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Pranayama- A Key to Healthy Life with Special Reference to Vaidyakiya Subhashit Sahityani

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ABSTRACT

Healthy body has a sound mind. Physical exercise develops only the musculature of the body but yoga not only develops sound mind but also tone up the various organs of the body. The different asanas in yoga are helpful to various organs in the body to remain healthy and perform their functions effectively. For better results one should go through the concept of Pranayama. It consists of inhalation (Puraka), retention of breath (Kumbhaka) and exhalation (Rechaka). Pranayama is an element of yoga and it improves the functions of lung. It is a scientific method of controlling breath to provide deeper relaxation and meditation. With the help of Pranayama one can increase their attentiveness and intelligibility of thoughts. It mainly improves functions of the nervous system and provides complete relaxation. It relieves pain caused by the compression of nerve ending. It helps to increase oxygen supply to the brain which in turn helps to control the mind. Mental and bodily powers are also increased by its practice. (11) It improves glowing on the face and also clear the sound. Ventilation capacity of lung is increased. During holding of breath, heart muscles modulate themselves to work in hypoxia. It is useful in diseases of respiratory system like asthma, bronchitis, chronic cough, angina, cardiac arrhythmia, high blood pressure, low blood pressure, etc. Pranayama is the best remedy for stress and stress induced diseases like peptic ulcer, irritable bowel syndrome and insomnia. As it improves the nervous system, some beneficial changes in involuntary actions, mind control and metabolism are also observed. This article is a focus on the concept, types, benefits, indications and contraindications of Pranayama.

Cite this article:

Pranayama- A Key to Healthy Life with Special Reference to Vaidyakiya Subhashit Sahityani
Barsing Devendra B., Ukey Rashtrapal N., Kirte Milind C.

KEYWORDS

Pranayama, Yoga, Health, Pulmonary function, Puraka, Kumbhaka, Rechaka

INTRODUCTION

Yoga is a prehistoric Indian discipline which includes preparation of exact posture and synchronized breathing \([Pranayama]\). \(^{[1]}\) The life is defined as a presence of \(pranvayu\) in the body while death comes as the \(pranvayu\) left the body, hence it is important to control the \(pranvayu\) by \(pranayama\). \(^{[2]}\) \(Pranayama\) is essential not only to live but also to perform various functions of the body. Sensory and motor functions related with nervous system are performed with the help of \(pranvayu\). \(^{[3]}\) A well command is obtained on the sensory organs by \(pranayama\) \(^{[4]}\). In absence of \(pranvayu\) body becomes tough like a ‘wood’. \(Pranayama\) is the life, health and everything. \(^{[5]}\) \(Pranayama\) is the scientific breathing technique of \(yoga\). Practicing the \(pranayama\) by the scientific method helpful to relief from various diseases but unscientific method causes various diseases. \(^{[6]}\) Oxygen is the most vital nutrient of our body which is necessary for the proper functioning of the brain, heart, blood vessels, nerves, and internal organs. \(^{[7]}\) Breath is the lively connection that connects body and mind. \(^{[8]}\) \(Pranayama\) is one of the most significant \(yogic\) practices which cause variety of physiological benefits in healthy individuals. Awareness and attentiveness in breathing brought by \(Pranayama\) is an ability of controlling breath. The repeated exercise of breathing pattern of \(Pranayama\) increases the pulmonary function in healthy individuals. \(^{[9]}\) \(Pran\) is the vital force of our body which restrains circulation, respiration and all sensory organs to work effectively. \(Ayam\) means bringing voluntary control on the \(prana\) by increasing control over the vital functions. Breathing is under the control of \(pran\) but \(Pranayama\) can control it. Breathing process is also related with mind, if the breathing process is controlled by \(Pranayama\) the mind can also be controlled. \(^{[10]}\) \(Pranayama\) can help to change the mood, improves the physiological system and make sure of long life. The chief aspects of \(Pranayama\) are inspiration, expiration and retention. Inhalation and exhalation strengthen the lungs and improve the nervous system by increasing the capacity of holding the breath (retention). Practicing standard method of \(Pranayama\) improves energy flow to about 72000 \(nadi\)s in our body. \(^{[11]}\) Anxiety, stress, anger and unhappiness are some emotional factors having effects on breathing and subsequently on nervous system. If we control the breathing through \(Pranayama\) that would be beneficial to control these emotional factors and relief from diseases like hypertension, diabetes mellitus, insomnia, peptic ulcer and asthma. \(^{[12]}\) The effect of \(yoga\) on these systems brings about many physiological changes in human body.

AIM:

To clear the scientific concept of \(Pranayama\) with special reference to \(Vaidyakiya\ Subhashit Sahityani\).
OBJECTIVES:

1. To study the role of ‘Pranayama’ to maintain healthy life.

2. To study the role of ‘Pranayama’ in prevention of diseases.

3. To study the ‘Pranayama’ as a remedy to cure diseases.

MATERIAL AND METHODS

1. Text books of yoga.
2. Articles published in national and international journals.

Pranayama: Pranayama is a significant scientific and beneficial feature of yoga. It is the scientific breathing process which involves inhalation, exhalation and the retention of vital energy. Puraka (Inhalation): During Pranayama that fills the lungs with fresh air.

Kumbhaka (Retention of Inhaled air): During Pranayama Retention of inhaled air.

Antyakumbhaka: Holding the breath after inhalation. Bahyakumbhaka: Holding the breath after exhalation. Rechaka (Exhalation): Exhalation of just inspired air. These are the chief components of Pranayama. The success of Pranayama depends on correct ratios being maintained between inhalation, exhalation and retention.

There are eight kinds of kumbhaka in Pranayama.

1) Suryabhedana
2) Ujjayi
3) Sitakari

4) Sitali
5) Bhastrica
6) Bharamari
7) Murcha
8) Plavani

General instruction during Pranayama:

1) Sit comfortable and erected in any meditative position.
2) Always keep both the eyes closed during the process of Pranayama.
3) Perform inhalation and exhalation slowly and in simple way.
4) Give maximum time for exhalation.
5) The ratio between inhalation, retention and exhalation should be 1:4:2 which will be achieved by practice.
6) Repeat it at least 10-20 times in the morning as well as in the evening.
7) Mul-band (Retraction of anus by negative pressure), Jalandar band (Press the chin on jugular notch) and Uddiyan band (Retraction of abdominal muscles by negative pressure to make prominent rectus muscles of abdomen) are the commonly used during holding of breath (kumbhaka).
8) Jalandar band- Press the chin on the jugular notch is most commonly used as it controls the heart rate and blood pressure.
General Benefits of Pranayama \[16\][17]

1) Increases oxygen supply to the brain.

2) Fit’s the body physically and mentally.

3) It improves Ventilation capacity of lung.

4) Increases strength of cardiac muscles.

5) Beneficial in diseases of Respiratory tract.

1. Nadi Shudhi /Suryabhedan: (Alternate Nostril Breath)

Procedure:\[18\][19] Bring together the middle and index finger and keep on a point between two eyebrows (nasion). Control the right nostril by thumb and left nostril by ring finger. Keep the left hand on the left knee. Close the right nostril by the right hand thumb. Now inspire slowly and deeply through the left nostril until the lungs are full. Hold the breath up to possible extent. Then close the left nostril with the ring finger of the right hand. Now, open the right nostril and exhale slowly. After total exhalation, breathe in again through the right nostril until lungs are full. Close the right nostril by the right thumb. Hold the breath up to possible extent. Then open the left nostril by releasing finger and breathe out slowly. Repeat the procedure at least 10 times.

Benefits: According to science of Yoga our body comprises of 72000 Nadis which are cleaned by Pranayama. It gives peace of mind by directing the stream of prana. It purifies blood and useful in respiratory disorders like asthma and bronchitis. It is of great value for physical and mental health. \[20\] It causes sweating and cleans the entire nervous system. It increases appetite and strengthen the body. The body becomes light weight and healthy. \[18\] Stress, anxiety, instability in mind will be reduced and becomes calm and cool. Hence, the functioning of central nervous system is improved. It reduces disturbances in sleep and increases memory, grasping capacity and stability\[22\] Nadishodhan pranayama causes Purification of Ida (A Nadi controlling left nostril breathing) and Pingla (A Nadi controlling right nostril breathing.) which in turn leads to purification of central Sushumna-nadi (Spinal cord). This is of benefit to increase awareness which in turn beneficial for meditation. \[22\] Unknown powers of mind are enhanced by this pranayama. The regular practice of pranayama, the chronic diseases can be absolutely cured. If a practice of 250-300 cycles per day achieved, then there will be awakening of ‘Kundalinishakti’ (Unknown power). \[23\]

2. Ujjayi

Procedure: Keep your both eyes closed. Slowly inspire atmospheric air through both nostrils by constricting the neck (air passage) so that whispering sound is created until the lungs are full. Then hold the breath up to possible extent. Then release the inspired air slowly through left nostril by closing right nostril by thumb. Repeat the procedure 5-20 times. \[24\][25]

Benefits: Useful in relieving of cough, rhinitis, diseases of pharynx and ear. It delays ageing and prevents ascites. \[24\]
It is supportive in thyroid disorder and beneficial to persons suffering from sleep deprivation, stress, and anxiety.\textsuperscript{[26]}\textsuperscript{[27]}\textsuperscript{[24]}

Joints of body remain healthy due to oxidation of lactic acid which is useful to improve sound, digestion, and ascites.\textsuperscript{[27]}In scientific study, it is proved that systolic and diastolic blood pressure; pulse pressure, mean arterial pressure and heart rate are significantly decreased by \textit{Ujjayi Pranayam} followed by \textit{shavasan}.\textsuperscript{[28]}

3. \textbf{Sheetkari}

\textbf{Procedure:} Sit comfortable and erected in any meditative posture. Place the palms on respective knees. Fix the front portion of tongue to the soft palate. Join the upper and lower teeth and separate the lips. Inhale through mouth until the lungs are full. Hold the breath up to possible extent. Then by making chilling sound expire the air through nostrils.\textsuperscript{[24]}\textsuperscript{[29]}

\textbf{Important:} In summer, perform only when envirmental temperature is greater than body temperature. In cold weather do not perform it when envirmental temperature is 10-15$^\circ$C. Do not perform the \textit{Sheetkari Pranayam} in congested room or gatherings.\textsuperscript{[30]}

\textbf{Benefits:} It improves glowing on the face and useful in diseases of mouth, nose, teeth and tongue. It gives energy and freshness\textsuperscript{[19]}\textsuperscript{[26]} and is of beneficial value for persons suffering from hypertension, hyperacidity. It increases lung capacity and concentration.\textsuperscript{[32]}

4. \textbf{Shitali Cooling Breath}

\textbf{Procedure:} Bring out the tongue from mouth and roll it up from both the sides so that pipe like structure is formed. Inspire the atmospheric air through this tube like structure slowly until the lungs are full. After full inhalation take the tongue inside and close the mouth. Hold the breath up to possible extent. Then slowly exhale through both the nostrils. Repeat for 3 to 10 times.\textsuperscript{[33]}

\textbf{Benefits:} The mind becomes fresh and calm and increases the lung capacity.\textsuperscript{[29]}It is useful in the treatment of thirst and fever. It is helpful in the treatment of liver and spleen diseases, skin diseases, hypertension and dyspepsia.\textsuperscript{[33]}

5. \textbf{Bhastrica}

\textbf{Procedure:} Bring together the middle and index finger and keep on the point between two eyebrows (nasion).Control the right nostril by thumb and left nostril by the ring finger. Keep the left hand on corresponding knee. Close the right nostril by the thumb and start vigorously inhalation and exhalation by left nostril for 4-5 times and increase up to 20 times. Finally take a deep inspiration and hold the breath by closing both nostrils with fingers. Repeat the same with opposite nostril.\textsuperscript{[35]}\textsuperscript{[36]}

\textbf{Benefits:} It increases working capacity of heart and brain, appetite and digestion. It makes a mind calm and stable and helpful in treatment of diabetes mellitus and diseases related with nose and Para nasal sinuses. It is also beneficial in controlling hair loss.\textsuperscript{[37]} It improves the function of nervous system and improves the health.\textsuperscript{[38]}
Contraindications for *Bhastrica*: contraindicated among the persons suffering from low blood pressure and high blood pressure, diseases of nose, ear, eye, insomnia and psychological instability. \[37\] \[38\]

6. Bhramari

**Procedure:** Close both the ear openings by respective thumb. Close both the eyes with the respective index fingers. Close both nostrils with the respective middle fingers. Finally, close the mouth with the help of ring fingers. Then slightly open the nostrils and inhale atmospheric air. During inhalation Buzzing sound should be created due to friction of inspired air with walls of nose and pharynx. Hold the inspired air up to possible extent. Even during expiration ‘Buzzing’ sound should be created. \[37\]

**Benefits:** It is most useful Pranayam for singers to improve quality of sound. It relieves stress, anger and laziness and helps to make pure mind. It improves blood supply to brain. \[39\]

7. Murcha

**Procedure:** Close you’re both eyes. Slowly inspire atmospheric air through both nostrils until the lungs are full. Then, hold the breath by closing both nostrils and apply *Jalindar band* (Press the chin on the jugular notch). Do not release the breath until you feel giddiness. Then, slowly expire the air through both nostrils. \[39\]

**Benefits:** It relieves the stress, anger and anxiety. \[39\]

8. Plavini

**Procedure:** Sit in a ‘Mastyasana’ posture and close both the eyes. Inspire atmospheric air slowly but deeply and forcefully till the abdomen bulge out. Hold the breath up to possible extent and then release the air slowly through nostrils. \[39\]

**Benefits:** Useful for digestive system, abdominal muscles and strong diaphragm. \[40\]

**DISCUSSION**

*Pranayama* is a key to healthy and peaceful life. During *Pranayama* one should closed his eyes for better concentration of mind and for best results. The ratio of inhalation, retention and exhalation is 1:2:4 which have to be maintained. During retention of breath (*kumbhaka*) most of impurities in gaseous form in the body are collected into the lungs, hence period of exhalation should be maximum to wash out them. ‘*Jalandar band*’ is most commonly used during *Pranayama* because it causes pressure on the carotid sinus and thyroid gland in the neck. This is useful to reduce blood pressure and relieves thyroid problems. In research study, it was also noted that slow *bhastrika Pranayamic* breathing respiratory rate of 6/min for 5 minutes leads to a significant decrease in both the systolic and diastolic blood pressure and heart rate. *Pranayama* is the best remedy to control mind. As breathing and mind have a close association, the control of the breath with the help of Pranayama, then mind can be controlled. As per yoga philosophy, longevity depends on breathing rate. By practice of
Pranayama the breathing rate is lowered and it is very helpful for to increase healthy life. Pranayama improves breathing capacity so that maximum amount of fresh oxygenated blood (during inhalation) travels from lungs to the heart which improves blood circulation. Pranayama is useful for healthy heart by providing more oxygen to its muscle. Pranayama effects on autonomic nervous system which improves the working of lungs, heart, diaphragm, abdomen, intestines, kidneys and pancreas.

The Ujjayi Pranayama is useful in diseases of pharynx, rhinitis due to friction of air with air passage due to constriction of neck. Sheetkari is contraindicated in group of people due to chances of infections are more as inspiring the air by mouth. It is also contraindicated in cold weather because body temperature could not support. Pranayama increases capacity of lung due to repetitive distension of lung alveoli. In Shitali Pranayama air is inhaled through tube formed by tongue. The inhaled air become moist due to moisture in mouth. Hence, it is useful in fever and thirst to reduce body temperature. In Bhastrica Pranayama rapid action is involved, it is contraindicated in hypertension. In Jalandhar band, blood supply to the brain is decreased due to pressure on carotid sinus which leads in murcha. In various studies, it is proved that Pranayama leads to increased pulmonary functions in healthy individuals. It is because of increased forced expiratory flow and peak expiratory flow. Bhramari Pranayama is most useful for singers as ‘Bee’ like sound produced during this breathing exercise which causes exercise of larynx also. Now a day’s stress, hurry, worries, mental instability is the major risk factors for heart diseases, hypertension, paralysis, peptic ulcer etc. Pranayama is the best key to relieve these factors and pave the way for a healthy life.

