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AROGYACHINTAN PATRIKA

Editor's Desk



Today's Ayurved students want to learn Ayurved through translations of the ancient Sanskrit books. Reading and trying to understand Ayurved through the translations of books is little inferior to understanding Ayurved through original text.

Ayurved is a vast and ancient medical science available to us in Devnagari and Sanskrit scriptures. Today, Ayurved scholars due to lack of Sanskrit knowledge run for English/ Marathi/Hindi/Gujarati translations. But the translation of knowledge is hampered due to unscientific approach. There is a need to redefine the techniques to translate Ayurved for modern healthcare outputs. Ayurved must be understood from the original textbooks without resorting to translations.

This can be done by understanding the nature of what is called as 'Translational Medicine (TM)'. TM emerged in the early 2000. Earlier the term 'Translational Research' was defined as 'walking the bridge between idea and cure' with the expectation that the bridge between these two worlds is difficult but necessary to build (Chabner et al. 1998: 4211).

A few years later TM was coined in the phrase 'from bench to bedside,' which means a basic laboratory discovery is applied to the diagnosis, treatment or prevention of a specific disease. (Pizzo 2002). Hence, TM 'translates' pure science knowledge into effective health applications.

TM is a new endeavor which saves from the typically difficult and messy work of going from basic research to medical applications and the slow work of moving successful new interventions into regular clinical practice. It restores hope in future clinical discovery, acknowledging the importance of non-formal methods in science that specifically support translational work.

This translational research will help us strengthen our Ayurved in a way that will prepare us for the remarkable transformation in precision health.

"Ultimately, TM will accelerate the application of research discoveries into clinical care, helping people live longer, healthier lives" says, Mark Cullen, MD, senior associate vice provost for research at Stanford and senior associate dean for research at the School of Medicine.

On October 3, 2016, the Nobel Prize in Physiology or Medicine was awarded to Yoshinori Ohsumi for "discoveries of the mechanisms for autophagy" in yeast.

However, in Harita Samhita, following shlok,

परिश्रममिताहारौ भुगतावक्षिणीसुतो । तावनादृत्य नैवाह वैद्यमन्य समाश्रये ॥

defines the importance of parishram and mitaahar i.e. physical exercise (PE) and calorie restriction (CR) respectively. Ohsumi's discovery of autophagy is the modern scientific explanation of the idea expressed in shlok of Harita Samhita. In this particular shlok, PE and CR are compared with twin deity of Ayurved, Ashwinikumar, emphasizing the immense critical role of PE and CR in prevention of disease and promotion of positive health.

Let us explore the possibility of applying the principles of TM to the following shloka. According to Acharya Charak, vitiated vata dosha causes Udavarta Yonivyapad with symptoms of painful menstruation and irritability. Onset of bleeding reduces these symptoms.

वेगोदावर्तनाद्योनिमुदावर्तयतेऽनिलः । सा रुगार्ता रजः कृच्छ्रेणोदावृत्तं विमुञ्चति ॥
आर्तवे सा विमुक्ते तु तत्क्षणं लभते सुखम् । रजसो गमनादूर्ध्वं ज्ञेयोदावर्तिनी बुधैः ॥

च. चि. ३०/२५-२६

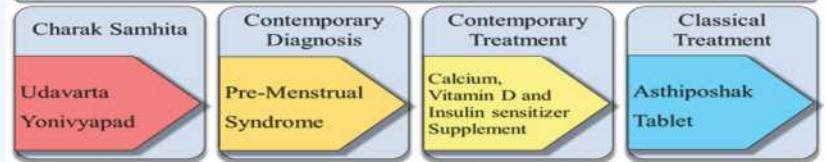
However, in modern science Udavarta Yonivyapad can be considered as Pre-Menstrual Syndrome (PMS). PMS is characterized by both somatic and psychological symptoms occurring during the luteal phase of a woman's menstrual cycle. According to article in Psychoneuroendocrinology (2003), more than 50% of menstruating women experience at least some premenstrual symptoms of varying severity, 20% to 30% of women are affected by moderate to severe symptoms and 3% to 8% of women meet diagnostic criteria for premenstrual disorders.

Clinical study reports published in Am J Obstet Gynecol establish the therapeutic role of Calcium supplements in decreasing both negative mood symptoms as well as somatic symptoms in PMS.

According to a research in Cochrane Database Syst Rev. 2013, in women with PMS due to fewer serotonin transporter receptors, abnormal serotonin transmission has been found. Hence, treatment with Selective Serotonin Reuptake Inhibitors (SSRIs) is the most effective and rapid therapy for PMS. Serotonergic modulation has demonstrated improvement in various symptoms of PMS. Herbs like Withania somnifera (Ashvagandha) are SSRI and useful in PMS.

According to a review in Obstet Gynecol Sci, 2019 studies indicate that vitamin D and calcium supplement or the use of a diet rich in these two micronutrients, could improve serum levels during the luteal phase and eliminate or improve PMS symptoms. Vitamin D and calcium, when compared to the treatments mentioned

Translational Medicine from Udavarta Yonivyapad to Pre-Menstrual Syndrome



in the studies can be safe, effective, acceptable, low cost and convenient method for reducing the intensity and frequency of PMS symptoms thus, improving women's quality of life.

