāma' means the expansion. The meaning of the term *Prānāyāma* is described as the expansion or regulation of *Prāna*. *Prānāyāma* simply means as the regulation of the normal process of breathing through special breathing techniques. Health can be defined as a state of an individual which is a sum total of vitality, endurance, flexibility and balance of the various functions. But now a days, Non-Communicable diseases are most common in the society. For gaining a good health state various kind of Medical System approaches have been found today. But the trouble is that the cure which the science of medicine offers is in many cases temporary. This survey was aimed to study the varieties of *Prānāyāma* and its benefits in diseases through the Yoga texts including *Hathayoga Pradeepika*, *Pathanjali Yoga Sutra* and the Research publications via searching e journals for six months since June 2018 backwards. According to Yoga classics, depending on the type of *Prānāyāma*, the varieties of Sahita Kumbhaka included *Anuloma – Viloma*, *Ujāyi*, *Suryabhedana*, *Bhastrika*, *Shitali*, *Sitkari*, *Brāmari*, *Moorchha*, *Plavini*. The effects of *Prānāyāma* on various body functions include digestion, circulation, respiration, secretion, excretion, reproduction, co-ordination and their clinical outcomes. Data was analyzed according to the percentages by using Microsoft Office Excel 2013. According to the results of the study, *Suryabhedana*, *Bhastrika*, *Brāmari*, *Anuloma – Viloma* pranayama promote the cleaning of the respiratory passage and increase the vital capacity and strength of respiratory muscles and is beneficial for respiratory disorders like Asthma; *Bhastrika*, *Kapalabhati*, *Anuloma – Viloma* pranayama act as caretaker of *Pancrease*, it is useful in the treatment of Diabetic Mellitus; *Nādishodhana*, *Suryabhedana*, *Brāmari Prānāyāma* is useful

for the removal of ignorance and to stability and peace of mind and it is beneficial for the disorders involving the human mind like Anxiety, Depression or Stress...etc. According to above details, Yogic *Prāṇayāma* is that it is another way for the maintenance of general or overall health apart from removing particular disorders.

Keywords: *Prāṇayāma*, Yoga, Non-Communicable diseases

DETERMINATION OF THE EFFECTS AND EFFICACY OF HERBAL FORMULATION DERIVED FROM SRI LANKAN OLA LEAVES MANUSCRIPT IN THE MANAGEMENT OF TYPE 2 DIABETES MELLITUS

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Type 2 diabetes mellitus (T2DM), which is characterized by hyperglycemia, insulin resistance and relative insulin deficiency, is an overwhelming health problem worldwide. The aim of this study was to determine the effects and efficacy of selected herbal formulation in the management of Type 2 diabetes mellitus. The patients were selected from Diabetes clinic of Aniyakanda Ayurveda Hospital, Kadana, Sri Lanka. The patients of group A (n=30) were treated with herbal formulation including dietary management and the patients of group B (n=30) were treated with Diabecon and dietary management during the period of 14 days. The patients of group A showed 27.12% reduction in fasting serum glucose level and 18.97% reduction in Postprandial serum glucose level after 14 days in comparison to those of patients of group B, which showed 4.3% and 3.81% reduction in same parameters respectively. Patients of group A showed significant reduction in fasting serum total cholesterol, triglyceride and low-density lipoprotein levels compared to those of group B. Both groups showed significant reduction in diabetic symptoms such as polyuria and polydypsia after 14 days of treatment. Present study showed that the oral administration of decoction of selected herbal formulation was having greater effect in reducing elevated serum glucose levels and serum lipid levels in addition to the reduction of clinical features of type 2 diabetes mellitus.