CONCLUSION:

Health is an important factor for every person. Physical and mental health is important, as mind has effect on the body and body has effect on the mind. Now a days, high blood pressure, heart diseases, diabetes mellitus, paralysis, insomnia, carcinoma, peptic ulcer, gastritis, asthma, epilepsy have become common diseases. The reason is the hectic and stressful life agenda of every one. Pranayama is the best remedy to overcome these problems. Because breathing and mind are closely associated and we can control and advance the breathing with the help of pranayama, a scientific breathing exercises. Breathing is the process performed since birth, but this being unintentional but Pranayama is the breathing exercise we performed intensively. For better results one should go through the concept of Pranayama. It consists of inhalation (purak), retention of breath (kumbhak) and exhalation (rechak).Retention of breath (kumbhaka) is of two types. One is being holding the breath after inhalation (Antyakumbhaka) and another being the holding of the breath after exhalation (Bahyakumbhaka). Pranayama is a great advice to healthy life. It is useful among the persons suffering from diseases for better results. The new research shows that it is beneficial in hypertension and having an effect on heart rate. Also stress and other emotional factors can be reduced by Pranayama which
reduces the risk of diseases like hypertension, diabetes mellitus, peptic ulcer, insomnia, etc ultimately alleviating the human suffering.

3. Ibid 2 p.40
4. Ibid 2 p.42
5. Ibid 2 p.39
6. Ibid 2 p.42
12. Ibid 5 pp.195
A Conceptual Study to Review Clinical Approach of ‘Adhobhakta’ Aushadha Sevana Kala

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ABSTRACT

Ayurveda is science of life. A lot of Siddhantas (basic principals) are mentioned in Ayurveda. There is big opportunity for emerging scholars and practitioners to study and understand basic principles of Ayurveda in clinical aspect. Bheshaja Sevana Kala or Aushadha Sevana Kala is one of those principles useful in day to day practice. Dictionary meaning of Aushadha Sevana Kala can be stated as “the time of day or night to consume a medicine”. Adhobhakta kala was taken into consideration for this study. Main objectives of the study were to review Aushadha Sevana Kala in different Ayurvedic Classical Texts, to compare and evaluate literary data available on Adhobhakta Kala in Classical Texts-Commentaries and to decide clinical approach of Adhobhakta Kala. It was reviewed in four classical texts namely Ashtanga Samgraha, Ashtanga Hridaya, Charaka Samhita and Sharangdhara Samhita along with their commentaries. Attempt was done to understand it. Related literary data elsewhere was also studied. Comparison and evaluation of collected data was done. All these four classical texts narrated Adhobhakta Kala in one and the same direction although name differs. Ashtanga Samgraha provided more detailed approach. It was found that systematic clinical approach about Adhobhakta Kala in these texts is very much precious in accordance with treatment of diseased conditions. This kala is found more important to take medicines in conditions mainly related to Vyana Vikruti, Udana Vikruti and Brimhana Chikitsa. Ayurvedic texts mentioned the different approach of Aushadha sevana kala than that of Modern Medicine and are more helpful to cure the diseased conditions. There is further scope for scholars to attempt clinical trials.
A Conceptual Study to Review Clinical Approach of ‘Adhobhakta’ Aushadha Sevana Kala
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Keywords: Aushadha Sevana Kala, Adhobhakta, Pashchat bhakta, Vyana kala, Udana kala, Clinical approach.

INTRODUCTION

Ayurveda is science of life. This science teaches us various ways for ‘Being healthy’ (Swasthyarakshana) and ‘Curing ill health’ (Vikaraprashamana) which is aim of Ayurveda according to Acharya Charaka[1]. Among various basic principles described in Ayurveda ‘Aushadha Sevana Kala’ is one of the most important concepts. The term Aushadha Sevana Kala means the time and specific condition either related to Dosha, Bhojana, Vyadhi, Ahoratra to take medicine. Dictionary meaning of Aushadha Sevana Kala can be stated as “the time of day or night to consume a medicine”. There are eleven kala narrated in Ashtanga Samgraha[2], while those are ten[3] in Ashtanga Hridaya, ten[4] in Charaka Samhita and five[5] in Sharangdhar Samhita. (Table 1) It is expectable to take the medicine on proper Aushadha Sevana Kala according the typical diseased conditions for better relief. We have made attempt to derive such typical conditions in accordance with Adhobhakta Kala. At present time it is necessary to study the basic principles and concepts in Ayurveda like ‘Aushadha Sevana Kala’ to derive proper meaning as well as clinical aspect of that concept.

We had selected ‘Adhobhakta Kala’ to study its clinical and practical approach which would have been expected to authors of these classical texts. Adhobhakta means after meal, either after lunch or after dinner. Pashchat, Ante, Uttarbhakta, Bhaktante, Divasbhojanebhojanante, Sayantane-bhuktasyante are the parallel terms denoted by different classical texts that for Adhobhakta. We think this study will be more helpful in the field of Ayurveda for scholars, practitioners and researchers to increase their knowledge. Also this study may be an inspiration for someone to go ahead and carry further research from the perspective of Aushadha Sevana Kala.

AIMS AND OBJECTIVES

1. To review Aushadha Sevana Kala in different Ayurvedic Classical Texts.
2. To study Adhobhakta Kala in detail.
3. To compare and evaluate literary data available on Adhobhakta Kala in Classical Texts and Commentaries.
4. To decide clinical approach of Adhobhakta Kala.
5. To derive related diseased conditions in which medicine should be taken on Adhobhakta Kala.

MATERIALS AND METHODS
Materials

Only literary material i.e. Ayurvedic Classical Texts (Ashtanga Samgraha, Ashtanga Hridaya, Charaka Samhita and Sharagadhar Samhita) and Commentaries were reviewed to collect the data during this work.

Methods

Literary data collected was compared and analyzed on classical background to find similarities, dissimilarities and expected clinical approach in accordance to modern medicine.

Literary Review

Comparison between Aushadha Sevana Kala stated by different Classical Texts is enlisted in Table 1. ‘Adhobhakta’ term is mentioned in Ashtanga Samgraha,[2] further classified into two types as ‘Pratarashantam’ and ‘Sayamashantam’.[6] Acharya Charaka named it as ‘Pashchat’, [4] and classified it into Pratarashitam and Bhojanottaram (Sayam).[7] Chakrapanidatta called it Patarbhojanottara kala and Sayam bhojanottara kala.[8] Laghu Vagbhata termed it as Ante3 and classified Pratarashasya and Sayamashasya.[9] Arundatta denoted it Purvanha bhuktasyante and Aparanha bhuktasyante.[10]

Sharangdhara accounted Adhobhakta Kala under two separate types Divasbhojane and Sayantane viz. Divasbhojane-bhojanante[11] and Sayanne-bhuktasyante.[12] Types of Adhobhakta Kala by different texts are accounted in Table 2. Here the terms Pratarashantam, Pratarashitam, Patarbhojanottara kala, Pratarashasya, Purvanha bhuktasyante, Divasbhojane-bhojanante roughly means after lunch and the terms Sayamashantam, Bhojanottaram (Sayam), Sayam bhojanottara kala, Sayamashasya, Aparanha bhuktasyante, Sayantane-bhuktasyante roughly means after dinner. One should take medicine after pratah bhojana in Vyana vikruti and after sayam bhojana in Udana viktuti. This kala is clinically significant for purva kaya baladhana (i.e. part of body above Hridaya), purva kayagat vyadhhi, kaphaja vyadhhi and sthoolikarana chikitsa.[13]

According to Indu, Aushadhi must taken just after the meal.[14] In Ashtanga Hridaya it is stated that one should take medicine at pratarasham in Vyana vikruti and at sayamasham in Udana vikruti.[9] Acharya Charaka also quoted same opinion that, in Vyana vikruti medicine is to be taken after pratah bhojana that in Udana vikruti after sayam bhojana.[7] Among five Bheshja Kala described in Sharangdhara Samhita, Divasabhojane and Sayantane had been sub classified into five and three subtypes respectively. Out of which Divasabhojane-bhojanante and Sayantane-bhuktasyante are same as the Adhobhakta kala of Vagbhata. Medicine should be taken on Divabhojane-bhojanante in Vyana vikrutin[11] and on Sayantane-bhuktasyante in Prana vikruiti.[12] This is only different opinion quoted by Acharya Sharagdhara. Even if names given are dissimilar for Adhobhakta Kala even then further details about it are almost same in these four classical texts except by Sharangadhara in
case of Sayantane-bhuktasyante kala in Prana vikruti. It is clear that, Ayurvedic Classical Texts had provided detailed practical approach on the topic of Aushadha Sevan Kala. Such profundity about this topic will hardly ever found in Health Science branches other than Ayurveda.

**OBSERVATIONS AND RESULTS**

After comparison of literary data collected, it was observed that, all four Texts and their commentaries had guided in one and the same direction. All texts have mentioned two types of Adhobhakta kala viz. pratah paschhat and sayam paschhat. Although names of those kala differs but the meaning of those ultimately remains same. It is observed that, Adhobhakta Kala is applicable in following conditions – Vyana vaigunya, Udan vaigunya, Kaphaja vyadhi, Purva kaya daurbalya, Purva kaygat vyadhi and Sthoolikarana Chikitsa. Prana vaigunya is exceptionally mentioned by Sharangdhara. There were no statistical data as this is only conceptual study.

**DISCUSSION**

Ayurveda is the complete life science including prevention as well as cure. Concepts of Ayurveda are focused to avoid disease, its recurrence and to cure it from base. Aushadha Sevana Kala concept also found completely different than that mentioned in Modern Science.

**Clinical Approach of Adhobhakta Aushadha Sevana Kala:**

As per collected data, some diseased conditions in accordance with Adhobhakta Kala are discussed here on the classical base. (Table 3)

1) **Purva Kaya Baladhanartha**[6].- Sharira is divided into three major parts according to sthana of Doshas. Part above Hridaya is sthana of Kapha called as Purva kaya, part between Hridaya and Nabhi is sthana of Pitta called as Madhya kaya and part below Nabhi is sthana of Vata called as Adho kaya.[15] Baladhana means Brimhana.[16] To increase Bala of durba sharirbhava in Purva kaya, Adhobhakta Kala is clinically significant to take medicine, i.e. bala hani and daurbalya caused by various vyadhies in Purva kaya.

2) **Purva Kayagat Vyadhi**[6].- It means those vyadhies having adhisthana in Purva Kaya.[15] i.e. part of body above Hridaya. For example – Mukha Roga, Karna-Nasa-Shiro Roga, Hridroga, Shwasa, Kasa, Hikka, Pratishya, Tandra etc… In these vyadhies Adhobhakta Kala is recommended to take medicine.

3) **Kaphaja Vyadhi**[6].- In Kaphaja Nanatmaja vyadhi[17] also in other Kapholbana vyadhi and in Samatapradhana vyadhi Adhobhakta Kala is mandatory to take medicine. For example – Mukhasrava, Apakti, Udarda, Galaganda, Kaphaja Jwara, Kaphaja Chhardi, Kaphaja Kasa, Shotha etc…

4) **Sthoolikarana**[6].- Sthoolikarana is to make someone Sthoola.[18] Averagely it is the treatment aimed at increasing the weight and body mass. According to Ayurveda Sthoolikarana is the upakrama
to enhance Mamsa and Meda Dhatu. For Shoolikarana Adhobhakta Kala is suggested to take medicine. For example - Pakshaghata, Mamsa kshaya, Meda kshaya, Mamsa shosha, Karshya etc…

5) Vyana Vikruti[6]: It is mentioned to take medicine in Vyana vikruti on Pratarbhojanottara Kala.\(^8\) Sthana of Vyana Vayu is Hridaya and it is krutsnadehachari, i.e. sanchara kshetra is sarva sharira. Gati, Utkshepana, Apakshepana, Nimesha and Unmesha are karmas of Vyana. \(^{[19]}\) In all types of Hridroga and diseased conditions related to Gati, Utkshepana, Apakshepana, Nimesha and Unmesha karma it is necessary to take medicine on Pratarbhojanottara kala. For example - Pakshaghata, Ardita, Khanja, Pangulya, Chhardi, Kasa, Shwasa, Raktapitta, Netra roga etc...

6) Udana Vikruti[6]: In Udana Vayu vikruti medicine is to be taken on Sayambhojanottara kala.\(^8\) Sthana of Udana Vayu is Urasthana and its sanchara kshetra is Nasa, Gala and upto Nabhi. Vak pravrutti, Prayatna, Urja, Bala, Varna and Smruti are karmas of Udana.\(^{[20]}\) Some clinical conditions to take medicine on Sayambhojanottara kala are enlisted below.

- Vyadhies from Nasa to Nabhi – Pratishyaya, Shwasa, Kasa, Hikka, Hridroga, Parshwashoola, Agnimandya, Ajirna, Amlapita, Adhmana, Yakrut dushti and Pleeha dushti etc…
- Conditions related to Vak pravutti – Pakshaghata, Ardita, Vaksamga, Muk, Minmin, Gada etc...
- Conditions related to Prayatna – Pakshagata, Ardita, Amsa shosha, Khanja, Pangulya, Daurbalya etc...
- Conditions related to Urja – Rasayana chikitsa, Daurbalya due to various diseases.
- Conditions related to Bala – Rasayana-Vajikaran chikitsa, Brimhana chikitsa, Vyadhipurva bala prapti chikitsa, Dhatu kshayajanya vyadhi, Daurbalya due to various diseases etc...
- Conditions related to Varna – All types of Kushtha, Twaka vikara, Khudra roga like vyanga, tarunyapitika, darunaka, Varnya chikitsa, Vrana vaikrtpapaham chikitsa etc…
- Conditions related to Smruti – Manasa vyadhi, Smruti kshaya, Anidra, Chinta, Shoka, Bhaya, Mental retardation, Depression etc.

7) Prana Vikruti[6]: Sharangdhara differs here from others that, in Prana vayu vikruti Sayantane-bhktasyante kala (i.e.sayambhojanottara kala) is reliable to take medicine.\(^{[12]}\) Sthana of Prana vayu is is Shir (Urdhvaga) and its sanchara kshetra is Ura and Kantha pradesha. Buddh dharan, Hridaya dharan, Indriya dharan, Chitta dharan, Shthivana, Kshavathu, Udgara, Nishwas and Annapravesha are karmas of Prana.\(^{[21]}\) Hence in vyadhies of Shir, Ura and Kantha Sayantane-bhuktasyante kala is significant to take medicine, also it covers diseased conditions related to Budhdi, Hridaya, Indriya (dasha indriya), Chitta, Nishwas and Annapravesha. For example
— Shiroroga, Hridroga, Shwasa, Kasa, Hikka, Gilana kashtata, Vaksamga, Ardita, Gilayu vruddhi, Manasa vyadhi, Indriya pradoshaya vikara, Thyroid disorders, Hormonal Disorders etc.

It was clearly observed in this conceptual study that, clinical approach of Aushadha Sevana Kala described in Classical Texts is majorly related to Vata Dosha. Prime importance to Vata dosha and its types instead of Kapha and Pitta is given as Vata is important among Dosha, Dhatu and Mala. Also it is Svayambhu, Bhagawan, and causative for vitiation of Kapha and Pitta. [22]

Comparative Review with Modern Medicine

Ayurvedic texts mentioned the different approach of Aushadha sevana kala than that of Modern medicine and are more helpful to cure the diseased conditions. Modern medicine stated it briefly. Types of Aushadha sevana kala i.e. time to consume medicine according to Modern Science are as OD (to take medicine once a day), BD. (to take medicine twice a day), TDS (to take medicine thrice a day), HS (to take a medicine at night) and SOS (to take a medicine as per requirement). Out of those to take medicine after meal in accordance with above said ‘times’ can be correlated with Adhobhakta Kala. Concept of modern medicine about these times is related to ‘t’ half period and bioavailability of that specific drug and the view to take medicine after meal is only aimed to avoid side effects like headache, nausea, hyperacidity and gastric disturbances.

But Ayurvedic Acharya narrated Adhobhakta kala in accordance with Dosha, Dosha types, Sthana of vyadhī, kala e.g. ahoratra, bhukta kala, specific Chikitsa upakrama e.g. Baladhana Chikitsa, Sthoolikarana Chikitsa. It shows detailed approach is given in Ayurvedic classical texts to cure the diseased conditions and not only to treat.