Acharya Charak as prescribed Vatahar Chikitsa for Vataj Yonivyapad:

नहि वाताहते योनिनरीणां संप्रदुष्यति । शमयित्वा तमन्यस्य कुर्याद्दोषस्य भेषजम् ॥

च.चि.३०/११५

A time has come to translate ayurvedic wisdom in modern clinical aspects. Understanding Udavarta Yonivyapad as pre-menstrual syndrome is one of the examples of TM. This way we will be able to provide Ayurved therapies for modern diseases. Applying TM principles for understanding Ayurved will help us walk the bridge between idea and cure.

DR. MILIND PATIL

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Lost in the Translation: Johns Hopkins Medicine

If academic medicine doesn't take a proactive role in undertaking these imperatives, we may find that our mission of advanced medical therapy through discovery gets lost in the translation.

-Bill Brody

NVP: The Burning Issue

An article says that nausea and vomiting are common experiences in pregnancy (NVP), affecting 70–80% pregnant women.

Symptoms usually begin 2–4 weeks after fertilization, peak between 9 and 16 weeks of gestation and generally resolve by 22 weeks of gestation. Up to 10% of women have a prolonged course with symptoms extending until the time of delivery.

NVP can significantly reduce the quality of life of the pregnant woman. NVP significantly increases the odds for high blood pressure and preeclampsia in symptomatic pregnant women compared with symptom-free pregnant women. The symptoms of NVP lead to increased psychosocial problems like depression and may cause a negative impact on parenting and family relationships in 10–35% patients.

Although, morbidity in pregnant women due to NVP is significant, these issues are overlooked. (Gastroenterol Clin North Am. 2011 Jun).

Hence, dealing with morning sickness is important because when a pregnant woman feels persistent nausea and vomiting, she might



see whether ginger can help settle her stomach or perhaps plenty of water. If that doesn't help, she might develop hyperemesis gravidarum (HG). One-third of women suffering from NVP have clinically significant symptoms. A small percentage of these women will develop HG, which is the most common indication for hospital admission during the first trimester of pregnancy.

To avoid all these complications, early treatment of nausea and vomiting during pregnancy is recommended to provide symptom relief and prevent progression to hyperemesis gravidarum.

A meta-analysis shows that about half of the pregnant women worldwide are infected with *H. pylori* and the prevalence of this infection in Asian continent is 44% (International Journal of Women's Health and Reproduction Sciences Vol. 5, No. 1, January 2017).

H. pylori (*Helicobacter pylori*) is a gram-negative bacterium that causes chronic inflammation (gastritis) in the stomach, duodenum by invading the lining of the stomach and producing a cytotoxin termed vacuolating cytotoxin A (Vac-A) and lead to ulcer formation.

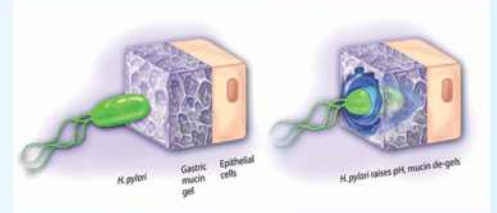
NVP can be considered as Amlapitta in Ayurved. According to Madhav Nidan, there are various lifestyle factors contributing to the aetiology of Amlapitta (hyperacidity):

विरुद्धदुष्मलविदाहिपित्तप्रकोपिपानान्नभुजो विदग्धम्।

पित्तं स्वहेतूपचितं पुरा यत्तदम्लपित्तं प्रवदन्ति सन्तः॥ – मा.नि. ५१/१

It is now established that Dushta paan (contaminated beverages) and anna (food) which is mentioned as notable sources of Amlapitta

is contaminated with microbes such as *Helicobacter pylori*, *E. coli*, *Entamoeba histolytica* and major cause of gastrointestinal disorders by



modern medical science. It is now well established that there is a strong association between gastric colonization of *H. pylori* and occurrence/severity of NVP.

As symptoms of NVP begin 2–4 weeks after fertilization, peak between 9 and 16 weeks of gestation which is most sensitive time for exposure to teratogens because of organogenesis, we need time-tested, safe and effective treatment to counter *H. pylori*.

An ideal anti-NVP drug should neutralize excess acid, regulate the acid secretion, protect gastric mucosa, heal the epithelial layer damage, reduce nausea, vomiting and eradicate *H. pylori*.

Recent studies have demonstrated antimicrobial efficacy of ellagic acid, a naturally occurring dietary polyphenol against *H. pylori*.

Amlapitta Mishran is a scientific and ideal combination containing:

Ingredients	Actions	Contains
Shouktik Bhasma	Neutralizes acid effectively and quickly	Calcium Carbonate
Yashtimadhu, Triphala	Anti <i>H. pylori</i>	Ellagic Acid (Anti - <i>H. pylori</i> activity)
Triphala, Yashtimadhu, Vasa, Nimba, Pittapapada, Chirayata, Patol	Anti-Inflammatory	
Guduchi	Anti-Stress	
Yashtimadhu, Nimba	Wound Healing	

Applying these TM principles for understanding Amlapitta will help us walk the bridge between idea of *H. pylori* eradication by ellagic acid and NVP cure.