Keywords: Diabetes mellitus type 2, Herbal formulation, Diabecon

EFFECTIVENESS OF *SHUDDHABALA TAILA MATRA VASTI* ON POLYCYSTIC OVARIAN SYNDROME

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Poly-Cystic Ovarian Syndrome (PCOS) is a common hormonal abnormality found in women worldwide. Rotterdam criteria is used to diagnose the PCOS. Poly-Cystic Ovarian Syndrome is characterized by excessive production of androgen and it interfere with ripening of ovarian follicles and aetiology is not known. A Clinical Study was carried out to find out the effectiveness of *Shuddhabala Taila Matra Vasti* in case of Polycystic Ovarian Syndrome, at Special Subfertility Clinic, Gampaha Wickramarachchi Ayurveda Teaching Hospital. Sixty PCOS patients were randomly selected according to inclusion, exclusion and diagnostic criteria and randomly divided in to two groups as group A and B. Group A were treated with oral drugs and Group B treated with oral drugs and *Matra Vasti* for one month, after taking the written consent. *Kanchanara Guggulu* and *Punarnawashtaka Panta* were used as oral drugs and *Shudhabala Taila* was used for *Matra Vasti*. Data was collected through an interview-based questionnaire and findings of day 14 Trans-Vaginal Scan Reports. Data was analysed by using Wilcoxon sign rank test and Mann-Whitney U tests. According to the data, Acne identified as the most common symptom (65%) and hirsutism and boldness were identified as the least common symptoms (51.66%) related to this study. When comparing the treatment efficacy between group A (only oral drug treatment) and group B (oral drugs with *Vasti* treatment), it shows that the treatment of group B was significantly effective for Polycystic Ovarian Syndrome with respect to Oligomenorrhea and Dysmenorrhea, while it (treatment of group B) has not shown a significant efficacy over the group A (oral drug treatment) with respect to improvement of endometrial thickness and Follicular maturity, in Polycystic Ovarian Syndrome at 5 percent level of significance.

Keywords - *Shuddhabala Taila Matra Vasti*, Polycystic ovarian syndrome, Oligomenorrhea.

A REVIEW ON EXTERNAL APPLICATIONS USED TO MANAGE WOUNDS IN INDIGENOUS MEDICINE

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The current study aimed at exploring the value of well reputed indigenous medicinal plants used in Sri Lanka for the management of wound healing. Wound healing remedies were studied referring 22 Indigenous books of *Thalpathe piliyam*, published by the Ayurved. Department which is the written evidence of ancient ola leaves manuscripts. The data were gathered separately based on different herbal applications used for treatments and gathered data were analysed to find out most common herbals used in those different applications. Analysis revealed that there are many external applications found in treating wounds such as oils (37%), powders (5%), fumigation (5%), *mellum* (19%), fresh juices (25%) and Bolus fermentation (8%). Among those preparation, *Pongamia pinnata* and *Vernonia zeylanica* was found in highest number of remedies (40 and 20 respectively) followed by *Curcuma longa*, *Azadirachta indica*, *Desmondium triflorum*, *Glycerrhiza glabra*, *Jasminum sambac*. *Pongamia pinnata* was mostly found in oil. *Vernonia zeylanica* was found in bolus fermentation and in fresh preparation. *Curcuma longa* included in *mellum* preparations and oils. *Azadirachta indica* found in oils and fumigation preparations. These herbals are having qualities of haemostatic, purification of blood, anthelmintic, anti-swelling, pain relief, improve qualities of blood, purification of wound and wound healing properties. Most of them are having pungent (31%), bitter (46%) in taste, light (45%), roughness in property, hot (71%) in potency and bitter (86%) in final digestion. Considering on humeous they pacify *kapha- vāta* which may have a direct impact on wound healing.