CONCLUSIONS

- Adhobhakta Kala can also be termed as Vyana kala, Udana kala, Vyanodana kala, Kapha kala in practice.
- All four classical texts had described almost same about Adhobhakta kala although name differs.
- This kala is clinically important to take medicine in Vyana and Udana vayu vikruti mainly.
- In Brimhana chikitsa, Sthoolikarana chikitsa, Smrutivardhana chikitsa, Rasayana-Vajikarana chikitsa, Varnya chikitsa, Adhobhakta kala is reliable to take medicine.
- This is conceptual study and has its own limits up to reviewing Concept (Siddhanta). There is further scope to attempt clinical trials for fruitful output on the topic of Adhobhakta Aushadha Sevana Kala.

ACKNOWLEDGEMENT

We are thankful to Teaching staff SVNHT’s Ayurveda Mahavidyalaya, Rahuri Factory, for encouraging and guiding us and Library staff of SVNHT’s Ayurveda Mahavidyalaya, Rahuri Factory,
for making available all the Classical Texts and Commentaries to refer.

REFERENCES:


Table 1. Comparison between Aushadha Sevana Kala stated by different Classical Texts

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<th>Practical Names</th>
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<tr>
<td>Abhakta</td>
<td>Ananna</td>
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<td>Rasayana kala Kapha kala</td>
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<tr>
<td></td>
<td></td>
<td>(Niranana)</td>
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<tr>
<td>Pragbhakta</td>
<td>Annadau</td>
<td>Bhuktadau</td>
<td>(bhojanagre)**</td>
<td>Apana kala Vata kala</td>
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<tr>
<td></td>
<td></td>
<td>(Pragbhohanam)</td>
<td></td>
<td></td>
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<tr>
<td>Madhyabhakta</td>
<td>Madhye</td>
<td>Madhye</td>
<td>(bhojanmadhye)**</td>
<td>Samana kala</td>
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<tr>
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<td></td>
<td></td>
<td></td>
<td>Pitta kala</td>
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<tr>
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<td></td>
<td></td>
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<td>i. bhojanagre</td>
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<td></td>
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<td>ii. Bhojanottaram</td>
<td>ii. bhojanmadhye</td>
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<td></td>
<td></td>
<td>(Sayam)</td>
<td>iii. bhojaishchamishra</td>
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<td></td>
<td>iv. bhojanate*</td>
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<td></td>
<td>v. purvamante</td>
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<td></td>
<td>B. Sayamtane*</td>
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Table 1. Comparison between Aushadha Sevana Kala stated by different Classical Texts
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Table 2. Comparison of *Adhobhakta Kala* & Its types found in different Classical Texts

<table>
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<tr>
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<th>Name of the <em>kala</em> that for <em>Adhobhakta</em></th>
<th>Types</th>
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<tbody>
<tr>
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<td><em>Adhobhakta</em></td>
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<td>2.</td>
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<td></td>
<td></td>
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<tr>
<td>3.</td>
<td>Charak Samhita</td>
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<td>i. Pratarashitam</td>
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<td></td>
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<td>Sharangdhara Samhita</td>
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<td></td>
<td></td>
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<td></td>
<td></td>
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</tr>
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<td><em>Ante</em></td>
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<table>
<thead>
<tr>
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<th>Clinical application &amp; Uses of <em>Adhobhakta kala</em></th>
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</thead>
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<td>Ashtanga Samgraha</td>
<td>a. <em>Purva kaya baladhana, Purvakayagata vyadhi,</em></td>
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<tr>
<td></td>
<td><em>Kaphaja vyadhi, Sthoolikaranaa Chikitsa</em></td>
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<td></td>
<td>b. <em>Vyana vaigunya - pratarashantam</em></td>
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<td>c. <em>Udana vaigunya - sayamashantam</em></td>
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<tr>
<td>Ashtanga Hriday</td>
<td>a. <em>Vyana vaigunya - pratarashasya</em></td>
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<tr>
<td>Charaka Samhita</td>
<td>a. <em>Vyana vaigunya - patarshitam</em></td>
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<tr>
<td></td>
<td>b. <em>Udana vaigunya - bhojanottaram (sayam)</em></td>
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<tr>
<td>Sharangdhara Samhita</td>
<td>a. <em>Vyana vaigunya - divasbhojane bhojanante</em></td>
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<tr>
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<td>b. <em>Prana vaigunya - sayamante bhuktasyante</em></td>
</tr>
</tbody>
</table>
Clinical Study of Efficacy of Kanchanara Guggulu and Gokshuradi Guggulu on Shlipada.


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ABSTRACT

India is the largest endemic country in the world; it contributes about 40% of total global burden of filariasis and accounts for about 50% of the people at risk of infection. To evaluate the therapeutic efficacy of drugs Kanchanara guggulu and Gokshuradi guggulu in the management of Shlipada; encouraging results of 80 patients were observed in both subjective and objective parameters. Out of 80 cases, 49 (61.25%) got good response, 28 (35 %) fair response, 1 (1.25 %) poor response and 2 (2.50 %) cases did not show any response. Based on numerical score statistical analysis also made and 63.13 % relief was found on all parameters. And also measured in each parameter, 42 % in lymphoedema, 92.14 % of relief in lymphadenitis, 92.8 % in lymphangitis, 53.57 % in pain, 25.84 % in tenderness, 98.53 % in fever, rigour 97.5 % and 37.35 % relief in heaviness was found.

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Clinical Study of Efficacy of Kanchanara Guggulu and Gokshuradi Guggulu on Shlipada
Shubhangi Bedge Vaibhav Mache K. Rajeshwar Reddy

KEYWORDS: Shlipada, Kanchanara guggulu, Gokshuradi Guggulu, Filaria

INTRODUCTION

The disease Shlipada (filariasis) is well described in Ayurvedic classics. Sushruta mentioned it as a Tridoshaja vyadhi with Kapha dosha predominance. Vitiated doshas gradually descends from groins, thighs, knees and calf regions to foot and causes swelling in it. As the foot gradually
becomes harden like Shila (stone), this disease is called Shlipada (Shilavat padamiti Shlipadam). This disease is classified to three i.e. Vata, Pitta and Kaphaja. Roughness, blackish discoloration of affected part, hardness and pain are the symptoms of Vataja Shlipada. In Pittaja Shlipada patient suffers from fever, reddishness of affected part, which is smooth in nature but having burning sensation, and hot on touch. Kaphaja Shlipada can be distinguished by oiliness, heaviness of affected part with knots and tumour like appearance.

According to modern view filariasis (Shlipada) is a vector borne parasitic disease caused by three lymphatic dwelling, nematode parasites viz., Wuchereria boncrafti, Burgia malayi and Burgia timori. Among them Wuchereria boncrafti is most common in India (98%). According to the estimates made in 1995 globally, there are nearly 1100 million people are at the risk of Filariasis and there are 120 million cases of Filariasis (ICMR bulletin May-June 2002)[1]. Though there are some popular modern medicines like DEC (Diethyl Carbamazine Citrate), Ivermectin and Albendazole for control and treatment of Filariasis, an alternate therapy from Ayurvedic drugs to treat chronic filarial patients to reduce chronic lymphoedema, lymphangitis, pain, tenderness, fever, rigour and heaviness were found effective. Periodical attacks and other infections were also reduced by Ayurvedic treatment.

Considering the above factors an attempt was made to evaluate therapeutic effect of Kanchanara guggulu and Gokshuradi guggulu in the management of Shlipada.

MATERIALS AND METHODS:

Selection of drugs:

1. Kanchanara Guggulu[2] – 500 mg thrice a day for four weeks

Contents:

Kanchanara: Bauhinia Variagata
Guggulu: Commiphora mukul
Harataki: Terminalia chebula
Bibhitaki: Terminalia beeria
Amalaki: Embilica officinale
Nagar: Zingiber officinale
Marich: Piper nigram
Pimpali: Piper lonum
Varun: Crataeva nurvula
Elayachi: Elettaria cardamomum
Tvak (Dalchini): Cinamommum
Zeylanicium
Tejapatra: Cinamommum tamala
2. Gokshuradi Guggulu[2] – 500 mg thrice a day for four weeks

Contents:-

Gokshur: Tribulus terrestris
Guggulu: Commiphora mukul
Harataki: Terminalia chebula
Bibhitaki: Terminalia beeria
Amalaki: Embilica officinale
Nagar: Zingiber officinale
Marich: Piper nigram
Pimpali: Piper lonum
Mustaka: Cyperus rotundum

SELECTION OF PATIENTS:

80 patients were selected for trial of Shlipada, comprising of 28 (35 %) male and 52 (65 %) female their age ranging from 18 to 70 years age.

CRITERIA FOR SELECTION OF PATIENTS:

A) Inclusion criteria-
1. Patients who has clinically diagnosed as
Shlipada[4].

2. Age: 18 to 60 years.
4. With positive blood for microfilaremia.
5. Patients ready to abide trial procedure & to give informed consent.

B) Exclusion criteria –
1. Unwillingness to participate in the study.
2. VDRL/HBsAg/HIV positive patients.
3. Patients having nodular deformity, wound ulcer, thorny deformity, anthill like deformity, nutritional oedema, and oedema due to liver and cardiac disorder, arthritic disorder are excluded from the study.

**Investigations:**
VDRL/HBsAg/HIV : To exclude any other diseases.
Criteria for the assessment of the response after the therapy:
Specific scores were denoted against each and every parameter was recorded initially and during subsequent assessments i.e. every week up to 4 weeks.

**IEC APPROVAL**
IEC approval no. – RAP/V.V.-2/IEC/15248/2012 dated 23/12/2012. The study was conducted in accordance with schedule Y of drugs and cosmetics act 1945, India, amended in 2005 and ICMR ethical guidelines for biomedical research on human participants.

**Gradation for the assessment of the response after the therapy**[3]:
1. Swelling (Deformity / lymphoedema)
   a) Much elevated that the part seems grossly deformed 3
   b) Covers well the bony prominences/upper surface of the affected part 2
   c) Slightly obvious or reveals more in comparison with normal 1
   d) No swelling 0
2. Lymphadenitis:
   a) When one or more lymph glands are enlarged 2
   b) Glands partially enlarged in size 1
   c) Completely normal size of lymph nodes 0
3. Lymphangitis:
   a) Swelling of any lymphatic channel visible/palpable 2
   b) Partially reduced 1
   c) Completely reduced 0
4. Pain
   Severe : Patient has continue disturbing pain 3
   Moderate : Patient frequently complain of pain 2
   Mild : Patient tells of pain after asking 1
   Nil : No pain at all 0
5. Tenderness:
   Grade -3 : The patient winches and withdraws the affected part 3
   Grade -2 : The patient winches 2
   Grade -1 : The patient says that the part is tender 1
   Grade –0 : No Complaint 0
6. Chyluria:
   a) Presence of chyle in every sample of urine 3
   b) Presence of chyle frequently (More than 50% sample) 2
   c) Presence of chyle rarely 1
   d) Absence of chyle/ normal urine 0
7. Fever:
   Present 1
   Absent 0
8. Rigor:
   Present 1
   Absent 0
9. Heavyness:
   Present 2
   Reduced 1

23 | ayurlog
Absent 0

ASSESSMENT OF RESULTS:
a) Good response : 75% or more relief in clinical symptomatology
b) Fair response : 50% to 75% relief in symptomatology
c) Poor response : 25% to 50% relief in symptomatology
d) No response : Relief below 25% in symptomatology

Results:
Patients were selected in between age of 18-70 years. Highest incidence of patients were observed (table no-1) in between the age of 31 - 40 (20 patients). Among the 80 patients 52 were females and 28 were males (table no-2). The patients having Chronicity of more than one year only were selected for the present study and majority patients (49) were having 1-5 years duration of illness( table no -3). In Shareera Prakriti of patients were Vata pitta (32), Vata kapha (33) in nature ( table no-4). Majority of patients Manashika Prakriti is Rajotamas (48 pts) (table no-4). 26 were suffering from right leg filariasis and 30 patients with left leg filariasis ( table no -5).

Out of 80 cases, 49 (61.25%) got good response, 28 (35 %) fair response, 1 (1.25 %) poor response and 2 (2.50 %) cases did not show any response. Based on numerical score statistical analysis also made and 63.13 % relief was found on all parameters. In individual parameter; 42 % in lymphoedema, 92.14 % of relief in lymphadenitis, 92.8 % in lymphangitis, 53.57 % in pain, 25.84 % in tenderness, 98.53 % in fever, rigour 97.5 % and 37.35 % relief in heaviness was found.

Overall effect of treatment in terms of score= [(BT-AT) / BT]×100
= [(1077 - 397) / 1077] × 100
=63.13 %

Table no. 1 : Showing the incidence of age.

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Age group ( In yrs)</th>
<th>No of pts.</th>
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<tbody>
<tr>
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<td>18 – 30</td>
<td>14</td>
<td>17.5</td>
</tr>
<tr>
<td>2</td>
<td>31 – 40</td>
<td>20</td>
<td>25</td>
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<td>3</td>
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<td>22.5</td>
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<tr>
<td>4</td>
<td>51 – 60</td>
<td>16</td>
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</tr>
<tr>
<td>5</td>
<td>61 – 70</td>
<td>12</td>
<td>15</td>
</tr>
<tr>
<td>Total</td>
<td>80</td>
<td>100</td>
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Table no. 2 : Showing the incidence of sex

<table>
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<th>Sr. No.</th>
<th>Sex</th>
<th>No of patients</th>
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<td>1</td>
<td>Male</td>
<td>28</td>
<td>35</td>
</tr>
<tr>
<td>2</td>
<td>Female</td>
<td>52</td>
<td>65</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>80</td>
<td>100</td>
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</tbody>
</table>

Table no. 3 : Showing duration of illness
Table no.4 : showing distribution of Sharira & Manashika Prakriti

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Prakriti</th>
<th>No of pts</th>
<th>Manasika</th>
<th>No of pts</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Vata</td>
<td>0</td>
<td>Satva</td>
<td>0</td>
</tr>
<tr>
<td>2</td>
<td>Pitta</td>
<td>0</td>
<td>Rajas</td>
<td>0</td>
</tr>
<tr>
<td>3</td>
<td>Kapha</td>
<td>0</td>
<td>Tamas</td>
<td>1</td>
</tr>
<tr>
<td>4</td>
<td>Vatapitta</td>
<td>32</td>
<td>Satvarajas</td>
<td>10</td>
</tr>
<tr>
<td>5</td>
<td>Vatakapha</td>
<td>14</td>
<td>Satvatamas</td>
<td>21</td>
</tr>
<tr>
<td>6</td>
<td>Pittakaphaj</td>
<td>33</td>
<td>Rajotamas</td>
<td>48</td>
</tr>
<tr>
<td>7</td>
<td>Sannipata</td>
<td>1</td>
<td>Sama</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>80</td>
<td>Total</td>
<td>80</td>
</tr>
</tbody>
</table>

Table no. 5 : Showing the parts affected

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Affected Part</th>
<th>No of pts</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Right leg</td>
<td>26</td>
<td>32.5</td>
</tr>
<tr>
<td>2</td>
<td>Left Leg</td>
<td>30</td>
<td>37.5</td>
</tr>
<tr>
<td>3</td>
<td>Both Leg</td>
<td>18</td>
<td>22.5</td>
</tr>
<tr>
<td>4</td>
<td>Right Hand</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>5</td>
<td>Left Hand</td>
<td>2</td>
<td>2.5</td>
</tr>
<tr>
<td>6</td>
<td>Both Hands</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>80</td>
<td>100</td>
</tr>
</tbody>
</table>

Table no. 6 : Showing the results of treatment

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Response</th>
<th>No. of Pts</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Good</td>
<td>49</td>
<td>61.25</td>
</tr>
<tr>
<td>2</td>
<td>Fair</td>
<td>28</td>
<td>35</td>
</tr>
<tr>
<td>3</td>
<td>Poor</td>
<td>1</td>
<td>1.25</td>
</tr>
<tr>
<td>4</td>
<td>Not</td>
<td>2</td>
<td>2.5</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>80</td>
<td>100</td>
</tr>
</tbody>
</table>
Table no. 7 : Showing the changes in lymphoedema

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Lymphoedema</th>
<th>BT No of patients</th>
<th>Score</th>
<th>AT No of patients</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Grade - 3</td>
<td>44</td>
<td>132</td>
<td>7</td>
<td>21</td>
</tr>
<tr>
<td>2</td>
<td>Grade - 2</td>
<td>32</td>
<td>64</td>
<td>26</td>
<td>52</td>
</tr>
<tr>
<td>3</td>
<td>Grade - 1</td>
<td>4</td>
<td>4</td>
<td>43</td>
<td>43</td>
</tr>
<tr>
<td>4</td>
<td>Grade - 0</td>
<td>0</td>
<td>0</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>TOTAL</td>
<td></td>
<td>80</td>
<td>200</td>
<td>80</td>
<td>116</td>
</tr>
</tbody>
</table>