Amlapitta Mishran

Effective in

Avipaak, Amlodgar, Aruchi, Utklesh, Hruddaha, Parinamshoola, Nausea and Vomiting of Pregnancy

Shake well before use

Dosage -

1 to 2 tsf twice or thrice a day preferably before meal or as per the condition of the disease



Shree Dhootapapeshwar Standards
SDS Monograph No. 070003
Amlapitta Mishran Suspension



Availability :
200 ml, 450 ml.



Ashvagandha in Rasarajeshwar Rasa (RRR):

Restores, Regenerates and Rejuvenates

The latest World Health Organisation fact sheet published in February 2018, states that Musculoskeletal disorders are the second largest contributors to joint deformity, chronic morbidity, disability and frailty worldwide with low back pain being the single leading cause of disability globally.

Musculoskeletal conditions comprise more than 150 diagnoses that affect the locomotor system such as muscles, bones, joints and associated tissues including tendons and ligaments, an inevitable consequence of ageing (International Classification of Diseases).

These conditions involve neural-musculo-skeletal (NMS) disabilities like lumbar spondylitis, sciatica, cervical spondylitis, ankylosing spondylitis, rheumatoid arthritis etc. which were once considered to be diseases of the old but now have become relevant across the life course and which are predicted to rise significantly as the global population ages. Between one in three and one in five people (including children) live with a painful and disabling musculoskeletal condition respectively.

There are two types of musculoskeletal disorders:

1. Degenerative (Dhatukshayajanya) musculoskeletal disorders
2. Autoimmune (Margavarodhajanya) musculoskeletal disorders

Causes of Degenerative (Dhatukshayajanya) musculoskeletal disorders: Aging, trauma, faulty postures, repetitive movements, overuse of particular joints and muscles involving wear and tear

व्यायामादपतर्पणात्प्रपतनाद्गताक्षयाज्जागरात्।

वेगानां च विधारणादतिशुचः शैत्यादतित्रासतः॥

रुक्षक्षोभकषायतिक्तकटुकैरेभिः प्रकोपं व्रजेत्।

वायुवर्धिरागमे परिणते चाह्वेऽपराह्वेऽपिच॥

(तीसटाचार्य-माधवनिदान-मधुकोष टीका)

Causes of Autoimmune (Margavarodhajanya) musculoskeletal disorders:

Chronic inflammatory conditions of the joints arising from unwanted autoimmune mediated responses (Interleukins and TNF) which are important factors in the rise of NMS disorders. Aging leads to production of a pro-inflammatory responses in the body which are responsible for various inflammatory changes and can be co-related to Aam, resulting from deranged metabolism or Agnimandya. Aging affects NMS system hampering mobility. This fact is validated by Ayurved, that ageing results in increased Vata dosha, which affects Kapha sthana like sandhis and leads to age-related inflammatory changes in the joints.

वायोः धातुक्षयात्कोपोमार्गस्यावरणेन वा । -च.चि. २८/५६

देहे स्रोतांसि रिक्तानि पूरयित्वाऽनिलो बली।

करोति विविधान्व्याधीन्सर्वगैकांगसंश्रितान्॥ -च.चि. २८/५६

The contemporary line of management in NMS conditions includes surgery, anti-inflammatory, analgesic and steroidal therapeutics, which is expensive, invasive, merely palliative and has side-effects on longterm consumption. Modern conventional treatment of NMS system does not address the aging process as a therapeutic target. A novel approach in management of neurological and musculoskeletal disorders should include treatment modalities taking care of the etiopathogenesis of the diseases, which shall help in restoring the damage to the nerves and the joints involved. Correcting the damage caused by degeneration or autoimmune inflammatory response and preventing recurrence shall be a panacea in managing the disease burden associated with neuro-musculo-skeletal disorders.

Therapeutic measures with potential to promote processes like chondrogenesis, osteogenesis, myogenesis need to be sought after; for which, Rasayan chikitsa given in Ayurved plays a vital role. Classical texts of Ayurved have also explained in detail Marma-Asthi-Sandhi vyadhis and their treatment in chapter of Vata vyadhi. Vata vyadhis are classified as Autoimmune/Margavarodhajanya or Degenerative /Dhatukshayajanya in origin. Therefore, two approaches of Aampachan and Rasayan chikitsa cover the entire management of NMS diseases.

Rasarajeshwar rasa is a potent herbomineral formulation, consisting of Rasayan, Aampachak, Agnideepak and Rasadhatu shodhan dravyas, covering treatment prerequisites of entire Vata vyadhis of both Aam and Dhatukshaya origin by restorative, regenerative and rejuvenative action.

मन्याशूलं कटिशूलं अन्यान् वातगदान्दहरेत्।

पक्षाघातादिरोगेषु बल्यो वृष्यो रसायनः॥

Ashvagandha is one of the major ingredients in Rasarajeshwar rasa. Ashvagandha is vata and kapha shamak, anti-degenerative, anti-inflammatory, balya and anti-aging.

अश्वगन्धाऽनिलश्लेष्मश्वित्रशोथक्षयापहा।

बल्या रसायनी तिक्ता कषायोष्णाऽतिशुक्रला॥

Two published studies on Ashvagandha have established the analgesic, anti-inflammatory and antioxidant properties of Ashvagandha.