Key words: Indigenous medicine, Wound, External herbal applications

A CASE STUDY ON THE AYURVEDIC MANAGEMENT OF VARICOSE VEIN

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A condition, in which a vein becomes dilated, elongated and tortuous, this is said to be "Varicose". There are primary as well as secondary causes of varicose veins. The superficial perforating as well as the deep veins are involved in varicose veins. The contemporary treatment for varicose veins includes ligation, ligation with stripping surgical treatments. But these treatments can cause reoccurrence of this disease. Ayurveda texts reveal *Siravedha* (venesection) cures varicose veins. We hereby report a case of a 60-year-old female with complaints of pain in the lower limbs from calf to the dorsum of the foot of both legs associated with dilated and tortuous veins in the anterior aspect of lower leg with discoloration. She was advised admission for ten days and was treated with internal medication, external treatments and *Siravedha* (venesection). During the treatment all the signs and symptoms of varicosity reduced to a very high extend. As the case showed significant changes in the symptoms of pain, swelling, burning sensation and dilated veins with discoloration, during the ten days of treatment with internal medicines as well as *Siravedha* done for 3 alternate day. It can be concluded that in such conditions of varicose vein, *Rakta mokshana* along with *Raktaprasadana* drugs will be choice of treatment. A large-scale clinical study should be conducted to evaluate the efficacy and benefits of this modality of treatment with longer follow ups.

Key words: *Siravedha*, Varicose vein, *Rakta mokshana*

ROLE OF AGNI KARMA WITH PIPPALI ON KADARA – A CASE STUDY

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Callosity is a local thickened or hardened part of the sole. It is a plaque of hyperkeratosis caused by repeated friction or pressure. It is assumed that frictional forces include hyperkeratosis leading to thickening of stratum corneum of the skin over certain areas prone to mechanical stresses. *Kadara* as described by the *Samhitas*, can be closely related to lesions of the skin caused by hyperkeratosis. *Kadara* has been enumerated and described in classical literature under the heading of *Kshudra Roga*. *Agni Karma* has been mentioned for the proper management of *Kadara*. *Pippali* has been mentioned as a *Dahana Upakarana* in *Susruta Samhita* and *Ashtanga Samgraha*. This study was conducted at Shalya Clinic of Gampaha Wickramarachchi Ayurveda Hospital. A 34 years old female patient presented with a pain and difficulties of walking due to small thickened area in her left sole for 3 months. First, scrapped that place by using surgical scalpel and heated *Pippali* was directly placed over the lesion. That procedure continued for 2 weeks. The data collected in regard with pain and hardness, when compared before treatment and after treatment yielded the following results. According to symptoms, pain and hardness observed before the treatment, that is 100%. But after treatment, complete cure was observed in above symptoms. Based on the study, it was observed that *Pippali* can be used to create superficial burns only. It was further observed that the area of lesion eventually dried and peeled off along with the *Kadara* tissue within about 14 days. The extent of tissue destruction due to burning with *Pippali* is very minimal. Hence, it was to be effective for treating superficial *Kadara* lesions.

Key words: *Pippali, Agni Karma, Kadara*

A CASE STUDY OF OBSERVE THE EFFECT OF UNRIPE *CARICA PAPAYA* PULP IN IMPROVING THE BLOOD CIRCULATION AROUND CHRONIC WOUND

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A chronic wound is a wound that does not heal in an orderly set of stages and in a predictable amount of time the way. Poor blood circulation is one of the major factors which hinder wound healing leading to chronic ulcers. Accumulation of deoxygenated blood around the wound is responsible for giving rise to blackening of the skin, itching and low temperature around the wound while decelerating the healing process. The pulp of the unripe *Carica papaya* fruit is traditionally used as a paste around the chronic wound as an aid to improve the skin condition. This study was conducted to observe its effect on circulation improvement taking two cardinal signs of poor blood circulation which are discoloration of skin and itching as indicators. This study was conducted at Shalya Clinic of Gampaha Wickramarachchi Ayurveda Hospital. A 54 years old female patient presented with a non-healing wound in dorsum of the left lower limb for 2 years. First cleaned the wound by using *Pancha walkala quatha* and applied a paste of the pulp of unripe *Carica papaya* fruit mixed with bee's honey around the wound. Treatment was carried out for 6 weeks. The results were recorded weekly using a scoring system based on the severity of symptoms. At the end of the period the patient was relieved of itching considerably, replaced the wound base with healthy granulation tissues and showed an improvement of skin color around the wound. Reduction of these symptoms could be taken as indications of an improving blood circulation around the affected area. In this study, it was seen that *Carica papaya* pulp applied around wounds which are positive for the above 3 symptoms were successful in reducing discoloration, itching and increasing healthy granulation tissues. Therefore, it was concluded that the pulp of unripe *Carica papaya* has the ability to improve the circulation around chronic wound.