Percentage of relief on lymphoedema

\[ \frac{(BT-AT)}{BT} \times 100 \]

\[ = \frac{(200-116)}{200} \times 100 \]

\[ = 42 \% \]

Table no. 8 : Showing the changes of lymphadenitis

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Lymphadenitis</th>
<th>BT No of patients</th>
<th>Score</th>
<th>AT No of patients</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Severe - 2</td>
<td>61</td>
<td>122</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>2</td>
<td>Partial - 1</td>
<td>18</td>
<td>18</td>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td>3</td>
<td>No - 0</td>
<td>1</td>
<td>0</td>
<td>71</td>
<td>0</td>
</tr>
<tr>
<td>TOTAL</td>
<td></td>
<td>80</td>
<td>140</td>
<td>80</td>
<td>11</td>
</tr>
</tbody>
</table>

Overall percentage of relief of Lymphadenitis in terms of score = 92.14 %

Table no. 9 : Showing the changes in lymphangitis

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Lymphangitis</th>
<th>BT No of patients</th>
<th>Score</th>
<th>AT No of patients</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Severe - 2</td>
<td>62</td>
<td>124</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>2</td>
<td>Partial - 1</td>
<td>15</td>
<td>15</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>3</td>
<td>No - 0</td>
<td>3</td>
<td>0</td>
<td>72</td>
<td>0</td>
</tr>
<tr>
<td>TOTAL</td>
<td></td>
<td>80</td>
<td>139</td>
<td>80</td>
<td>10</td>
</tr>
</tbody>
</table>

Overall percentage of relief of lymphangitis after treatment is 92.80 %

Table no. 10 : Showing the changes in pain
Score wise overall percentage of relief in pain = 53.57 %

Table no. 11 : Showing the changes in tenderness

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Tenderness</th>
<th>BT</th>
<th>AT</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No of patients</td>
<td>Score</td>
<td>No of patients</td>
</tr>
<tr>
<td>1</td>
<td>Severe</td>
<td>3</td>
<td>9</td>
</tr>
<tr>
<td>2</td>
<td>Moderate</td>
<td>16</td>
<td>32</td>
</tr>
<tr>
<td>3</td>
<td>Mild</td>
<td>48</td>
<td>48</td>
</tr>
<tr>
<td>4</td>
<td>No</td>
<td>13</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>80</td>
<td>89</td>
<td>80</td>
</tr>
</tbody>
</table>

Score wise percentage of relief in tenderness =25.84 %

Table no. 12 : Showing the changes in Chylurea

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Chylurea</th>
<th>BT</th>
<th>AT</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No of patients</td>
<td>Score</td>
<td>No of patients</td>
</tr>
<tr>
<td>1</td>
<td>Grade - 3</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>2</td>
<td>Grade - 2</td>
<td>8</td>
<td>16</td>
</tr>
<tr>
<td>3</td>
<td>Grade - 1</td>
<td>42</td>
<td>42</td>
</tr>
<tr>
<td>4</td>
<td>Grade - 0</td>
<td>28</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>80</td>
<td>64</td>
<td>80</td>
</tr>
</tbody>
</table>

Score wise percentage of relief in Chylurea = 53.12 %

Table no. 13 : Showing the changes in fever

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Fever</th>
<th>BT</th>
<th>AT</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No of patients</td>
<td>Score</td>
<td>No of patients</td>
</tr>
<tr>
<td>1</td>
<td>Present</td>
<td>79</td>
<td>79</td>
</tr>
<tr>
<td>2</td>
<td>Absent</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>80</td>
<td>79</td>
<td>80</td>
</tr>
</tbody>
</table>
Score wise percentage of relief in fever = 98.73 %

Table no. 14 : Changes in rigors

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Rigor</th>
<th>BT No of patients</th>
<th>Score</th>
<th>AT No of patients</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Present</td>
<td>80</td>
<td>80</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>2</td>
<td>Absent</td>
<td>0</td>
<td>0</td>
<td>78</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>80</td>
<td>80</td>
<td>80</td>
<td>2</td>
</tr>
</tbody>
</table>

Scorewise percentage of relief in rigors=97.5 %

Table no. 15 : Showing changes on heaviness in affected part

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Heaviness</th>
<th>BT No of patients</th>
<th>Score</th>
<th>AT No of patients</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Severe</td>
<td>78</td>
<td>156</td>
<td>51</td>
<td>102</td>
</tr>
<tr>
<td>2</td>
<td>Mild</td>
<td>2</td>
<td>18</td>
<td>18</td>
<td>7</td>
</tr>
<tr>
<td>3</td>
<td>No</td>
<td>0</td>
<td>0</td>
<td>11</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>80</td>
<td>174</td>
<td>80</td>
<td>109</td>
</tr>
</tbody>
</table>

Score wise percentage of relief in heaviness=37.35 %

Table no. 16 : Showing the relief on over all parameters

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Parameters</th>
<th>BT</th>
<th>AT</th>
<th>Diff</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Lymphoedema</td>
<td>200</td>
<td>116</td>
<td>84</td>
<td>42</td>
</tr>
<tr>
<td>2</td>
<td>Lymphadenitis</td>
<td>140</td>
<td>11</td>
<td>129</td>
<td>92.14</td>
</tr>
<tr>
<td>3</td>
<td>Lymphangitis</td>
<td>139</td>
<td>10</td>
<td>129</td>
<td>92.80</td>
</tr>
<tr>
<td>4</td>
<td>Pain</td>
<td>112</td>
<td>52</td>
<td>60</td>
<td>53.57</td>
</tr>
<tr>
<td>5</td>
<td>Tenderness</td>
<td>89</td>
<td>66</td>
<td>23</td>
<td>25.84</td>
</tr>
<tr>
<td>6</td>
<td>Chylurea</td>
<td>64</td>
<td>30</td>
<td>34</td>
<td>53.12</td>
</tr>
<tr>
<td>7</td>
<td>Fever</td>
<td>79</td>
<td>1</td>
<td>78</td>
<td>98.73</td>
</tr>
<tr>
<td>8</td>
<td>Rigor</td>
<td>80</td>
<td>2</td>
<td>78</td>
<td>97.5</td>
</tr>
<tr>
<td>9</td>
<td>Heaviness</td>
<td>174</td>
<td>109</td>
<td>65</td>
<td>37.35</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>1077</td>
<td>397</td>
<td>680</td>
<td>63.13</td>
</tr>
</tbody>
</table>

Overall effect of treatment in terms of score= \left\{ \frac{(BT-AT)}{BT} \times 100 \right\}

=\left\{ \frac{(1077 - 397)}{1077} \times 100 \right\}

=63.13 %
Discussion:

The drugs Kanchanara guggulu and Gokshuradi guggulu were selected for the clinical trial on Shlipada (Manifested Filariasis). Though these two preparations were not directly indicated for the treatment on Shlipada they have been used to reduce in swelling, pain, tenderness, heaviness, inflammation, nodular deformity, etc. Gokshura, kanchanara & guggulu are the three important ingredients used in the above said preparation. Among them Gokshura (Tribulus terresteris) has been mentioned in Charaka sothahara dasainami, it is having Sothahara (reduces swelling) and kapha nissaraka properties\[5\]. Kanchanara (Bauhenia variegata) is having sothahara, krimighna (wormicidal), kaphaghna, medohara, vranasothara, granthihara properties\[6\]. Guggulu (Commiphora mukul) is having medohara (hypolipidemic), granthihara (reduces hard masses and tumors), pidakanasana, krimighna, shothahara, Vedanasthapana (stops pain), vrana shothahara (reduces swelling due to wound), vranaropana (wound healing) properties\[7,8\]. Its antihelminthic, anti-inflammatory, hypocholestremic, hypolipidemic, fibrinolytic properties were also proved in pharmacological studies. All the above actions of the drugs and clinical studies also corroborated in getting significant results.

Conclusion:

1. By the observations and results of the treatment it is clear that the overall effect is significant.
2. This combination of drugs is most effective on fever and less effective on lymphoedema or swelling of affected part.
3. By this study it can be concluded that further multicentric trial and large number of population of research can provide more benefits to the filarial population.

References:


2. Sharangahdara, Sarth Sharangadhara Samhita, Commentary by Vd Gangadhar


Article 04

Effect Of Jalaukavcharana In The Management Of Janusandhigat Vata With Special Reference To Knee Joint Osteoarthritis

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Abstracts:

Janusandhigat Vata i.e. osteoarthritis (degenerative joint disease) is most common joint disorder, it mostly affects cartilage. The top layer of cartilage breaks down & wears off. Osteoarthritis is of two types, primary (idiopathic) & secondary. In idiopathic osteoarthritis, the most common form of the disease, no predisposing factor is apparent. Secondary osteoarthritis is pathologically indistinguishable from idiopathic osteoarthritis but is attributable to an underlying cause. The main symptoms seen in Janusandhigat vata are pain, stiffness, swelling, tenderness, restriction of movement, etc.

The NSAID’S are main drug of choice in modern medicine which have lots of side effect therefore are not safe for long term therapy. Raktamokshana i.e. bloodletting is one of the ancient and important parasurgical procedure described in Ayurveda for treatment of various diseases. Of them, Jalaukavcharana or Leech therapy has gained greater attention globally, because of its medicinal values. It is very gentle and easy method of bloodletting. The saliva of leech contains numerous biologically active substances, which has anti-inflammatory, analgesic as well as anesthetic property. So the aim of the study is to know the effect of Jalaukavcharana in Janusandhigat Vata. For this, clinical criteria are assessed with gradation and results are drown with statistical analysis.

Keeping this view in mind we have started leech therapy in the patient of osteoarthritis especially in knee joint osteoarthritis & found encouraging results.

Cite this article:
Effect Of Jalaukavcharana In The Management Of Janusandhigat Vata With Special Reference To Knee Joint Osteoarthritis
Trupti B. Titarmare, V. R. Sonambekar, Pankaj Dixit
Key Words:


**Introduction:**

Knee joint osteoarthritis is most common joint disorder & it generally present in old age. Osteoarthritis is a degenerative joint disease, which affects cartilage. Cartilage is slippery tissue that covers the ends of bones in a joint. Healthy cartilage allows bones to glide over each other. It also helps absorb shock of movement. In OA, the top layer of cartilage breaks down & wears away. This allows bones under the cartilage to rub together. Due to this, pain, swelling & movement restriction of joint occurs. As time pathology proceeds ahead, it becomes worsen and turn into flexion deformity of knee joint.

Knee joint is weight bearing joint, so all these symptoms most commonly seen in knee joint. Osteoarthritis is of two types, primary (idiopathic) & secondary. Idiopathic osteoarthritis is most common. Secondary OA is pathologically indistinguishable from idiopathic OA but is attributable to an underlying cause.

In Ayurveda, OA of knee joint is correlated with *Janusandhigat vata*. In this pain, swelling & movement restriction of joint occurs. It is of two types,

- *Dhatukshayjanya* i.e. *nirupstambhit*
- *Strotorodhjanya* i.e. *upastambhit*.

The NSAID’S are main drug of choice in modern medicine which have lots of side effect therefore are not safe for long term therapy. *Raktamokshana* i.e. bloodletting is one of the ancient and important parasurgical procedure described in Ayurveda for treatment of various diseases. Of them, *Jalaukavcharana* or Leech therapy has gained greater attention globally, because of its medicinal values. The saliva of leech contains numerous biologically active substances, which has anti-inflammatory, analgesic as well as anesthetic property.

Keeping this view in mind we have started leech therapy in the pt. of OA especially in knee joint OA & found encouraging results.

**Aim:** To evaluate the effect of “Jalaukavcharana” in the management of *Janusandhigat vata* w.s.r. to knee joint osteoarthritis.

**Objective:** To reduce the symptoms of *Janusandhigat Vata* such as pain, stiffness, swelling, tenderness, restriction of movement etc.

**Materials and methods:**

**Study type:** Pilot study.

**Study design:** It was open, randomized, preliminary clinical study.

**Source of Data:** Patients were selected from OPD and IPD of A.S.S Arogyashala Hospital, Nashik, having classical clinical features of *Janusandhigat vata* as
expressed in Charaka Samhita as well fulfilling inclusion and exclusion criteria.

**Sample size:** Total 20 patients were selected for the present study.

**Inclusion criteria:** Cases were randomly selected irrespective of their age, sex, occupation and socio-economic conditions, showing the following sign and symptom of Janusandhigat vata.

- Pain
- Stiffness
- Swelling
- Tenderness
- Restriction of movement

**Exclusion criteria:**

- Patients having chronicity of disease more than 5yrs
- Steroid dependant patients
- Infective pathology of any system
- Any life threatening disease

**Procedure for leech therapy (Jalaukavcharana)**

Selection of Leeches: - Non poisonous leeches (species *Hirudo medicinalis*) are selected.

Total Leeches applied per joint: - 2

Duration: - Alternate day with total 2 sittings only.

Procedure:- To activate the Leeches as well as to make the skin of leeches antiseptic they were put in a bowl containing Haridra & water for a period of 15min. later on Leeches were cleaned by keeping them in another bowl of pure water for 15min. then the anterior sucker of leech applied over joint & leeches were covered with wetted gauge piece. As soon as the leeches showed the sign of elevated head & pumping action of the anterior sucker region, the time was noted when the leeches got detached. After leeches get detached, the site of application was properly cleaned, thereafter sprinkling of haridra powder, followed by bandaging of wound.

**Clinical Assessment Will Be Done As Follow:**

1. **Gradation of pain**

<table>
<thead>
<tr>
<th>Sign</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>No pain</td>
<td>0</td>
</tr>
<tr>
<td>Pain not required Analgesic</td>
<td>1</td>
</tr>
<tr>
<td>Pain required Analgesic</td>
<td>2</td>
</tr>
<tr>
<td>Pain not relived even if Analgesic given</td>
<td>3</td>
</tr>
</tbody>
</table>

2. **Gradation of stiffness:**

<table>
<thead>
<tr>
<th>Sign</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>No stiffness</td>
<td>0</td>
</tr>
<tr>
<td>Mild stiffness can perform daily routine activities</td>
<td>1</td>
</tr>
<tr>
<td>Moderate stiffness can perform daily activities with difficulty</td>
<td>2</td>
</tr>
<tr>
<td>Severe stiffness hampering</td>
<td>3</td>
</tr>
</tbody>
</table>
daily routine activities

3. Gradation of swelling:

<table>
<thead>
<tr>
<th>Sign</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>No swelling</td>
<td>0</td>
</tr>
<tr>
<td>Mild</td>
<td>1</td>
</tr>
<tr>
<td>Moderate</td>
<td>2</td>
</tr>
</tbody>
</table>
| Severe, elicited even on slight touch | 3

4. Gradation of tenderness:

<table>
<thead>
<tr>
<th>Sign</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>No tenderness</td>
<td>0</td>
</tr>
<tr>
<td>Mild, elicited on much pressure</td>
<td>1</td>
</tr>
<tr>
<td>Moderate, elicited on moderate pressure</td>
<td>2</td>
</tr>
</tbody>
</table>
| Severe, elicited even on slight touch | 3

5. Gradation of restriction of movement:

<table>
<thead>
<tr>
<th>Sign</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>Absence of movement restriction</td>
<td>0</td>
</tr>
<tr>
<td>Restriction of movement with flexion deformity of &lt;5 degree</td>
<td>1</td>
</tr>
<tr>
<td>Restriction of movement with flexion deformity of 5-15 degree</td>
<td>2</td>
</tr>
<tr>
<td>Restriction of movement with flexion deformity of more than 15 degree</td>
<td>3</td>
</tr>
</tbody>
</table>

Observation and Result:

All statistical analysis is done by student’s paired t-test ‘p’ value <0.05 were considered to be statistically significant. All the observations in reduction of symptoms and statistical analysis are given in table.