In a study, Evaluation of Analgesic Activity of Standardised Aqueous Extract of Withania somnifera in Healthy Human Volunteers using Mechanical Pain Model, published in Journal of Clinical and Diagnostic Research. Jan 2019, Withania somnifera (Ashvagandha) significantly increased pain threshold, pain tolerance force and time compared to placebo. Test drugs were well tolerated.

In a study, Suppression of inflammation and cartilage destruction by steroid-rich methanolic extract of Withania Somnifera: A study on collagen induced arthritic rats, published in Journal of Experimental and Applied Animal Sciences, June 2017, Ashvagandha treatment significantly inhibited NF-kB, TNF-α and MMP-8 upregulation. Also, the ability to inhibit the production of oxidative stress and subsequent modulation of the inflammatory cytokines shows the protective effect of Ashvagandha and its potential use for the treatment of arthritis.

Thus, Ashvagandha in Rasarajeshwar rasa (RRR) is Restorative, Regenerative and Rejuvenative.

Rasarajeshwar Rasa

Effective in

Ardita, Hanustambha, Manyastambha, Hasta-Pada Chimchimayan, Manyashoola, Katishoola, Shirokampa, Rigidity in Parkinson's disease Pakshaghat

Dosage & Anupan

1 to 2 Tablets once or twice a day with Dashmoolarishta, Balarishta, Maharasnadi Kwath, Ashvagandharishta, lukewarm water or as per the condition of the disease



Shree Dhootapapeshwar Standards
SDS Monograph No. 1902604
Rasarajeshwar Rasa



Availability :
30 Tab. (Blister pack)

Guggul: A Secret to Healthy Skin

Healthy skin is an indicator of better mental, emotional health, social engagement, more active and productive life. Environmental and lifestyle factors affect skin health. The International League of Dermatological Societies (ILDS), has identified the consequences of skin aging as one of the most important grand challenges in global skin health.

Aging is a time-dependent natural phenomenon that results in changes to the structure and function of human skin. Aging is a composite of two biological processes:

1. **Intrinsic:** Natural wearing
2. **Extrinsic:** Changes brought about by skin's interaction with the external environment

Both factors result in a common endpoint i.e. decline of skin's function. Extrinsic factors accelerate intrinsic factors and deeply affect skin deterioration as we age. There are none of us who will escape the aging effects to some degree. Worldwide aged populations show skin aging with reduced functional capacity and increased susceptibility to cutaneous conditions like dry skin, itching, dyspigmentation, wrinkles, infections, etc and in turn reduce the likelihood for healthy and active aging.

In the treatment of skin diseases, anti-aging therapy will immensely add to therapeutic benefits.

Intrinsic Skin Aging

Environment Factors
(UV light, Pollution)

Life-style Factors
(Smoking)

Chronic diseases

Guggul Kalpa

वृष्य

सूक्ष्म

रसायन

बल्य

कफवातव्रण

कुष्ठामारुतान्

पिडकाग्रन्थिशोफ

कुमी

सर्वदोषहा

Tvak Sarata

स्निग्धश्लक्ष्णमृदुप्रसन्नसूक्ष्म
माल्पगम्भीरसुकुमारलोमा

सुखसौभाग्यैश्वर्योपभोगबु
द्विविद्यारोग्यप्रहर्षणा
न्यायुष्यत्व

Acharya Charak has elaborated the signs of Tvaksarata (healthy skin) as follows:

तत्र स्निग्धश्लक्ष्णमृदुप्रसन्नसूक्ष्माल्पगम्भीरसुकुमारलोमा सप्रमेव च त्वक्
त्वक्साराणाम्।

सा सारता सुखसौभाग्यैश्वर्योपभोगबुद्धिविद्यारोग्यप्रहर्षणान्यायुष्यत्वं चाचष्टे। -च.
वि. ८

Description of Guggul in Bhavaprakash Karpuradi varga is as:

वृष्यः सूक्ष्मः रसायनः बल्यः ... (Anti-aging)

कफवातव्रणकुष्ठामारुतान् ... पिडकाग्रन्थिशोफकृमीञ्जयेत्।

(Anti-inflammatory)

गुग्गुलुः सर्वदोषहा॥ (Anti-disease specific)

Guggul exhibits protective and restorative effects on the CCL-110 skin fibroblast cell line (International Journal of Cosmetic Science, 2012). Guggul has ability of promoting synthesis of intracellular triglycerides or lowering degradation of intracellular triglycerides thereby, reducing depth of large and small wrinkles and giving the skin a smooth appearance. (Indian Journal of Traditional Knowledge, October 2006).

Herbs like Bakuchi, Gomutra, Kutaja, Vidanga, Nimba, Chitraka, Trivruta, Haridra, Chavya, Katuaka, Ativisha, Devdaru, Manjishtha and Guduchi, are effective as well as preventive in skin ageing. (Bioactive compounds from natural resources against skin aging, Phytomedicine 2012).