Key words: *Carica papaya*, Chronic wound, Wound healing

EFFECTS AND EFFICACY OF ORAL ADMINISTRATION OF HERBAL DECOCTION WITH AND WITHOUT PURGATION TREATMENT ON SERUM LIPID LEVELS AND HEPATIC ENZYMES IN THE MANAGEMENT OF HYPERLIPIDEMIA

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This comparative study, approved by Gampaha Wickramarachchi Ayurveda Institute, University of Kelaniya, was conducted to determine the effects and efficacy of oral administration of decoction with and without purgation treatment on serum lipid levels and hepatic enzymes of patients with hyperlipidemia. A formulation, consisting of nine herbal materials (*Terminalia chebula* – Fruits, *Trichosanthes cucumerina* – leaf and stem, *Gymnema sylvestre* - leaf and stem, *Picrorhiza kurroa* – rhizome, *Aegle marmelos* – root, *Plectranthus zatarhendi* – leaf and stem, *Adhatoda vasica* – root, *Cyprus rotundus* – rhizome, *Tinospora cordifolia* – stem), was selected from Chandramapadmaya of Katupitiyathindu, a traditional ola leaves manuscript offered by Mr. Asela Chandranath. 60 patients were selected, as per the selection criteria, from medical clinic of Ayurvedic Hospital, Panawala, Sri Lanka with written consent and were assigned randomly into two groups i.e. Group A (n=30) and Group B (n=30). Group A patients were treated with the decoction of herbal formulation and dietary management in parallel to the patients of group B, who were treated with the decoction and dietary management preceded by purgation treatment for three weeks. Before the treatment, fasting serum total cholesterol (TC), triglycerides (TG), LDL cholesterol (LDL) levels of group A were 246.8±8.2, 191.5±16.7, 159.1±7.5 mg/dl respectively in comparison to those of group B, which showed no significant difference in same lipid parameters (TC: 234.7±6.4, TG: 245.6±18.5, LDL:130.0±8.5). After treatment for three weeks both groups showed significant reduction in TC, TG, LDL levels and insignificant changes in serum levels of HDL, key hepatic enzymes and fasting serum glucose level. The efficacy of reduction in fasting serum lipid levels (except to HDL level) of Group B was greater than that

of Group A. Thus, the decoction of herbal formulation with purgation therapy could be recommended for the management of hyperlipidaemia when purgation is appropriate.

Keywords: Hyperlipidaemia, Herbal formulation, Purgation

A REVIEW ON *RASA YOGA* IN THE MANAGEMENT OF *HṚID ROGĀ* ACCORDING TO *BHAIṢAJYA RATNĀVALĪ*

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Hṛidroga have a large share amongst non-communicable diseases. It is the most frequent cause of adult death in industrial societies. According to the latest WHO data published in 2017 Coronary Heart Disease Deaths in Sri Lanka reached 28,554 or 22.52% of total deaths. The age adjusted Death Rate is 126.95 per 100,000 of population ranks Sri Lanka 73rd in the world. By 2030 almost 23.6 million people will die from *hṛidroga*. *Rasa Shāstra* which is a special branch in Ayurveda stresses the importance of Rasa medicine. They can be used in curable and incurable diseases. Even though it plays a very important role in curing various kinds of ailments, much attention is not paid to use *Rasa yoga* in the management of *Hṛidroga*. Therefore, as an initial step this review was carried out to identify the *Rasa yoga* in *Bhaiṣajya Ratnāvalī* and to find out the *Rasa* ingredients in *rasa yoga*. Further it was aimed to analyze the Ayurvedic properties of *Rasa* ingredients. The analysis was done by Microsoft Excel. According to the findings 10 *rasa yoga* can be used for *Hṛidroga*. *Rathnākara rasa* was identified as the drug in the management of various types of *Hṛidroga*. Results revealed 16 *Rasa* ingredients were included in *Rasa yoga*. As the prominent *Rasa* ingredient, *yoga* contained *Shuddha Pārada* and *Shuddha Gandhaka* in 70%. *Abraka bhasma*, *Lauha bhasma* was included in 60% and 50% of *Rasa yoga* respectively. Other considerable *Rasa* ingredients were *Swarna bhasma*, *Vanga bhasma*, *Tamra bhasma*, *Vaikranta bhasma* and *Shuddha Shilajatu*. They included many *guna karma* related to cure *Hṛidroga*. In *Hṛidroga*, *Vāta doshā* is the predominant *doshā*. *Madhura rasa* was most prominent *Rasa* in the selected *yoga*. *Madhura rasa* increases *Kapha dosha* and decreases *Vāta dosha*. *Snigdha* and *Guru guna* decreases *Vāta dosha*. Further studies should be carried out to ensure the effect & efficacy of *Rasa yoga*.