<table>
<thead>
<tr>
<th>Symptoms</th>
<th>Mean ± SD Before T/t</th>
<th>Mean ± SD After T/t</th>
<th>Paired t-test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pain</td>
<td>2.3 ±0.55</td>
<td>0.8 ±0.42</td>
<td>t=3.21 p&lt;0.05</td>
</tr>
<tr>
<td>Stiffness</td>
<td>0.8 ±0.63</td>
<td>0.5 ±0.53</td>
<td>t=2.01 p&gt;0.05</td>
</tr>
<tr>
<td>Swelling</td>
<td>1.1 ±0.57</td>
<td>0.1 ±0.32</td>
<td>t=4.76 p&lt;0.05</td>
</tr>
<tr>
<td>Tenderness</td>
<td>1.5 ±0.53</td>
<td>0.3 ±0.48</td>
<td>t=9.02 p&lt;0.05</td>
</tr>
<tr>
<td>Restriction of movement</td>
<td>1.2 ±0.79</td>
<td>0.1 ±0.32</td>
<td>t=6.12 p&lt;0.05</td>
</tr>
</tbody>
</table>

Discussion:

Traditional Leech therapy seems to be an effective in treatment for knee joint osteoarthritis. The saliva of Leeches contains a variety of substances such as Hirudin, hyaluronidase, histamine like vasodilators, collagens, destabilase and poorly characterized anesthetic and analgesic compounds. These substances might reach deeper tissue zones and possibly the joint spaces. And thus exert marked effects in periarticular tissue and adjacent structures.
A regional analgesic and antiphlogistic effect by these substances enforced by hyaluronidase as well as counter-irritation might be the possible reason of improvement by treatment. Venous congestion in the joint also remarkably decreases as the small blood volume removed by medicinal leeches and the augmented blood removal during the passive bleeding phase of Leech therapy.

In the Ayurvedic text2, Jalaukavacharana is described as a very gentle procedure of bloodletting. As Dushta rakta dhatu is one of the causative factor in Janusandhigat Vata, Jalaukavacharana shows good result in it. It gives instant relief in Vedana (pain) and Shotha (swelling).

The effectiveness and safety of this treatment is especially when applied repeatedly.

**Conclusion:**

Jalaukavcharana exhibited good clinical improvement in term of relieving individual symptoms as well as reducing severity of disease. Pain, swelling & tenderness were significantly reduced. Joint movement significantly improved. Stiffness was also reduced to mild extent.

**Acknowledgement:**

I am grateful to Dr. S. L. Dasari Sir, Principal A.S.S. Ayurved College, Nashik, for permit me to do this research work. I also very grateful to Dr. V.R. Sonambekar Sir, HOD Shalyatantra dept., Dr. Santosh Pathak Sir-Asst. Professor, Dr. Pankaj Dixit Sir-Asso. Professor- Shalyatantra dept. A.S.S. Ayurved College, Nashik, for giving me opportunity to do this work and to guide me in each and every step of this study.

**References:**

Article No. 05
‘Clinical evaluation of Argyreia speciosa Linn. F. in the management of NIDDM ’

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ABSTRACT: -

According to the IDF (International Diabetes Federation), Diabetes mellitus affects more than 62 million Indians, which is more than 7.1% of India's Adult Population. Vruddhadaruka (Argyreia speciosa Linn.F.) is a traditional indigenous drug amongst the wide range of drugs in our Indian materia medica. The present open randomized control type of study was aimed to evaluate the ‘hypoglycemic property’ of Vruddhadaruka (Argyreia speciosa Linn.F.) w.s.r. to Madhumeha [Type 2 Diabetes mellitus- NIDDM (Non Insulin Dependant Diabetes Mellitus)]. For this purpose, 40 patients were selected and randomly divided in two groups A and B of 20 patients in each. The 4 gram of root powder of research drug Vṛddhadāruka (Argyreia speciosa Linn.F.) and 6 gram of seed powder of control group drug Kataka (Strychnous potatorum Linn.F.) were given in two divided doses after meals with the vector of luke warm water. The duration of the study was two months with follow up after every two weeks. After application of appropriate statistical test, Group A showed highly significant results than group B.

In Achikīṣīta prameha Kledotpatti and dhatu shaithilya leads to Sarva Dhatu Asarata. At this stage Vruddhadaruka acts as Balya and Rasayana due to its madhura vipaka and snigdha, mrudu, manda guna. Further Ojakshaya get relieved by Vruddhadaruka as it is rasadhatwagnivardhaka and sarvadhatu poshaka due to its katu, tikta, kashaya rasa and ushna virya. Out of two treatment modalities in Ayurveda, it is a shamana aushadhi in Madhumeha and therefore can be used effectively in lowering Fasting and Post-prandial Blood Sugar Level in NIDDM.

Cite this article:
“The Clinical evaluation of Argyreia speciosa Linn. F. in the management of NIDDM”
P. A. Khaire

INTRODUCTION

Diabetes Mellitus which is currently research is aimed at is the greatest challenge for medical fraternity in the present scenario and has become the great cause of concern for researchers. Now-a-days Diabetes Mellitus has not only gained the attention of Physicians but also of many scientists across the world and W.H.O., because the worldwide prevalence of DM has risen dramatically over the past two decades. The IDF (International Diabetes Federation) has subsequently released estimates of the numbers of diabetic persons globally for 2003 and forecasts for 2025 of 194 million and 334 million respectively [1]. According to the IDF, the disease affects more than 62 million Indians, which is more than 7.1% of India's Adult population [2]. An estimate shows that nearly 1 million Indians die due to Diabetes every year [3]. Additionally, a study by the American Diabetes Association reports that India will see the greatest increase in people diagnosed with diabetes by 2030 making India ‘World Capital’ of DM. Major causative factors for its tremendous increase is immense stress in this competing era, lack of exercise, sedentary lifestyle and the most important is unhealthy food.

Diabetes mellitus comprises a group of common metabolic disorders that share the phenotype of hyperglycemia with disturbances in carbohydrates, fat and protein metabolism. Depending on the etiology of the DM, factors contributing to hyperglycemia may include reduced insulin secretion, decreased glucose utilization and increased glucose production. Long-lasting metabolic derangement is frequently associated with several functional and structural changes in the cell of the body, those of the vascular system being particularly susceptible.

‘Prameha’ described in Ayurvedic literature appears to have very strong correlation and similarity to the diabetes mellitus of modern medicine. The associated Dhatuṣaithilya and Dhatukṣaraṇa causes gross Dhatukṣaya with the depletion of Ojuṣa (Vital life force).

For the management of madhumeha (Diabetes mellitus), various herbal and herbo-mineral preparations are described in Ayurvedic texts. Taking into consideration the samprapti of madhumeha (Pathogenesis of Diabetes mellitus), the ideal requirement of any drug used for its management should possess the following qualities:

1. Prevent dhatuṣaithilya.
2. Improve the cellular metabolism (at jatharagni, dhatvagni level).
3. Replenish the lost dhatu.
4. Possess an immune-modulatory effect.
5. Be more potent and have minimum side effects.

Vruddhadaruka (Argyreia speciosa Linn.F.) is one amongst the wide range of
drug in our Āyurvedic text explained by grānthakāra. The plant is easily available throughout the India up to an altitude of 300 – 1000 m. and not so expensive in the market, so affordable to everyone. Research work on the root of Argyreia speciosa Linn. F. in animals is published previously, but results in human trials are lacking; likewise research on aerial part done, but on roots is lacking⁴,⁵. As we go through bibliography of Ayurveda researches, very few researches on Vruddhadaruka have done [⁶]. Therefore further researches are needed on this drug. Hence, it was thought worth to choose the drug Vṛddhadāruka (Argyreia speciosa Linn.F.) for my research work and study.

Vruddhadaruka was mentioned in Sushrut samhita [⁷]; Ashtang sangraha [⁸] and later in various nighantus (lexicons) like kaiyadev⁹ and Bhavaprakasha [¹⁰].

According to Bhāvaprakāśh nighantu, Argyreia speciosa Linn.F. which is known as Vṛddhadāruka or Samudraśosa has its action on Prameha and can be used as a Hypo-glycemic agent [¹¹]. Āyurvedic literature has mentioned its Anti-diabetic property; as well as Balya and Rasāyana karma[¹²]. Further Madhumeha is vataj prameha and basically prameha generates due to Kapha-dosha[¹³]. This drug breaks the Samprāpti (patho-physiology) as it is Vāta-Kaphanāśaka[¹⁴] (subsides vata and kapha dosha). Taking into consideration the substantial increase in prevalence of Diabetes mellitus, it has been decided to prepare, standardize a Vṛddhadāruka mula cūrna (Argyreia speciosa Linn.F). Main aim of the present study was to evaluate its hypoglycemic activity for the management of Madhumeha (Type-2 Diabetes mellitus-NIDDM).

AIM-

To evaluate the ‘hypoglycemic property’ of Vṛddhadāruka (Argyreia speciosa Linn.F.) w.s.r. to Madhumeha (Diabetes mellitus- NIDDM).

OBJECTIVES-

1. To identify and authenticate the research drug Vṛddhadāruka (Argyreia speciosa Linn.F.) and control group drug Kataka (Strychnous potatorum Linn.F.)
2. To collect the literature of the research drug Vṛddhadāruka (Argyreia speciosa Linn.F.) and control group drug Kataka (Strychnous potatorum Linn.F.) according to Ayurveda and Modern sciences.
3. To do the standardization of the research drug Argyreia speciosa Linn.F. (Vṛddhadāruka) before its administration.
4. To review the literature of the Madhumeha (Diabetes mellitus) according to Ayurveda along with modern medical science.
5. To clinically evaluate its Madhumehaghna property w.s.r. to Diabetes Mellitus and compare the results with control group drug Kataka beeja (seeds of Strychnous potatorum Linn.F.)
6. To assess & conclude the result of study determined with application of appropriate statistical test.
MATERIALS AND METHODS-

Clinical Study:

The Clinical Study conducted to evaluate the hypo-glycemic property of *Vruddhadāruka* (*Argyreia speciosa* Linn. F.) in NIDDM patients diagnosed using following parameters. The protocol of this clinical study includes the Study Design, Criteria for selection & Criteria for Clinical Assessment, as follows.

(1) Design of clinical study–

1. **Type of study**: Open Randomized control type of study

2. **Material**: a. **Drug**- The root powder of research drug *Vruddhadāruka* (*Argyreia speciosa* Linn.F.) and seed powder of control group drug *Kataka* (*Strychnous potatorum* Linn.F.) both botanically authenticated in laboratory were sourced from the cultivated fields at Smt. K. G. M. P. college herbal garden, Kalina university campus, Santacruz, Mumbai and genuine market suppliers of Mumbai, Maharashtra respectively,

   b. **Posology**- Orally 4 gram of gr. A drug and 6 gram of gr. B drug advised in two divided doses for 8 weeks. Follow up was taken after every 2 weeks.

   Bhaishajya-kala for both the drugs was decided as *adhobhakta* (after meals), because any *balya* and *rasayan aushadhi* are given so.

c. **Anupana (vector)**:[15], [16]- *Ushnodaka* (Luke warm water),

d. **Dietary restrictions**- The patients were explained to follow the *Pathyapathya* for *madhumeha* as said in Ayurvedic texts.[17]

e. **Patients**- Total 40 patients, 20 in each group attending the out-patient department fulfilling inclusive criteria.

3. **Method**: Preparation of *churna* (fine powder) of trial drug (Gr. A) and control drug (Gr. B) was done by pulverizer in institutional pharmacy time to time as per needed to patient.

4. **Ethical clearance**: The study was cleared by the Institutional Ethics Committee. Prior to initiation of the study, written consent was taken from each patient.

5. **Statistical analysis**: The values of the above parameters were subjected to statistical analysis in terms of mean, standard deviation and standard error. t-test was carried out and calculated values are compared with ‘t’ table value at p<0.05, p<0.01, p<0.001 to find out the level of significance. Statistical test – Wilcoxon sign rank, paired & unpaired ‘t’ test was applied at the 5% level of significance.

In case of subjective parameters, as the data was ordinal, Wilcoxon Sign Rank Test was applied within the group and Mann Whitney ‘U’ test was applied to compare results between the groups. In case of objective criteria, as data was interval data (‘Rating Scale’ data), paired ‘t’ test was applied within the group and unpaired ‘t’ test was applied between two groups.
(2) Criteria for selection-

**Inclusion criteria:-**

- Patients of either sex belonging to age group of 25-70 years
- Patients presenting with classical signs and symptoms of *Madhumeha* (Diabetes mellitus) mentioned in subjective Criteria and of NIDDM type only.
- Blood sugar level: Fasting >126 and <200 mg/dl & PP >200 and < or =400 mg/dl

**Exclusion Criteria:-**

- Patients Below 25 years and above 70 years.
- Blood sugar level- Fasting <126 and >200 mg/dl, PP <200 and > 400 mg/dl
- Malignant and accelerated hypertensive, CVS disorder (CAD)
- IDDM (Insulin dependent diabetes mellitus) patients
- Pregnant women & Lactating mothers
- Juvenile diabetics
- Infectious diseases like HIV, Koch’s, etc.
- Chronic complications

**Withdrawal Criteria:** Development of any serious complication which requires emergency treatment with any other drug or therapy.

(3) Criteria for clinical assessment

- **Objective Criteria :**
  1) Fasting Blood Glucose Level (FBS)
  2) Post–prandial Blood Glucose Level (PPBS)

- **Subjective Criteria:** (Table 1)

<table>
<thead>
<tr>
<th>Grades</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0- Absent</td>
<td></td>
</tr>
<tr>
<td>1(+) - Mild</td>
<td></td>
</tr>
<tr>
<td>2(++) - Moderate</td>
<td></td>
</tr>
<tr>
<td>3 (+++) - Severe</td>
<td></td>
</tr>
</tbody>
</table>

**OBSERVATIONS AND RESULT:**

`The patients were randomly selected with fulfillment of all Inclusive criteria and provided with trial/ research drug to group A and control group drug to group B comprising 20 patients each. Criteria of assessment were applied to assess the prognosis of patient and improvement in general health. Clinical assessment was done on the basis of gradation of assessment criteria before treatment and after treatment (after 8 weeks) for both the groups.

Clinical efficacy of different treatment modalities:

Result after application of Wilcoxon matched pair sign rank test for subjective parameters- Data when treated with Wilcoxon test assuming,

Null hypothesis: There is no significant difference between before & after result of treatment modality.
Alternative hypothesis: There is significant difference between before & after result of treatment modality. (Table 2)

The score magnitudes were treated as signs & ranks given accordingly. Where;

S.D.: standard deviation,
E.S.: extremely significant,
V.S.: very significant,
S: significant,
N.S.: not significant,
NOT Q.S.: not quite significant.

We use two tailed P value as we want to prove that the means of before and after treatment modality are not equal. (Wilcoxon sign rank test compares medians). The two-tailed P value is <0.001, for all symptoms in the group A. This concludes that difference between values Before & After treatment is considered to be extremely significant in group A. The two-tailed P value is <0.0001, for the BSL fasting parameter in group B. This concludes that difference between values Before & After treatment is considered to be extremely significant in group A; whereas it is 0.001 in the BSL post-prandial parameter in group B. It means difference between values Before & After treatment is considered to be very significant.

Application of mann whitney ‘U’ test for comparison between subjective criteria of both groups- (table-5)

Result: As P<0.05 we reject null hypothesis and accept alternative hypothesis. i.e. result of Group A is better than group B in subjective parameters.

Application of unpaired ‘t’ test for comparison between objective criteria of both groups- (table-6)

Result: As P<0.05 we reject null hypothesis and accept alternative
hypothesis. i.e. result of Group A is better than group B in lowering both B.S.L.-F level and B.S.L.-PP level.

**DISCUSSION**

In this open randomized control study, the gradations of each symptom given as per the severity served as a quantitative data in the form of scores from 0 to 3. The shifting of gradation from higher to lower is considered as good prognosis. This data is further processed and analyzed using Statistical test to obtain result. Objective parameters i.e. investigations, were carried out before and after treatment and were also, subjected to statistical analysis.

Wilcoxon Matched Pair Sign Rank test showed that, both Groups A [Vruddhadaruka mula] & B [Kataka beja] are showing significant results in treatment of *Madhumeha*. Thus it was necessity to find out which modality is showing better results. For this purpose, only summation of after treatment results of each symptom of each patient was calculated for both groups. Thereafter these values were treated in Statistical software. Here also data was not following normal Distribution; thus MANN-WHITNEY TEST instead of unpaired ‘t’ test was used for calculation.

There seemed to be significant difference between results of two groups after application of Mann-Whitney Test. Group A showed statistically ‘effectively significant’ results in subjective parameters and in BSL-PP; however, very significant in BSL-F parameter. Thus group A was better than group B.