Panchatikta Ghruta Guggul

Effective in

Kushtha, Vatavyadhi,
Nadivrana, Arbuda,
Bhagandar, Arsha, Gulma,
Vatarakta, Peenasa,



Shree Dhootapapeshwar Standards
SDS Monograph No. 0400104
Panchatikta Ghruta Guggul



Availability :
60 Tab., 1000 Tab.

Amrutadi Guggul

Effective in

Sravi Tvachavikar Like Pama, Mandal
and Vicharchika, Vatarakta, Amavata,
Arsha, Amlapitta, Bhagandar,
Nadivrana, Prameha, Shotha,
Varicose ulcer



Shree Dhootapapeshwar Standards
SDS Monograph No. 0400114
Amrutadi Guggul



Availability :
60 Tab., 1000 Tab.

Swayambhuva Guggul

Effective in

Shwitra and other Chronic Skin
Disorders, Sravi Kushtha, Itching,
Mukhadushika (Acne), Ekakushtha,
Prameha, Pada Vrana, Vatarakta,
Madhumehajanya Kshudrakushtha,
Pama in Children



Shree Dhootapapeshwar Standards
SDS Monograph No. 0400284
Swayambhuva Guggul



Availability :
200 ml, 450 ml.

As Vata aggravates in old age, chronic musculo-skeletal disorders are more prevalent in elderly population. Now it is established that aging is an important contributing factor to the development of various musculo-skeletal disorders. Therefore, anti-aging therapies are expected to play critical role in the therapy of disorders like osteoarthritis, rheumatoid arthritis, ankylosing spondylitis.

Multifactorial mechanism responsible for unhealthy ageing may include an age-related pro-inflammatory condition called

Inflammaging. Inflammation is advanced by aging of adipose tissue, joint tissues including the cartilage and meniscus resulting in increased production of cytokines, chemokines, matrix-degrading enzymes and tumour necrosis factor- α (TNF- α). An age-related increase in blood levels of cytokines has been associated with decreased physical function and frailty. Aging activates adipogenesis and suppresses osteogenesis in stem cells. (Aging Cell 2004).

Sinhanad Guggul

Effective in

Amavata, Vatavyadhi, Shwas, Kas, Kushtha, Vatarakta, Udara, Gulma



Availability :
60 Tab., 1000 Tab.

Gokshuradi Guggul

Effective in

Amavata- Niramavastha, Mootrakruchchhra, Mootraghata, Mootrashmari, Prameha, Vatavyadhi, cVatarakta, Shukradosha



Availability :
60 Tab., 1000 Tab.

Panchamrut Loha Guggul

Effective in : Vatavikar, Manyakasherukagata Vata {Cervical Spondylosis}, Avabahuk, Grudhrasi, Vatanadi Vikruti, Sandhigata Vata, Mansashosha, Mastishka Dourbalyajanya Shirahshoola, Insomnia, Tremors, Heaviness, Tingling due to Majjakshaya



Availability :
30 Tab., 60 Tab., 1000 Tab.

Trayodashang Guggul

Effective in

Grudhrasi, Katishoola, Stiffness in back, Ankle and other Joints, Sandhigata Vata, Asthi-Majjagata Vata, Asthisousheerya, Asthibhagna



Availability :
60 Tab., 1000 Tab.

Yogaraj Guggul

Effective in

Vatavyadhi, Kushtha, Grahani, Vatarakta, Arsha, Bhagandar, Aruchi, Agnimandya, Udarashoola



Availability :
60 Tab., 1000 Tab.

Mahayogaraj Guggul

Effective in

Vatavyadhi, Kushtha, Grahani, Vatarakta, Arsha, Bhagandar, Aruchi, Agnimandya, Udavarta, Gulma, Apasmar, Shukradosha, Rajodosha, Napunsakatva, Vandhyatva



Availability :
30 Tab., 60 Tab., 1000 Tab.

Lakshadi Guggul

Effective in

Asthisousheerya, Asthibhagna, Asthisousheeryajanya Sandhishoola, Asthibhagnottar Sandhishoola,



Availability :
60 Tab., 1000 Tab.

Kaishor Guggul

Effective in

Vatarakta, Vataraktajanya Sandhishoola, Sravi Tvachavikar, Gulma, Vrana



Availability :
60 Tab., 1000 Tab.

Child's future: Health, Ageing and Longevity

बाल्यं वृद्धिश्चविमेषा त्वग्दृष्टिः शुक्रविक्रमौ।
बुद्धिः कर्मेन्द्रियं चेतो जीवितं दशतो ह्रस्ते॥

—शा.सं.प्र.ख.६/६२

Acharya Sharangdhar described growth and development stages of full lifespan, decade-wise when the estimated full lifespan was approximately 120 years.

From above, it should be obvious that each subsequent growth stage depends on the quality of the preceding growth and developmental stage. Nutrition during early childhood till adolescent age has a great effect on healthy growth and various deficiencies have a negative impact on adult healthy growth.