Keywords: *Rasa yoga*, *Hṛidroga*, *Rasa Shāstra*

EVALUATION OF THE EFFECT OF “*LEKHANEYYA DASHAKAYA MAHA KASHAYA*” IN THE MANAGEMENT OF HYPERLIPIDEMIA

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Noncommunicable diseases (NCDs) are chronic diseases that has a prolonged course, that does not resolve spontaneously and for which a complete cure is rarely achieved. Among the NCD's cardiovascular diseases, Coronary artery disease (CAD) is one of leading causes of mortality. Total cholesterol, blood glucose, overweight and obesity are the four metabolic risk factors for the NCD's. At present In Sri Lanka, NCDs are the leading cause of mortality, morbidity and disability. Hyperlipidemia is one such disorder where there is an abnormally elevated level of any, or all lipids and /or lipoproteins in the blood. Within this back ground this study was develop to find out the efficacy of *Lekhanīya daśakaya mahā kaṣāya* in the management of Hyperlipidemia. This randomized clinical study carried out at OPD and IPD of the Gampaha Wickramarachchi Teaching Hospital at Sri Lanka. 30 patients were randomly selected according to the inclusion and exclusion criteria. Patients were treated with *lekhanīya daśakaya mahā kaṣāya* for 2 weeks. Diagnostic criteria were made based on serological investigation and anthropometric measurements before and after the treatment. Data were analyzed using SPSS (paired sample t- test) and $p < 0.05$ was taken as the level of significance. *lekhanīya daśakaya mahā kaṣāya* showed reduction in all the parameters, Mid arm circumferences, BMI, Triglycerides, Total cholesterol, LDL, HDL, CHO/HDL ratio and LDL/HDL ratio significantly. Waist to Hip ratio reduced but not significant. Based on the present study *lekhanīya daśakaya mahā kaṣāya* effectively managed hyperlipidemia.

Key words: Hyperlipidemia, Dislipidemia, *lekhanīya daśakaya mahā kaṣāya*,

THE LEARNING STYLES OF LEVEL III INDIGENOUS MEDICAL STUDENTS - A SURVEY STUDY

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The acquisition of knowledge or skills through study, experience or being taught is called as learning. According to scientists and researchers the process of learning begins since the conception in mothers' womb. The significant truth is that everyone learns differently. Since classrooms are made up of students with varying strengths and limitations bring out different results due to the various learning styles. The study aims to identify the learning styles of level III indigenous medical student in University of Colombo. Data were collected by giving a self-administered questionnaire to complete level III students. The study was done among the 168 students of level III. The three types of learning styles: Visual, Auditory and Kinesthetic (VAK) model developed by Neil Fleming was used in field for data collection. Data shows majority of students are visual pattern learners. The percentage was 57%. The auditory pattern was selected as their way of study by 30% of the study group. The kinesthetic method acquired by 13% individuals among the study population. Results could be utilized to improve the teaching method of a teacher and it is important to understand and change the way of teaching in a fruitful manner. Understanding the uniqueness of various learning differences and the science behind the reasons are important to recognize by educators to prepare students for the 21st Century.