**Probable mode of action of Vruddhadaruka**

In *Achikitsita prameha* (Prameha samprapti as explained earlier) *Kledotpatti* and *dhatu shaithilya* are main causative factors involved.

1. *Kledotpatti* leads to *Sarva Dhatu Asarata*. At this stage *Vruddadaaruka* acts as *Balya* and *Rasayana* due to its *madhura vipaka* and *snigdha, mrudu, manda guna*. *Sarva Dhatu Asarata* results in *Ojakshaya* which relieved by the use of *Vruddhadaruka* as it is *rasadhatwagnivardhaka* and *sarvadhatu poshaka* due to its *katu, tikta, kashaya rasa* and *ushna virya*.

2. *Dhatu shaithilya* in *madhumeha* disturbs *prakrut dhatu utpatti* and leads to *dhatu-kshayajanya Vataprapka*. Here *Vruddhadaruka* is *Vatashamaka; Dhatuposhaka* due to its *Madhura vipaka* and *snigdha, mrudu* and *manda guna*.

Out of two treatment modalities in Ayurveda, *Vruddhadaruka* is a *shamana aushadhi* in *Madhumeha*.

**CONCLUSION**

*Vruddhadaruka* is a traditional indigenous drug which is discussed by nearly all *Nighantus* (lexicons). Preparations of *Vruddhadaruka* were stated by many *rasagranthas* like *Bhaishajya-ratnaavali, yog-ratnaakara, Shaarangadhara, Vangasena* etc. It is very useful as *rasayana, vajikarana, pramehaghna* and in diseases like *shlipad, vaatavyadhi, arsha* etc. Äyurvedic
literature has mentioned its Anti-diabetic property; as well as Balya and Rasayana karma. Further Madhumeha is vataj prameha and basically prameha generates due to Kapha-dosha. This drug cures the condition as it is vata-kaphanashaka.

In the Subjective criteria of group A, two-tailed ‘p’ value is <0.001 that is difference between values before & after treatment is considered to be extremely significant. But in Tulu-dant-jivha-malotpatti symptoms (0.001) of group A it is significant. In the group B, symptoms like Paridahangeshu, Pipasa, Muktaalushosa and Dourbalya showed very significant results, Madhuraasyata and Taludantjivha-malotpatti showed significant results and other symptoms showed effectively significant results.

In the Objective criteria of group B, the two-tailed P value is <0.0001, for the BSL fasting parameter. This concludes that difference between values Before & After treatment is considered to be extremely significant in group A; whereas it is 0.001 in the BSL post-prandial parameter in group B. It means difference between values Before & After treatment is considered to be very significant.

As P<0.05 in both BSL-Fasting (significant) and Post-prandial (effectively significant) we reject null hypothesis and accept alternative hypothesis, that is result of Group A is better than group B in lowering Blood Sugar Level- Fasting and Post-prandial.

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TABLES-

<table>
<thead>
<tr>
<th>No</th>
<th>Lakshana</th>
<th>0</th>
<th>1-2 times in</th>
<th>3-4 times in</th>
<th>More than 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>Prabhūta-mūtratā</td>
<td>Not in</td>
<td>1-2 times in</td>
<td>3-4 times in</td>
<td>More than 5</td>
</tr>
</tbody>
</table>


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### Table 2 - Result after application of wilcoxon matched pair sign rank test for subjective parameters

<table>
<thead>
<tr>
<th>Sr. no.</th>
<th>Symptom</th>
<th>GROUP A</th>
<th>GROUP B</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>( Z )</td>
<td>( Z )</td>
</tr>
<tr>
<td></td>
<td></td>
<td>( 'p' ) value (2-tailed)</td>
<td>( 'p' ) value (2-tailed)</td>
</tr>
<tr>
<td>02</td>
<td>Álasya (general debility)</td>
<td>-3.904(^a)</td>
<td>-3.839(^a)</td>
</tr>
<tr>
<td></td>
<td>night feels only to do day to day activities</td>
<td>.000</td>
<td>.000</td>
</tr>
<tr>
<td>03</td>
<td>Karapādayoh suptatā (numbness in palm and foot)</td>
<td>Absent</td>
<td>Cotton test +ve; Pinprick +ve.</td>
</tr>
<tr>
<td>04</td>
<td>Madhurāsyatā (sweetness in mouth)</td>
<td>Absent</td>
<td>Persistent feeling</td>
</tr>
<tr>
<td>05</td>
<td>Paridāha angeshu (burning sensation)</td>
<td>Absent</td>
<td>Mild increase in symptoms</td>
</tr>
<tr>
<td>06</td>
<td>Gurūgatratā (heaviness)</td>
<td>Absent</td>
<td>Patient with long standing person feels it.</td>
</tr>
<tr>
<td>07</td>
<td>Sveda and angadourgangdhya (excess perspiration, bad odor)</td>
<td>Absent</td>
<td>Patient with neighbor person feels it.</td>
</tr>
<tr>
<td>08</td>
<td>Pipāsa (polydipsia)</td>
<td>drinks 2 to 3 liters of water</td>
<td>drinks 4 to 6 liters of water</td>
</tr>
<tr>
<td>09</td>
<td>Mukhatāluśosa (dryness in oral cavity)</td>
<td>Absent</td>
<td>Needs to take water to keep mouth wet.</td>
</tr>
<tr>
<td>10</td>
<td>Talu Dant Jivhā Malotpatti</td>
<td>Absent</td>
<td>Feels after doing brush 2 times/day.</td>
</tr>
<tr>
<td>11</td>
<td>Atinidrā (excess sleep)</td>
<td>sleeps at night for 6-8 hrs.</td>
<td>Night sleep with 1-2 hour diwap</td>
</tr>
<tr>
<td>12</td>
<td>Dourbalya (weakness)</td>
<td>Absent</td>
<td>Only on exertion</td>
</tr>
</tbody>
</table>

\(^a\)Note: \( p < 0.05 \) indicates statistical significance.
Based on positive ranks. b. Wilcoxon Signed Ranks Test

**Table-3-**

Result after application of paired ‘t’ test for objective parameters of group-A

<table>
<thead>
<tr>
<th>Test</th>
<th>Mean BT</th>
<th>S.D. BT</th>
<th>S.E. BT</th>
<th>Mean AT</th>
<th>S.D. AT</th>
<th>S.E. AT</th>
<th>‘t’ value</th>
<th>‘p’ value</th>
</tr>
</thead>
<tbody>
<tr>
<td>BSL-F</td>
<td>154.28</td>
<td>95.84</td>
<td>22.976</td>
<td>9.5858</td>
<td>5.1376</td>
<td>2.143</td>
<td>15.93</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>BSL-PP</td>
<td>272.62</td>
<td>166.71</td>
<td>54.597</td>
<td>36.278</td>
<td>12.208</td>
<td>8.112</td>
<td>16.93</td>
<td>&lt;0.001</td>
</tr>
</tbody>
</table>

**Table-4-**

Result after application of paired ‘t’ test for objective parameters of group-B

<table>
<thead>
<tr>
<th>Lab Test</th>
<th>Mean BT</th>
<th>S.D. BT</th>
<th>S.E. BT</th>
<th>Mean AT</th>
<th>S.D. AT</th>
<th>S.E. AT</th>
<th>‘t’ value</th>
<th>‘p’ value</th>
</tr>
</thead>
<tbody>
<tr>
<td>BSL-F</td>
<td>150.49</td>
<td>105.25</td>
<td>22.85</td>
<td>18.115</td>
<td>5.110</td>
<td>4.050</td>
<td>12.91</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>BSL-PP</td>
<td>252.23</td>
<td>220.85</td>
<td>54.35</td>
<td>44.481</td>
<td>12.154</td>
<td>9.946</td>
<td>4.152</td>
<td>0.001</td>
</tr>
</tbody>
</table>

**Table- 5-**

Application of Mann Whitney ‘U’ test for comparison between subjective criteria of both groups-
### Table-6-

Application of unpaired ‘t’ test for comparison between objective criteria of both groups-

<table>
<thead>
<tr>
<th>Patients No. 20</th>
<th>B.S.L. FASTING</th>
<th>B.S.L.- Post-prandial</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Difference- Gr. A</td>
<td>Difference- Gr. B A</td>
</tr>
<tr>
<td>Mean</td>
<td>58.58</td>
<td>45.24</td>
</tr>
<tr>
<td>S.D.</td>
<td>16.668</td>
<td>15.661</td>
</tr>
<tr>
<td>S.E.</td>
<td>3.7271</td>
<td>3.5020</td>
</tr>
<tr>
<td>‘T’ value</td>
<td>2.608</td>
<td>2.608</td>
</tr>
<tr>
<td>Significance ‘P’ value</td>
<td>0.013 (Considered Significant)</td>
<td>0.000 (considered effectively significant)</td>
</tr>
</tbody>
</table>
Role of Nirgundipatra swarasa and Shunthi kashaya in the management of Amavata w.s.r to Rheumatoid arthritis

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Abstract

Ama and Vata are the two chief pathological factors responsible for causing the disease Amavata. Ama or Amavisha is the undigested food which is resultant of improper digestion of the food due to hypo functioning of Jatharagni[1]. The disease Amavata presents with the qualities of heaviness (guru), immobility (sthira), bulkiness (sthula), and stickiness (picchila) etc.[2]. Rheumatoid arthritis is an autoimmune disorder, which means our immune system has begun to attack its own tissues instead of protecting them. Inflammation is a normal response by our immune system against infections, wounds and foreign objects. In Rheumatoid arthritis, the inflammatory immune response is wrongly directed towards our joint tissues. The aim of the present pilot study was to test the efficacy and safety of Nirgundipatra Swarasa and Shunthi Kashaya as a part of treatment for Rheumatoid Arthritis. The study was conducted at Government Ayurved Hospital, Nanded. 10 patients with a confirmed diagnosis of Rheumatoid Arthritis were enrolled for the present study. Further evaluated the outcomes of Ayurvedic treatment on the basis of American Rheumatism Association (ARA) criteria that is grip strength, foot pressure, walking time, ESR etc. There was statistically significant improvement in all parameters from admission to discharge. The results indicated that the classical Ayurvedic remedy used in the form of Nirgundipatra swarasa and Shunthi kashaya were found effective. These drugs possess anti-disease property like laghu, ruksha, deepana, pachana, anti-inflammatory (shothhara), analgesic (Vednaprashamana) which helped in breakdown of pathogenesis of disease Amavata.
Role of Nirgundipatra swarasa and Shunthi kashaya in the management of Amavata w.s.r. to Rheumatoid arthritis

Kadam Krishna Namdeo, Jadhav Viraj Vilas


Keywords:
Ayurveda, Amavata, Rheumatoid arthritis, Nirgundipatra swarasa, Shunthi kashaya, Ama, Vata

Introduction:

When Ama and Vata simultaneously get vitiated and enters the Trika and Sandhi finally leading to stabdhata (stiffness) of the body, the condition is known as Amavata [2]. It means, Vata Dosha along with Ama is termed as Amavata. It indicates the propulsion of Ama by vitiated Vata in the entire body and gets lodged in Sandhisthana producing Amavata [3]. The word Rheumatism is derived from rheumatismos (Greek) designating mucus as an evil humour which flows from brain to the joints and other portions of the body producing pain. Rheumatoid Arthritis is a chronic systemic inflammatory disorder that may affect many tissues and organs, skin, blood vessels, heart, lungs and muscles, but principally attacks the joints, producing a non-suppurative proliferative synovitis that often progresses to destruction of the articular cartilage and ankylosis of the joint. (Robbins1999).

Purpose of study:

Amavata (Rheumatoid Arthritis) possess a challenge to the physician owing to its apparent chronicity, incurability, complications and morbidity. The treatment of Rheumatoid Arthritis in modern system of medicine is quite unsatisfactory as it produces only symptomatic relief without destroying the pathogenesis of the disease.

The study is aimed to provide an Ayurvedic economical remedy for people living in all groups [4][5]. The management of this disease is merely insufficient in other system of medicine and patients are continuously looking with a hope towards Ayurveda to overcome this challenge [6]. In Amavata, dushti of rasa dhatu takes place, so it is necessary to treat rasa dhatu first [7][8]. With this purpose, author selected the drugs having actions like Deepan and Pachana which have antidisease properties and can easily breaks the pathogenesis of disease. With this view, 10 patients suffering from Rheumatoid Arthritis were enrolled and administered Nirgundipatra swarasa and Shunthi kashaya for 30 days. It was observed that Shaman Chikitsa used in the form of Nirgundipatra Swarasa and Shunthi kashaya produces significant improvement in the patients of Amavata.
Table 1: Correlation of Amavata with rheumatoid arthritis

<table>
<thead>
<tr>
<th>Amavata</th>
<th>Rheumatoid arthritis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sandhishula</td>
<td>Joint pain</td>
</tr>
<tr>
<td>Sandhishotha</td>
<td>Joint swelling</td>
</tr>
<tr>
<td>Sparshasahyata</td>
<td>Tenderness about the joints</td>
</tr>
<tr>
<td>Gatra Stabdhatu</td>
<td>Stiffness of joints and whole body</td>
</tr>
<tr>
<td>Raga</td>
<td>Ruddy hue erythema about the joint</td>
</tr>
<tr>
<td>Jwara</td>
<td>Low grade fever</td>
</tr>
<tr>
<td>Daha</td>
<td>Burning of fingers and toes (prodromal sign of R.A.)</td>
</tr>
<tr>
<td>Aruchi</td>
<td>Anorexia</td>
</tr>
<tr>
<td>Daurbalya</td>
<td>Weakness due to anemia</td>
</tr>
<tr>
<td>Guruta</td>
<td>Heaviness in body parts</td>
</tr>
<tr>
<td>Angashoonata</td>
<td>Pedal edema</td>
</tr>
<tr>
<td>Utsahahani</td>
<td>Loss of enthusiasm</td>
</tr>
<tr>
<td>Bhrama</td>
<td>Vertigo</td>
</tr>
<tr>
<td>Murcha</td>
<td>Loss of motor function</td>
</tr>
<tr>
<td>Hritagraha</td>
<td>Pericarditis, Myocarditis, Conduction defects</td>
</tr>
<tr>
<td>Angavaikalyata</td>
<td>Deformities</td>
</tr>
<tr>
<td>Jadya</td>
<td>Inability to perform action due to stiffness</td>
</tr>
<tr>
<td>Mamsa-shosha</td>
<td>Muscle wasting</td>
</tr>
<tr>
<td>Granthi</td>
<td>Rheumatoid nodule</td>
</tr>
<tr>
<td>Anyani</td>
<td>Carpel tunnel syndrome, Felty’s syndrome</td>
</tr>
<tr>
<td>Updravani</td>
<td>Loss of bladder control etc.</td>
</tr>
</tbody>
</table>

When ama mixes with dosha, dhatu, mala develops certain complex adverse reactions, which is the manifestation of disease. Direct influence of ama is observed in disease Amavata. When vata amalgamate with ama produces stupor, inactiveness, feeling of heaviness, unctuousness, loss of power of agni, anorexia, lassitude, feeling of coldness, swelling etc.

**Aims**

To study the role of Nirgundipatra swarasa along with Shunthi kashaya in the management of Amavata

**Objectives**
• To assess the efficacy of *Nirgundipatra swarasa* along with *Shunthi kashaya* in the management of *Amavata* w.s.r.to rheumatoid arthritis.

• To draw a hypothesis regarding the mode of action of drug used in the present trial on the scientific basis.

**Materials and Methods**

**Selection of Patients**

10 cases of well diagnosed patient of Rheumatoid Arthritis were selected from the I.P.D. and O.P.D. wing of Government Ayurvedic College, Hospital and Nanded. The evaluation of the efficacy of Ayurvedic treatment based on ARA 1988 criteria\[^{[17]}\].

**Age:** 20 to 60 year.

**Sex:** Either sex

**Criteria of diagnosis**

The patients were diagnosed on the basis of special Performa incorporating all signs and symptoms of the disease. Also the detail clinical history was taken and complete physical examination was carried out. Rheumatoid factor test was carried out in all the patients. In addition, routine investigations like haematological, stool, urine were also carried out to rule out other pathologies. Moreover, the criteria are laid down by American Rheumatism Association 1988 \[^{[17]}\] was also followed which are:

- Morning stiffness lasting for more than one hour.
- Arthritis of three or more joints area.
- Arthritis of hand joints
- Symmetrical arthritis
- Presence of rheumatoid nodules
- Presence of rheumatoid factor

Criteria 1, 2, 3 and 4 must be present for the duration of six weeks or more. Diagnosis of rheumatoid arthritis was made with four or more criteria.