Recent studies highlight increasing global prevalence of lifestyle risk factors and age-associated diseases which have emerged as the striking cause of morbidity and mortality among adolescents. Lifestyle risk factors can be easily modified if detected early in life. (Indian Journal of Public Health Research & Development, Mar2019)



The early period of childhood is important with respect to lifelong health as growth and development of tissues and organ systems occur at a rapid pace in this age. Any deviation from this process, due to nutritional deficiencies or exposure to environmental factors, not only derails or delays growth, but also causes metabolic diseases that affect adult health. Health across the lifespan is predicted by cellular health in the tissue, organ structure and function early in life. Various studies have reported that hampered early childhood nutrition and growth is a potential risk factor for developing age-associated lifestyle disorders like obesity, cardiovascular disease, diabetes, cancer, infertility, etc. in later life. Therefore, the dissection of underlying molecular mechanisms to explain this phenomenon, known as 'developmental programming', is a highly investigated area of research. (Subcell Biochem. 2019)

These age-associated diseases are related not only to genetic predisposition but also to adaptive changes to environmental exposures during development. This phenomenon is referred as the Developmental Origins of Health and Disease (DOHaD) hypothesis. It means that exposure to a deficient environment

during childhood growth and development is associated with continuous changes in tissue morphology and its function. This impaired capacity of organ systems to adapt with physiological stressors, including ageing, in postnatal life ultimately results in poor adult health. (Early Life Origins of Ageing and Longevity, HAL, Volume 9)

So, the nutritional measures taken in childhood not only take care of child's growth and development but also have positive effects on adult health, aging and longevity.

Shishubharan Rasa (SBR) is a safe and effective intervention strategy which ultimately will have a positive effect on child's health and prevent the risk of age-associated disease.

वर्णायुःकान्तिदं श्रेष्ठं पुष्टिदबलवर्धनम् ।

बालानां वद्विकृद्यैव दन्तोदभेदगदापहम् ।

Shishubharan Rasa helps to improve complexion, imparts glow to the skin. It is a general tonic and helps proper growth of child. Shishu Bharan Ras acts as an appetizer and digestive in children. It helps in teething troubles.

Sr.	Shishubharan Rasa
1.	Kumarkalyan Rasa (Suvarnayukata Premium Quality) कुशतां वह्निवैकृतम्। रसः कुमारकल्याणो नाशयेन्नात्र संशयः॥
2.	Sitopaladi Choorna श्वासकासक्षयहरंमन्दान्निं ज्वरमूर्ध्वगतं व्यपोहति।
3.	Sanshamani Vati गुडूची कटुका तिक्ता रसायनी लघ्वी बल्याऽग्निदीपनी दोषत्रयज्वरक्रिमिवमीन्हरेत् श्वासकासनुत् ।
4.	Madhumalini Vasant Rasa मधुमालिनीनामायं वसन्तो वैद्य पूजितः। अनुपानविशेषेण बलपुष्टिप्रदायकः॥
5.	Draksha kwath द्राक्षा पक्वा सरा शीता चक्षुष्या बृंहणी गुरुः।

Shishubharan Rasa

Effective in

Ensuring Child's Normal Growth, Physical, Mental and Intellectual development, Strong Immunity, Trouble-free Teething

Dosage & Anupan - Children

Upto 2 years : 1 Tablet once a day
2 to 5 years : 1 Tablet twice a day
Above 5 years : 2 Tablets twice a day

Administration

Tablet to be crushed and administered with honey, Goghrita, Godugdha or as dire



Availability :
30 Tab. (Blister pack)

HCR: Cardio-Protection and Reversal (CPR) in CVD

Non-communicable diseases (NCDs) have overtaken communicable diseases as the world's major disease burden, with Cardiovascular disease (CVD) currently accounting for nearly half of NCDs, engulfing all socio-economic strata of the society. CVDs are the number one cause of death worldwide with an estimate of 17.3 million deaths per year and expected to grow till 23.6 million by 2030. (Journal of the American College of Cardiology, 2012)

In India, CVDs contributed to 28.1% (2.8 million) deaths of total in 2016 compared with 15.2% (1.3 million) of deaths in 1990. (The Lancet Global Health, December 2018)

Not only management of CVDs but prevention also is indeed the need of the hour. CVDs are fatal and most of the times create a lifetime disability. The conventional line of treatment in CVDs is symptomatic, expensive and fails to prevent recurrence. The latest WHO policies on CVDs focus on prevention in order to arrest the pace of growth of this disease burden and regards prevention as the best cure.

Recent studies highlight the role of metabolic syndrome as a significant factor in development of CVDs, a fact which Ayurved has established thousands of years ago. Also, Ayurved provides a detailed insight into the root causes of CVDs and promises a comprehensive management.

As a result of various metabolic imbalances, activation of **pro-inflammatory markers** in blood, cells and tissues cause 'inflammageing' leading to increased risk for CVDs. These research findings can be **Translated** into the pathogenesis of Hrudroga mentioned in Madhav Nidan and vice-versa. The etiopathogenesis of CVDs include:

अत्युष्णगुर्वन्नकषायतिक्तश्रमाभिघाताध्यशनप्रसङ्गैः।

सञ्चितनैर्वेगविधारणैश्च हृदामयः पञ्चविधः प्रदिष्टः॥

dietary as well as psychological factors responsible for disturbance in cardiometabolic health, which if chronically persistent, trigger mechanisms which upregulate inflammageing and ultimately advance into CVDs.