Key Words: Learning, Visual, Auditory, Kinesthetic

AYURVEDA MEDICINE IN SANSKRIT SOURCES WITH SPECIAL REFERENCE TO *CHARAKASAMHITA*

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Ayurveda also called **Ayurvedic Medicine**, traditional system of Indian Medicine. *Ayurvedic* medicine is an example of a well-organized system of traditional health care, both preventive and curative, that is widely practiced in parts of Asia. *Ayurveda* has a long tradition behind it, having originated in India perhaps as much as 3,000 years ago. Today it remains a favored form of health care in large parts of the Eastern world, especially in India, where a large percentage of the population uses this system exclusively or combined with modern medicine. *Charaka Samhita* is a pre-2nd century text consists of eight books and one hundred and twenty chapters. It describes ancient theories on human body, etiology, symptomology and therapeutics for a wide range of diseases. The *Charaka Samhita* also includes sections on the importance of diet, hygiene, prevention, medical education, the teamwork of a physician, nurse and patient necessary for recovery to health. This research paper mention about the *Ayurveda* Medicine in Sanskrit sources specially referred by *Charaka Samhita*.

Today, the *Ayurvedic* medicine is still very much important to the society. There are the people who still believe to use the *Ayurvedic* medicines rather than the modern medicine. *Charaka Samhita* is one of the ancient Indian text books of medicine in Sanskrit. It remains as a valuable medicinal source that inspired countless medical practitioners in coming up with the most modern medical concepts to treat humanity. *Charaka Samhita* is one such *Ayurvedic* encyclopedia of age-old holistic importance. This research refers the importance of traditional medicine and *Charaka Samhita* through descriptive research method and comparative research method. This research is to analyze various aspects of *Charaka Samhita* and its importance in the traditional medical system *Ayurveda*. In *Ayurveda* and also *Charaka Samhita* states that the *Ayurveda* Medicine essential to recovery and natural to the human activities and good health of the human life.

Key Words: *Ayurveda*, *Charaka Samhita*, Indian traditional medicine, Medical system, Sanskrit

ANTIBACTERIAL ACTIVITY OF *PSIDIUM GUAJAVA* AGAINST BACTERIAL PATHOGEN

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The parts of Guava are used as food and as a diet in diarrhea. It is used in Siddha, Ayurveda and Unani medicine especially for the treatment of wounds and gastrointestinal (GI) diseases such as cholera and dysentery. Over 20 compounds have been reported to be present in the leaf. Flavonoid is main compound associated with the antibacterial activity. The aim of this study is to identify the potential effects of *Psidium guajava* leaves extract. Kirby-Bauer's disc diffusion method was used to screen the antibacterial activity against three bacterial pathogens. The result showed that the inhibition zones were 9-12 mm and the highest inhibitory effect was seen against *Staphylococcus aureus*. It indicated that *Psidium guajava* leaves could serve as a good source of antibacterial agent.

Keywords: Antibacterial, *Psidium guajava*, Flavonoids

***SAMBIRANI THAILAM* TRADITIONAL FORMULATION FOR SKIN DISEASES – REVIEW**

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Skin is largest organ of the body and is affected by both external and internal factors. Several drugs are available in Siddha system of medicine for skin diseases. *Sambirani Thailam* is one of the best drugs for skin diseases. It is a herbo-mineral external medicine has been using for treatment of skin diseases by a Traditional Medical Practitioner. Here an attempt has been made to review the Siddha perspective and pharmacological activities of the ingredients of the Thailam to ensure the scientific factors favouring this formulation. The data were collected from traditional doctor, olla leaves, Siddha text books, and published papers available at web sources. All the data were analysed. The ingredients of *Sambirani Thailam* contain the chemical compositions and pharmacological actions incorporated with the chemical compositions and pharmacological actions used in allopathic system at present. Hence, literally, the *Sampirani thailam* is effective for skin disease. But clinical study should be carried out to confirm the effectiveness of *Sampirani Thailam* on the management of skin disease scientifically.