**Criteria for Exclusion**

Patients belonging to any of the below criteria were being excluded from the present study:

- Chronicity of more than 10 years
- Having severe crippling deformities
- Having cardiac disease, pulmonary tuberculosis, diabetes etc.

**Administration of drug**

The patients of this study group were given *Nirgundipatra Swarasa*\[^{[18][19]}\] in the
dose of 10 ml twice a day with Luke warm water along with *Shunthi kashaya*\[^{[18][19]}\] in the
dose of 30ml mixed with equal amount of water in the morning for 1 month.

**Period of trial – 30 days**

**Criteria of assessment**

The results of the therapy were assessed on the basis of clinical signs and symptoms mentioned in Ayurvedic classics as well by ARA 1988. Functional capacity of the
patients was also assessed and Laboratory investigations were repeated at the end of the treatment.

Clinical assessment

The indoor patients were examined daily and the outdoor patients were assessed weekly and changes observed in the signs and symptoms were assessed by adopting suitable scores.

Table 1: Pain in joint

<table>
<thead>
<tr>
<th>Specification</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>No pain</td>
<td>00</td>
</tr>
<tr>
<td>Mild pain of bearable nature, comes occasionally</td>
<td>01</td>
</tr>
<tr>
<td>Moderate pain, but no difficulty in joint movement, appears frequently and requires some upashaya measure</td>
<td>02</td>
</tr>
<tr>
<td>Slight difficulty in joint movements due to pain or, requires medication may remain through day</td>
<td>03</td>
</tr>
<tr>
<td>More difficulty in moving the joints and pain is severe, disturbing sleep and requires strong analgesics</td>
<td>04</td>
</tr>
</tbody>
</table>

Table 2: Swelling of the joint

<table>
<thead>
<tr>
<th>Specification</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Similar circumferences of bilateral parts of body</td>
<td>00</td>
</tr>
<tr>
<td>by ½ to 1 cm.</td>
<td>01</td>
</tr>
<tr>
<td>by 1 to 2 cm.</td>
<td>02</td>
</tr>
<tr>
<td>by 2 to 3 cm.</td>
<td>03</td>
</tr>
<tr>
<td>by &gt; 3 cm.</td>
<td>04</td>
</tr>
</tbody>
</table>

Table 3: Stiffness of the joints

<table>
<thead>
<tr>
<th>Specification</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>No stiffness or stiffness lasting for 5 min</td>
<td>00</td>
</tr>
<tr>
<td>Stiffness lasting for 5 min to 2 hours</td>
<td>01</td>
</tr>
<tr>
<td>Stiffness lasting for 2 hours to 8 hours</td>
<td>02</td>
</tr>
<tr>
<td>Stiffness lasting for more than 8 hours</td>
<td>03</td>
</tr>
</tbody>
</table>

Table 4: Tenderness of the joints

<table>
<thead>
<tr>
<th>Specification</th>
<th>Score</th>
</tr>
</thead>
</table>
Subjective experience of tenderness 01
Wincing of face on pressure 02
Wincing of face with withdrawal of affected pressure 03

Table 5: Redness of the joint

<table>
<thead>
<tr>
<th>Specification</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Redness</td>
<td>00</td>
</tr>
<tr>
<td>Redness occupying Length 5cm</td>
<td>01</td>
</tr>
<tr>
<td>6 to 10 cm</td>
<td>02</td>
</tr>
<tr>
<td>11 to 15 cm</td>
<td>03</td>
</tr>
<tr>
<td>&gt; 15 cm</td>
<td>04</td>
</tr>
</tbody>
</table>

Table 6: Warmth of the joint

<table>
<thead>
<tr>
<th>Specification</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Raised temperature when compared to the normal body surface</td>
<td>02</td>
</tr>
<tr>
<td>Fall in local warmth</td>
<td>01</td>
</tr>
<tr>
<td>Normal temperature</td>
<td>00</td>
</tr>
<tr>
<td>No change after treatment</td>
<td>03</td>
</tr>
</tbody>
</table>

General Symptoms of Amavata

General symptoms of Amavata like Agnimandya, Aruchi, Apaka, Angamarda, Trishna, Gaurava, Alasya, Jvara, Praseka, Utsahahani, Asyavairasya, Daha, Bahumutrata, Kukshikathinya, Kukshishula, Nidravigapraya, Chardi, Bhrama, Murchha, Hritagraha, Hritgaurava, Vidvibandha, Amatisara, Jadya, Antrakujana, Anaha, Daurbalya, Klamaand Shiroruja were scored as mentioned below:

- Some relief after treatment 01
- Complete relief after treatment 00
- No improvement after treatment 02

Functional assessment

Following periodical functional tests were carried out for objective assessment of the improvement of Amavata patients.

Walking time:
The patients were asked to walk a distance of 50 feet and the time taken was recorded before and after the treatment by using stop watch.

**Grip Strength:**

To find the functional capacity of the affected upper limb, the patient’s ability to compress an inflated ordinary sphygmomanometer cuff under standard conditions was recorded before and after the treatment.

**Foot pressure:**

To have an objective view of the functional capacity of the legs, foot pressure was recorded by the ability of the patients to pressure a weighing machine.

**Joint movement:** The range of movement of each affected joint was measured by using the goniometer both before and after the treatment.

**Observations and Results**

**Functional index**—It is based on the following function rating scale:

- Fit for all activities, no handicap.
- Moderate restriction - Independent despite some restriction of joint movement.
- Marked restriction – Limited self-care, some assistant required.
- Confined to chair or bed bound – largely incapacitated and dependent.

**Haematological assessment**

- Rheumatoid Factor
- Haematological investigation
- Urine and stool analysis
- Biochemical investigations
- Radiological changes

**Table 8: Effect of therapy on Cardinal Features of 10 patients Amavata**

<table>
<thead>
<tr>
<th>Symptoms</th>
<th>‘n’</th>
<th>BT(mean score)</th>
<th>AT(mean score)</th>
<th>% of relief</th>
<th>X</th>
<th>SD +/-</th>
<th>SE +/-</th>
<th>‘t’</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sandhishula</td>
<td>10</td>
<td>2.70</td>
<td>0.60</td>
<td>77.78</td>
<td>2.10</td>
<td>0.7</td>
<td>0.18</td>
<td>11.67</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Sandhishotha</td>
<td>10</td>
<td>2.40</td>
<td>0.60</td>
<td>75.00</td>
<td>1.80</td>
<td>0.79</td>
<td>0.25</td>
<td>9.25</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Stabdhata</td>
<td>08</td>
<td>1.75</td>
<td>0.50</td>
<td>71.43</td>
<td>1.38</td>
<td>0.52</td>
<td>0.18</td>
<td>7.67</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Sparshasahyata</td>
<td>10</td>
<td>2.40</td>
<td>0.40</td>
<td>83.33</td>
<td>2.10</td>
<td>0.82</td>
<td>0.26</td>
<td>7.69</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Warmth</td>
<td>07</td>
<td>1.57</td>
<td>0.29</td>
<td>81.53</td>
<td>1.29</td>
<td>0.49</td>
<td>0.18</td>
<td>7.17</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Redness</td>
<td>03</td>
<td>2.00</td>
<td>0.00</td>
<td>100</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

**Table 9: Effect of Nirgundipatra Swarasa and Shunthi kashaya on General Symptoms of 10 patients of Amavata**
Effect of Nirgundipatraswarsa and Shunthi kashaya on the circumference of the limbs in 10 patients of Amavata

The circumference of arm showed average increase in 0.28 which was statistically insignificant. Average increase incircumference of forearm was 0.28 cm which was statistically significant.

In thigh the average increase was observed 0.23 cm and in calf it was observed by 0.65 cm which were statistically significant.

Effect of Nirgundipatrapraswa and Shunthi kashaya on functional parameters in 10 patients of Amavata

Effect on Range of Joint movement:

In this, the mean range of joint movement was 85.900 before treatment, improvement was 94.730 after the completion of treatment, the improvement was statistically highly significant (P<0.001).

Effect on Foot Pressure: In this, an average improvement of 26.82 kg was observed in foot pressure from the initial mean value of 29.96 kg. This improvement was statistically highly significant (P<0.001).

Effect on Hand Grip: The mean initial reading of the hand grip recorded before the treatment 42.40 mm of Hg, which increased to 46.90 mm of Hg. This improvement was statistically significant (P<0.01).
Effect on Walking Time: Average initial walking time of the patient before treatment was recorded as 22.50 seconds, which reduced to 18.10 second after the completion of the treatment. This improvement was statistically highly significant (P<0.001).

Effect on General Functional Capacity: The mean initial score of general functional capacity was 2.00 which reduced to 0.90 after the treatment. This improvement was statistically highly significant (P<0.001).

Effect of Nirgundipatra Swarasa and Shunthi kashaya on haematological value in 10 patients of Amavata

In this slight decrease was observed in Hbgm% as it came down from 12.10gm% to 11.91gm%. PCV also observed, decreased by1.33%. The mean initial recording of E.S.R. came down from 23.60mm in 1hour to 19 mm in one hour after completion of the treatment. The improvement is statistically highly significant (P<0.01). Neutrophil showed an average decreased of 0.71 while lymphocytes showed an average increase of 7.47%. Total leukocytes count decrease from 82.60 per cumm to 58.31 per cu mm.

Effect of Nirgundipatra Swarasa and Shunthi kashaya on haematological value in 10 patients of Amavata

In this, maximum 5 patients were observed with major improvement while 2 patients were minor improvement whereas 1 patient unimproved and 2 patient complete remissions from sign and symptoms.

Discussion

Nirgundi and Shunthi are already proved for their analgesic[20, 21, 22,23,24] and anti-inflammatory[23,24] property. The result of the study provided comparatively better relief in Sandhishula 77.78%, Sandhishotha 75.00%, Stabdhatara 71.43%, Sparshasahayata 83.33%, warmth 81.83%, redness 100% (table no.8), general symptoms 84.97%, circumference 0.86%, knee swelling 4.48%, range of joint movement in degree 10.27%, foot pressure in kgm 11.71%, hand grip in mmHg 10.61%, walking time in second 19.56%, general functioning capacity 55.00%, degree of disease activity 50.00%, Vata 64.81%, Kapha 65.00%, AnnavahaSrotasa71.00%, RasavahaSrotasa 81.82%, AsthivahaSrotasa 72.73%, MajjavahaSrotasa 78.00%, PurishavahaSrotasa77.88%.

In the present study, Nirgundi Patra swarasa and Shunthi has been chosen in the first of the disease Amotpatti as they do Amapachana. According to Ayurveda, Shunthi is best Amapachaka .It helps in digestion of Ama present at dhatu level. Due to its tikshnaguna, it helps in removing obstruction of Kapha due to
which it is best medicine for kapharuddha Vyadhi. Shunthi helps in digestion of undigested matter which present in GIT produces nitrogenous waste product that acts as antigen and provoke immunity response. It not only works at jatharagni level but also dhatwagni level that means it not only corrects basic pathology at tissue level but also nourishes the dhatu.

The Katu, Tikta rasa of Nirgundi possess an antagonistic property to that of Ama and Kapha. Theagnivardhakor deepniya property increases digestion power ,which also digest amarasa and reduce the excess production of Kapha and also remove obstruction of strotas because of Ushnavirya. It also alleviates vitiated Vata, hence pain, swelling, tenderness and stiffness in joint is reduced. The active principles of Shunthi are Gingerol, Dehydrogingerdione and Gingerdione were shown confirm anti-inflammatory activity on animal experiment[25]. Also investigators confirmed its antirheumatic effect.

<table>
<thead>
<tr>
<th>Sanskrit Name</th>
<th>Botanical Name</th>
<th>Family</th>
<th>Guna</th>
<th>Parts used</th>
<th>Rasa</th>
<th>Virya, Vipaka</th>
<th>Dosha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shunthi</td>
<td>Zingiberofficinale</td>
<td>Zingiberaceae</td>
<td>Lagh, Ruksha</td>
<td>Rhizo, Me</td>
<td>Katu</td>
<td>Ushna, Madhura</td>
<td>Kapha</td>
</tr>
<tr>
<td>Nirgundi</td>
<td>Vitexnigundo</td>
<td>Verbenaceae</td>
<td>Laghu, Ruksha</td>
<td>Leaves</td>
<td>Katu, tikta, Kashaya</td>
<td>Ushna, Katu</td>
<td>Vata</td>
</tr>
</tbody>
</table>

**Probable mode of action:**

In the present study, Nirgundipatra swarasa and Shunthi kashaya has been selected. In the first of the disease Amotpatti is there and Nirgundi Patra swarasa as well Shunthi kashaya does Amapachana and agnideepan respectively. Also the Pharmacodynamic property of Nirgundi Patra and Shunthi are laghu, rakshaguna, katu, tikta rasa, ushnnaviryaea against guru, snigdha, picchila, sheeta properties of Ama. Yugapata Prakopaof disease is checked by Vata-kapahahara action of the drugs. Further, Ama formation is stopped by the Deepniya action. Thus these helps for the breakdown of Samprapti of disease and to combat the main culprit Vata, Kapha that is Ama and Mandagni which are root sources of Amavata.

**Conclusion**

This pilot study shows that Shaman Chikitsa in the form of Nirgundipatra Swarasa and Shunthi kashaya produces significant improvement in the patients of Amavata. Nirgundipatra swarasa alongwith Shunthikashaya found very
effective when given orally, possessing specific properties against disease Amavata that can check samprapti of Rheumatoid arthritis. It helps in arresting the progress of disease and development of complications. This fact is supported by various observations including laboratory investigations.

References

17. Davidson's Principles and Practice of Medicine,Rheumatoid Arthritis;Christopher Haslett,Edwin,Hunter,NicholasBoon:E...


Article: 07

To study efficacy of Godhumadiyoga dhoopan chikitsa in “ bahya arsha”


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Abstract:

Arsha is one of the commonly presenting problems now a day due to life style modification and rudimentary life.

Management of arsha through surgical procedure has become notorious due to post operative pain associated with it. Arsha is most common and irritating disease which need to be relieved using minimal invasive and painless procedures. The treatment with dhoopan karma have shown effective results during and post followup of treatment in reducing signs and symptom. The aim and object of this study is to evaluate efficacy of godhumadiyoga dhoopan chikitsa in “ bahya arsha” by using godhum, hingu, bhallatak. 20 patients were selected of age group 15 -65 years which having haemorrhoids of 2nd, 3rd, 4th degree.

Result and summary and conclusion was drawn from appropriate statistical analysis. To study efficacy of godhumadiyoga dhoopan chikitsa” in “ bahya arsha”.

Cite this article:

To study efficacy of Godhumadiyoga dhoopan chikitsa in “ bahya arsha”

Pallavi Baban Pawar, Vidyad Dharne


Key words: Arsh, godhum, hingu, bhallatak. haemorrhoids

Introduction:

Ayurveda is the natural healing system of medicine and shalya tantra is the important branch which represents the surgical field. The healthy mind in the healthy body is the principal aim guiding all prevailing
systems of medicines. Ayurveda is playing important role in that haemorrhoids are dilated veins of the anal canal in the subepithelial region formed by radical of superior, middle and inferior rectal veins. The veins and overlying tissue may then form into one or more swellings called haemorrhoids. Basically these are vascular structures in the anal canal which help in the stool control. They become pathological or piles when swollen or inflamed. In their physiological state they act as a cushion composed of arteriovenous channels and connective tissue that aid the passage of stool. The symptoms of haemorrhoids depend on the type present. Internal haemorrhoids usually present with painless rectal bleeding while external haemorrhoids present with pain in the area of the anus.

According to Indian Journal of Surgery among 2000 consecutive proctologic examinations, 72% of anorectal cases include haemorrhoids. About 50% of the population of word, above 50 yrs of age suffer from haemorrhoids.

According to Ayurveda various modalities are explained for treatment of haemorrhoids. But none of them are complete or perfect. Since then there is always search for better and safer method of treatment for those who are contraindicated for the surgery due to extremes of age, systemic complications, patients fearing for post operative pain. Under the above circumstances there is a need to find new innovative simpler procedure which ideally suits in offering better relief to the sufferers. Most of surgical procedures are expensive and invasive. Various conservative treatments are in practice but management with dhoopan karma is new therapeutic aspect.