Some of the key findings associated with inflammageing leading to CVDs are:

1. Genetic susceptibility
2. Mitochondrial dysfunction
3. Cellular senescence
4. Visceral obesity producing pro-inflammatory markers
5. Microbiota and gut permeability changes
6. Pro-inflammatory markers in blood
7. Intrinsic defects in immune cells and chronic infections

The primary cause of Hrudroga, according to Ayurved, is associated with improper metabolism, leading to formation of Aam, faulty nourishment of sapta dhatus in body including Rasadhatu dushti. This Aam or Dushta Rasadhatu leads to lifestyle metabolic disorders like obesity, diabetes, atherosclerosis, etc. Also, it gets lodged in Hruday, causing Hrudroga and expressing symptoms like CVDs.

दूषयित्वा रसं दोषा विगुणा हृदयं गताः।

हृदि बाधां प्रकुर्वन्ति हृद्रोगं तं प्रचक्षते॥

The chronicity of Rasadhatu dushti by Aam leads to activation of pro-inflammatory markers at higher level ultimately resulting into chronic inflammatory changes in various systems of the body. Despite its fundamental physiological role as a defense

mechanism against infections or extraneous molecules, when inflammation is prolonged it becomes chronic and detrimental to health.

Rasadhatu is responsible for maintaining the structural and functional integrity of endothelium in the coronary vessels. Rasadhatu when vitiated with Aam leads to its accumulation in the cardiac vessels which in the long run leads to conditions like atherosclerosis or dhamani pratichaya, a nanatmaja kapha vikaar, damaging the endothelium of the vessels and in turn of myocardium.

Acharya Charak has illustrated the approach to manage, treat and prevent CVDs:

तन्महत् ता महामूलास्तद्योजः परिरक्षता। परिहार्या विशेषेण मनसो दुःखहेतवः॥

हृदयं यत् स्याद्यदौजस्यं स्रोतसां यत् प्रसादनम्। तत्तत् सेव्यं प्रयत्नेन प्रशमो ज्ञानमेव च॥

It involves management of stress, dietary habits to modulate metabolism with medicines for cardioprotection i.e. protection of cardiac vasculature from inflammageing which is responsible for endothelial dysfunction. By promoting healthy Rasadhatu we can ensure cardiometabolic health.

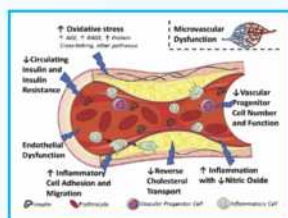
Restoration, preservation of cardio-metabolism and reversal of cardiovascular inflammageing shall serve the purpose of prevention from damage and strengthening of cardiovascular system.

Hrudroga Chintamani Rasa (HCR) is a novel cardioprotective herbomineral formulation. Chintamani in the name Hrudroga Chintamani Rasa suggests that it is a gem in preservation and restoration of cardio-metabolic health and reversal of CVDs.

HCR consists of a combination of classical and time-tested herbomineral formulations Bruhat Vata Chintamani Rasa, Poornachandrodaya Makardhwaj, Abhrak Bhasma, Akeek pishti, along with potent cardio-protective herbs like Arjun, Jatamansi, Manjishta and titrated with Dashamoola kwath.

The abundance of phenolic content in herbs of HCR:

1. Reduce plasma inflammatory and fibrotic markers, ameliorate extracellular modelling and interstitial inflammation.
 2. Maintain homeostasis levels of reactive oxygen species and antioxidant enzymes
 3. Modulate stress by regulating lipid peroxidation
 4. Regulate production of nitric oxide effect, reduce expression of the pro-inflammatory cytokines which are all responsible for inducing inflammation.
 5. Anti-thrombotic as well as pro-angiogenic effect on blood
- HCR, indeed, is as lifesaving as CPR in Cardiovascular diseases.



Hrudroga Chintamani Rasa

Effective in

Hrudroga, Hrudrava, Ayasen Shwas (Dyspnoea on Exertion), Hrudshoola, Hrud Dourbalya, Dhamani Pratichaya

Dosage & Anupan - Children

1 to 2 Tablets once or twice a day with Dashamoolarishta, Arjunarishta, cow milk, honey, lukewarm water or as per the condition of the disease



Shree Dhootapapeshwar Standards
SOS Monograph No. 1902594
Hrudroga Chintamani Rasa



Availability :
30 Tab. (Blister pack)

Quality Beejaposhan: The Panacea for Male Infertility

Male infertility refers to a male's inability i.e. impairment of a function to cause conception in a fertile female. Idiopathic male infertility affects nearly 10-15% of men in their prime reproductive age. (NPJ Genom Med. 2016 Aug)

Apart from a number of other contributing factors, deterioration in semen quality is the prime factor contributing to a drop in the fertility rate.

According to the article, "Decline in seminal quality in Indian men over the last 37 years" published in Reproductive Biology and Endocrinology (2018), semen parameters like semen volume, sperm concentration, total motility, rapid linear progressive motility, normal sperm morphology and sperm viability in Indian men have declined with time. Decline in these semen parameters is the result of defective spermatogenesis.

Acharya Vagbhat has illustrated Vajeeekaran as Beejaposhana in 1st Adhyay (आयुष्कामीय) of Sutrasthan.