Key words: *Sampirani Thailam*, Herbo-mineral external medicine, Skin diseases

EFFICACY OF *LŌDRĀDI LĒPA* AS A FACE CREAM ON *YUWĀNA PIDAKA*

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Acne is a multifactorial disease exhibiting distinct clinical presentations. Among them, the cat menial type is a matter of concern for young women. The present study aimed to evaluate the effect of overnight applications of paste made of *Lodhradi Lepa* which contains *Lodhra* (*Symplocus rasemosa*), *Dhanyaka* (*Coriandrum sativum*) and *Vacha* (*Acorus calamus*). The herbal extracts used here were of the plants described in *Sharangadhara Samhita*. The efficacy of the treatment using the external application has been assessed through conduct of trial in 30 patients for 3 months in a randomized. Thirty patients participated to clinical trial and completed successfully. All the patients were available to obtain measurements at all the measuring sessions. No one has complained about any experience about allergy, infections or discomfort at any time that they have encountered during the follow up. Before the treatment period, 30% of patients were having more than 11 *pidaka* on face and after the 2 weeks treatment period patients were not having more than 11 of *pidaka* 53% of patients who had 6 to 10 of affected area decreased to 23% of patients. Before the treatment period, 23% of patients were having continuous pain of lesion and after 4 weeks, 20% of patients were having it. Itching and burning sensation also markedly reduce after the 4 weeks of treatment. These results were proved that the face cream has worked well on reducing no of *pidaka* of face.

Key words: *Mukha Lepa*, face pack, beauty care cosmetics

MICROBIOLOGICAL STUDY OF INDIGENOUS MOUTH WASH (*GANDUSHA*) FOR PERIODONTAL DISEASES

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Gandusha is clinically effective in the management of periodontal diseases. This study is an in-vitro analysis on determining the antimicrobial efficacy of this drug using standard Antimicrobial Sensitivity Test against a fungal culture isolated from a patient. The test was performed according to the Well diffusion method having 6mm diameter wells on Sabouraud Dextrose Agar (SDA). Each well was loaded with the test drug mixed in 20 μ l of sterile distilled water and fluconazole 2.5mg / ml was used as the positive control. According to the results the test drug showed an average Inhibition Zone Diameter (IZD) of 19mm while the positive control showed IZD of 15mm. Therefore it can be stated that the test drug is more effective than the positive control and the isolated culture is sensitive to the test drug as it had shown a IZD of 19mm while it is intermediate sensitive for the positive control as 15mm comes under Intermediate sensitive range (15-18mm). These results support the fact that the indigenous mouth wash (*Gandusha*) is effective in the management of periodontal diseases.

Key words: *Gandusha, Antimicrobial action, Periodontal diseases*

EFFICACY OF EXTERNAL APPLICATION OF SPECIALLY PREPARED HERBAL CREAM IN THE MANAGEMENT OF FEMALE GENITAL SORES.

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Female genital sores are bumps and lesions in or around the vagina. Some sores may be itchy, painful, tender or produce a discharge, but some may not cause any symptoms. Bumps or sores on the genitals sometimes happen for no reason and self-resolve. Some may be due to certain skin disorders, but they are most often symptoms of a sexually transmitted infection (STI) while STIs are the cause of most genital sores. They can also be the result of non-sexually transmitted infections or skin disorders called Non-Sexual Acquired Genital Ulcers (NSAGU). NSAGU sores are a type of aphthous ulcer. They appear as single or multiple shallow round sores. They tend to be painful and have a creamy-white or grey film and a red halo. Eczema or other skin disorders, a reaction to perfume or detergents, a cyst, an infected scratch, or an ingrown hair, could all potentially cause NSAGU sores. The aim of this study was to evaluate the efficacy of selected herbal cream in the management of female genital sores. 40 number of volunteer patients who are diagnosed with female genital sores were selected for the study in Gynecological clinic of Gampaha Wickramarachchi Ayurveda Teaching Hospital-Yakkala- Srilanka. After examination, all the patients were advised to apply the herbal cream on sore of vagina four times a day for a period of fourteen days of follow up period. Collected data were statistically analyzed. Reduction of symptoms of genital sore were statistically significant ($P < 0.05$). Selected herbal cream has an efficacy in the management of genital sores specially Non Sexual Acquired Genital Ulcers.

Key words: Genital sores, Ulcers, Herbal cream

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