चत्वारिंशोऽनपत्यानामध्यायो बीजपोषणः।

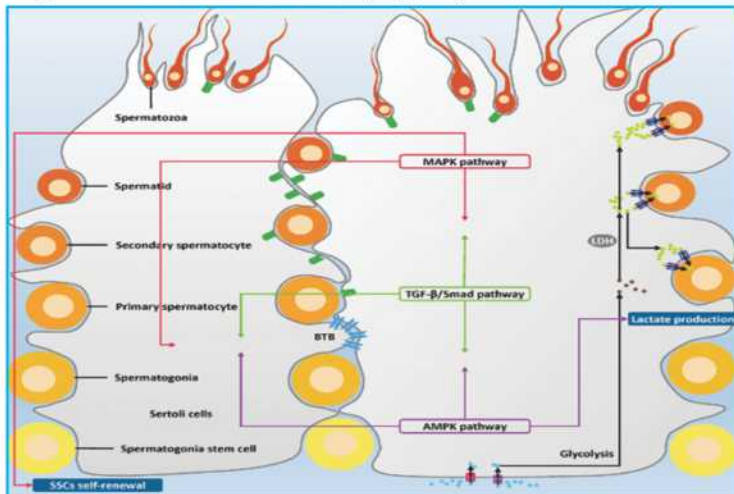
According to Acharya Vagbhat vajeeekaran medicines improve or promote Beejaposhan i.e. spermatogenesis.

Spermatogenesis (Beejaposhan) is a significant physiological process of sperm production in the epithelium of the seminiferous tubules. In this process, spermatogonial stem cells (SSCs) are triggered to produce spermatogonia, which will transform to spermatocytes, spermatids, and finally mature spermatozoa.

Sertoli cells are a key factor in spermatogenesis and a better insight about the role of hormones and growth factors in the regulation of their homeostasis and functions will be important for the control and reversal of male fertility.

The regulation of Sertoli cell proliferation and differentiation is thought to be controlled by cell-cell junctions and a set of circulating and local hormones and growth factors.

Normal spermatogenesis depends on Sertoli cells, mainly due to their influence on nutrient supply, maintenance of cell junctions, and support for germ cells' mitosis and meiosis. (Figure 1)



* Figure 1: Multiple signaling pathways in Sertoli cells: recent findings in spermatogenesis. Accumulating evidence in the past decade has highlighted the dominant functions of the MAPK, AMPK, and TGF-β/Smad signaling pathways during spermatogenesis. (Table 1)

These signaling pathways combine to form a complex regulatory network for spermatogenesis. In infertile patients, the activities of these signaling pathways in Sertoli cells are abnormal.

Table 1: Multiple signaling pathways in Sertoli cells

The **MAPK** signaling pathway regulates dynamics of tight junctions and adherens junctions, proliferation and meiosis of germ cells, proliferation and lactate production of Sertoli cells;

TGF-β/Smad signaling pathways affect dynamics of tight junctions and adherens junctions, as well as the proliferation of Sertoli cells.

The **AMPK** signaling pathways affect dynamics of tight junctions and adherens junctions, regulates lactate supply as well as the proliferation of Sertoli cells.

Understanding the mechanisms of signaling pathways like AMPK, MAPK in Sertoli cells during spermatogenesis provides new insights into the physiological functions of Sertoli cells in male reproduction. Also, they serve as potential therapeutic targets in abnormal spermatogenesis including male infertility.

Modern science identifies function of 5' AMP-activated protein kinase (AMPK) as the controller of spermatozoan production, motility, mitochondrial activity, membranes, acrosome reaction and ability to fertilize. It also plays an important role in the reproductive function by connecting other physiological regulators with energy balance i.e. hypothalamus-pituitary-gonadal axis. It acts as a novel gatekeeper of steroidogenesis, a key signaling protein for the spermatozoa, male fertility control and a target for modulating steroid hormone production.

Average semen parameter values for normal (fertile) Indian men:

Volume	2.88 ± 0.77 ml
Sperm Concentration	81.08 ± 29.21 per ml
Sperm Motility (Total)	66.37 ± 10.95%
Rapid Linear Progressive Motility	52.64 ± 15.78%,
Normal Morphology	56.68 ± 20.23%
Viability	72.63 ± 8.31%

* Reprod Biol Endocrinol. 2018

Ayurved Superspeciality Drug, Beejpushti Rasa is formulated using Vajeeekaran herbs like Gokshur, Shatavari, Yashtimadhu and Amalaki which are established AMPK, MAPK activators. Metallo-mineral drugs like Suvarna (Svarna) Bhasma and Poornachandroday Makardhwaj are also included in Beejpushti Rasa to improve spermatogenesis (Beejaposhan) and male sexual functions.

Beejpushti Rasa

Effective in

Alpa Shukra, Dushta Shukra, Ksheena Shukra, Vishushka Shukra

Dosage & Anupan

1 to 2 Tablets once or twice a day with Godugdha or as directed by the Physician



Shree Dhootapapeshwar Standards
SDS Monograph No. 1902654
Beejpushti Rasa



Availability :
30 Tab. (Blister pack)



For more details please contact:
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