Dhoop chikitsa is explained in Brihad trayi and also in Yog ratnakara and bhavprakasha. Acharya Kashapa was also explained dhoopadhya of dhoopan chikitsa for rakshoghna purpose. Among this godhum pishta, hingu, bhallataka is selected for dhoopan karma which is available and effective in relieving pain and haemorrhoidal swelling as mentioned by yoga ratnakar arsha[3].

**Aims and objectives:**

To study efficacy of “godhumadiyoga dhoopan chikitsa” in “bahya arsha”.

**Objectives:**

1) To study modern and ayurvedic references of haemorrhoid management.

2) To study effect of dhoopan karma on bleeding haemorrhoids (1st, 2nd, 3rd degree)

**Review of literature:**

Sushruta has described 60 essential procedure for wound care and healing. Dhoop is one of the shashthi upakarma.

Sushruta has described dhoopan its action he said that dhoopan is useful to relieve pain and secretion. Acharya Vagbhata explain dhoopan used in the arsha treatment. In Kashyap samhita acharya has mentioned 40 dhoopan kalpas in dhoopan kalpadhyaya.[1]
Piles are dilated bowel vessel. Piles are divided into two type 1 internal 2 external. Internal – above the dentate line and external – below dentate line. Sushruta maintains four treatment procedures for haemorrhoids. Bhaishajya, kshar, agnikarma, and operative procedure. In some patients, surgical intervention is not possible for this purpose using dhoopan chikitsa.

**Materials and methods:**

**Materials:**

1. 20 patients suffering from bleeding haemorrhoids (2nd, 3rd, 4th degree haemorrhoids with bahya arsha) are selected from IPD & OPD.
2. Dhoopan yoga – godhoom pishta, hingu bhallataka.
3. Dhoopan yantra (specialised electric dhoopan yantra is used)
4. Commod chair

**Inclusion criteria:**

Patients suffering from bleeding haemorrhoids with bahya arsha.

Haemorrhoids - 2nd, 3rd, 4th degree prolapsed (bahyarsha).

**Exclusion criteria:**

Patients having anorectal diseases other than haemorrhoids.

Patients having systemis disorders and bleeding disorders.

**Methodology:**

**Purvakarma:**

1. Patient was counselled & taken written consent of patient.
2. All material required was kept ready.

**Pradhan karma**

1. After passing stool patient was allowed to seat on commod chair so that fumes can reach upto haemorrhoids.
2. Fumes are exposed to bahya arsha for 10 min.

**Paschyat karma:**

Perianal region was cleaned and dried.

Patient was asked to have light maximum fibrous diet, least exertion and proper sleep.

Patients were observed carefully for untoward effects.

**Protocol:**

1. Dhoopan karma done once in a day for 10 days.
2. Patient assessed on 3rd, 5th, 7th, 10th day.
3. No other external application or medicine is used during the study period.
4. Follow up taken after 1 month.

**Assessment criteria:**

1. bleeding P/R
2. mucoid discharge
3. protrusion of mass
4. pain at anal region

Grading

Bleeding P/R :

0- no bleeding
1- mild
2- moderate
3- severe
4- uncontrollable

Mucoid discharge:

0- no discharge
1- mild
2- wets one layer gauze piece
3- wets two layers

Observations and result:

<table>
<thead>
<tr>
<th></th>
<th>mean BT</th>
<th>mean AT</th>
<th>m.dcrse</th>
<th>%</th>
<th>S.D</th>
<th>S.E</th>
<th>T test</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>p/r bleed</td>
<td>2.9</td>
<td>0.2</td>
<td>2.7</td>
<td>93.1</td>
<td>0.47</td>
<td>0.1</td>
<td>25.65</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>mass</td>
<td>2.8</td>
<td>0.4</td>
<td>2.4</td>
<td>85.71</td>
<td>0.75</td>
<td>0.16</td>
<td>14.23</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Pain</td>
<td>2.2</td>
<td>0.2</td>
<td>2</td>
<td>90.9</td>
<td>1.16</td>
<td>0.26</td>
<td>7.6</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>discharge</td>
<td>1.2</td>
<td>0.05</td>
<td>1.15</td>
<td>95.83</td>
<td>1.22</td>
<td>0.27</td>
<td>4.19</td>
<td>&lt;0.001</td>
</tr>
</tbody>
</table>

Result:

**Effect on bleeding P/R** – Main initial symptom score of bleeding p/r was 2.9 which reduced to 0.2 after treatment. Its statistical analysis shows highly significant results at 0.001 level.

**Effect on discharge** – main initial symptom score for discharge was 1.20 which reduced to 0.05 after treatment. Its statistical analysis shows highly significant results at 0.001 level.

**Effect on protrusion of mass**- main initial symptom score of protrusion of mass was 2.8 which e dhoopan reduced to 0.4 after treatment. Its statistical analysis shows heighly significant results at 0.001.

**Effect on pain** - main initial symptom score of protrusion of mass was 2.2 which reduced to 0.2 after treatment. Its statistical analysis shows heighly significant results at 0.001.

Discussion:
Arshroga is the disease which usually requires surgical intervention. Charakacharya and vagbhatacharya mentioned some measures like abhyanga, avagaha, sweda etc for those who are not fit for surgery. So an attempt was made to study one of those measures i. karma as indicated in arsha which are swollen painful and protruded out i.e bahyaarsha.

This method which is simple, safe and harmless, easy to perform, economic and devoid of complications was taken for the study. Intention of the study was mainly to study the efficacy of dhoopan karma with indigenous drugs (godhum pishti, hingu, bhallataka) in the management of bhahya arsha. In the present study bahya arsha was selected for dhoopan karma by random sampling method. Following points were observed during and after the treatment.

Pain - Pain was there in all patients. The severity of pain is mainly due to pravrudha vata and cougha doshas. In external pile mass main pathology of pain is combination of dilated venous plexus, thrombosis and inflammation. Exposure of dhoopan karma in bhahya arsha has resulted in reduction of pain when compared before treatment and after treatment. As drugs used for dhoopan karma were having vedanasthapak, shothaghna, vat-kaphaghna property. As dhoopan is a type of swedana, ushna guna promotes quick perfusion of blood in dilated veins by removal of waste metabolites locally. As the pathology of stasis removed pain may have reduced.

Protrusion of mass- size of protruded mass also reduced significantly due to the drugs used which are vata and kaphaghna.

Discharge- discharge from protruded haemorrhoids also reduced due to its ruksha and kaphaghna property.

Bleeding per rectum - also proved effective in bleeding piles as in above study bleeding reduced significantly after the treatment.

Hence study has proven the efficacy of dhoopan karma in bahya arsha by symptomatic and statistical assessment.

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Article 08

“Evaluation of ksharsutra ligation in charmakeela with special reference to skin tag.”

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Abstract:

Skin tag is a common type of skin growth found in many individuals, making the look of a person ugly. In Ayurvedic context skin tag can be compared with Charmakeela-a type of kshudra roga described in Ayurvedic Samhitas and it shows symptoms like multiple skin growths looking like projected nails. In Charmakeela there are Vata dosha and Kapha dosha are prime cause of the disease and it can occur anywhere on the skin. Topical application of keratolytic agents like TCA, Salicylic acid and also surgical removal of skin tags is the line of treatment for skin tags. Agnikarma and Kshara karma is the treatment of Vatakaphaj arsha described by Acharya Sushruta. As well as Ksharsutra is a special application of Kshara karma described by Chakrapani which is the remedy used to treat Arsha and Bhagandara; so it can be used to remove skin tags. I have studied the effects of Ksharsutra ligation in the 15 patients of charmakeela. These patients are studied under different criteria like cause of formation of skin tags, site of occurrence, sex ratio, age, etc. This study showed that it is an efficient method for removal of skin tag with minimum complications and it is a good alternative to surgery.

Cite this article:

“Evaluation of ksharsutra ligation in charmakeela with special reference to skin tag.”
Shrikant S. Mukadam, V. R. Sonambekar, Santosh Pathak

Key Words:-Skin tag, Charmakeela, Ksharsutra ligation, Ksharakarma, Kshudra roga, Arsha

Introduction:-

Skin tag is a benign (non-cancerous) skin growth that can occur on the body or on the face. They are fleshy; multiple pedunculated masses. They can be smooth or wrinkled, skin-colored or just slightly darker than skin colour. Skin tags can occur almost any where there is skin, but most commonly grow on the neck, underarms, eyelids, groin, upper chest and under the breasts [1].

They are composed of hyper-plastic epidermis over a fibrous connective tissue stalk. Smaller lesions may be removed by electrocautery or cryosurgery. Radiofrequency or CO2 laser give better cosmetic results; while large lesions need excision [1].

In Ayurvedic context these skin tags can be compared with ‘Charmakeela’, which is described by Acharya Sushruta that vitiated Vyana vayu takes Kapha dosha along with it and lodges (makes sthana samshraya) at skin [1]; And pathology (Samprapti) of this disease is as follows:

In Charmakeela Nistoda is due to Vata dosha, Savarnatva and Granthitva are due to Kapha dosha; Rauksha, Krishnatva, Shuklata are due to Pitta and Kapha dosha respectively. As well as Samudirnatva and Kharatva are symptoms present in Charmakeela. [2] Acharya Sushruta described the treatment of vata kaphaj arsha; that they are treated by Agnikarma and Kshara karma. According to modern point of view skin tags or Achrochordons can occur anywhere over the body and are supposed to be caused by continuous friction of skin against skin or tight garments. Generally the common sites of formation of skin tags are arm pits, neck, eyelids, groin and beneath the breast.

Aims :-

To evaluate the effect of Ksharasutra ligation in charmakeela with special reference to skin tag.

Objectives:-

To Find a new and safe alternative way of treatment to procedure of surgical removal of skin tag.

MATERIAL AND METHODS:-

Inclusion criteria:-

Patients were selected from Shalyatantra OPD and IPD of Arogyashala Rugnalaya.

- Patients of both sex having age between 20 to 70 yrs were selected for the study.
- Patients having skin tags over axilla, neck, trunk, face were selected.

Exclusion criteria:-

- Patients having uncontrolled Diabetes mellitus.
- Patients having allergic reactions.
- Skin tags over eyelids were excluded from the study.
Investigations:-

BT/CT and BSL(R)

Preparation Of Ksharsutra:-

Ksharsutra which were used for ligation; were prepared as per standard method of preparation of ksharsutra at Shalyatantra dept. Following drugs were used to prepare ksharsutra-

<table>
<thead>
<tr>
<th>Drug</th>
<th>Latin name</th>
<th>Family</th>
</tr>
</thead>
<tbody>
<tr>
<td>Snuhi</td>
<td>Euphorbia Neriifolia</td>
<td>Euphorbiaceae</td>
</tr>
<tr>
<td>Apamarga</td>
<td>Achyrantes aspera</td>
<td>Amaranthaceae</td>
</tr>
<tr>
<td>Haridra</td>
<td>Curcuma longa</td>
<td>Zingiberaceae</td>
</tr>
</tbody>
</table>

Linen thread no.20 was used. Latex of Euphorbia Neriifolia plant (Snuhiksheera) was applied on the thread – one coating/day- Total 11 coatings. After that 7 coatings of Apamarga Kshara and 3 coatings of Haridra Choorna were applied and Ksharsutra prepared this way.

Criteria of Assessment:-

Patients were assessed on 3\textsuperscript{rd} and 5\textsuperscript{th} day of treatment of partial or complete slough out of the skin tag.

Observation:-

In this study total 15 patients were studied for the effect of ksharsutra ligation on Charmakeela (Skin tag). Out of 15 patients 7 were male & 8 were female patients. Among these; majority of patients were from the age group 30-40 yrs, i.e. - 8 patients out of 15.

The common site of Skin tag was found to be neck in most of (11) the patients. 90\% (10) patients having skin tags at the neck were regularly using ornaments and tight garments; causing continuous friction & irritation of the skin which explains the reason of having skin tags.

After the treatment the skin tags of 12 patients got sloughed out in 5 days & in 3 patients all the skin tags sloughed out in more than 5 days. Out of 15 patients 3 patients got itching at the site of skin tag and 2 patient got pain during the treatment.

Discussion:-

According to Ayurveda Vata, Pitta, Kapha are the principle body humors (Dosha). Along with five sub types of each dosha they control all body activities and metabolism. These Dosha are also responsible for normal growth of body and all diseases are caused due to disturbance and abnormalities occurred in them. In Charmakeela, Vyana Vayu (A sub type of Vata dosha) and Kapha dosha are the prime cause which shows symptoms like Vedana(pricking pain), Rukshatva(dryness) and Savarnatva (having same colour like skin), Granthitva (aggregation) respectively. And also symptoms like Krushnata (Blackish colour), Shuklata(Whitish colour),
Snigdhatata (oiliness) or Kharata (dryness) can be seen. According to Acharya Sushruta; Charmakeela is considered as a type of Arsha and the treatment of Vata-Kaphaj Arsha is done with Agnikarma and Kshara. Also Twacha is upadhatu of Mamsadhatu and the treatment of Mamsvaha srotodusthi janita Vyadhi is done with Agnikarma, Shastrakarma and Kshara karma; so ksharsutra can be applied (ligated) to charmakeela. The action of kshara is also on Mamsadhatu, it is described as; Kshara posses corrosive action on tissues and acts as Ksharan, Kshanan or lekhan of dushta Mamsadhatu. Ksharsutra is a special application of Kshara described by Chakrapani. Ksharsutra treatment is done in Krusha (lean & thin), Durbala (weak) and Bhiru (anxious) people as it does not causes pain and other side effects as compared to other modes of treatment.

Mode of Action:-
Latex of Snuhi has potent tissue necrosis property. Extract of Latex of Snuhi has stimulating activity in the blastogenesis of lymphocytes. From Kshara sutra Euphol, Antiquol, Cycloeucalenol, Methylene cycloantanol and Curcumin were isolated. It has also anti inflammatory, analgesic and anti-oxidant, anti-bacterial and anti-viral property. It starts necrosis of skin tag pedicle which gradually slough off the skin tag. It shows early necrosis, active granulation of tissue with capillary formation, fibroblastic proliferation with collagen formation and epithelial hyperplasia. Its anti-inflammatory and analgesic property reduces the pain.

Conclusion:-

From this study we can state that ksharasutra ligation is a good alternative to surgical excision of skin tag with minimum complications & maximum acceptance and it can be used as method of removing it.

Further scope of study:-

Aim of the present study was to study the effects of ksharsutra ligation in skin tag and to provide a safe and easily acceptable alternative to surgery. The comparative study can be done with another topical agents like Salicylic acid, TCA, etc. which are used to remove skin tags regarding clinical and cost efficacy.

Acknowledgement:-

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References:

To study the efficacy of nagakesharadi yoga in Raktarsha (Bleeding piles)
Efficacy of nagakesharadi yoga in Raktarsha (Bleeding piles)

Rajesh G. Bhoir*[1], Vidya Dharne [2]

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ABSTRACT:

In modern science Arsha is considered as haemorrhoid. Incidence rate of haemorrhoids is is very high. A clinical study was designed to see efficacy of Nagakesharadi yoga for the treatment of bleeding piles. Total 20 patients were selected as open random clinical study & all patients are given with nagakesharadi yoga for 4 weeks significant result was observed in this study in complain of Raktasrava (per rectal bleeding).

Cite this article:
To study the efficacy of nagakesharadi yoga in Raktarsha (Bleeding piles)
Efficacy of nagakesharadi yoga in Raktarsha (Bleeding piles)
Rajesh G. Bhoir, Vidya Dharne

Keywords: Arsha, Piles, Nagakesharadi yoga.

INTRODUCTION:

According to susruta arsha is one among the astou-mahagada[1] (8 dreadful diseases). There are 6 types of arshas i.e. Vataj, pittaj, Kaphaj, sannipataj, Sahaj, Raktarsha[1] (bleeding piles). Among all types of arshas raktarsha can be leads to life threatening complications if not treated during early stage. Bleeding through pile mass can leads to anaemia which ultimately leads to serious complications. Stoppage of bleeding in primary goal in the bleeding piles. Ayurveda as well as modern science have some treatment protocols to cure haemorrhoids[2]. According to ayurveda mainly 4 types of therapy are mentioned bhashaja (medicine), agni (cauterization), kshara (alkali) & shastrakarma (surgery). For bleeding piles some injectables, ligation of pile mass, stepper method, rubber band ligation etc treatment protocols are used to stop bleeding[2]. In ayurveda bleeding through haemorrhoids can be considered
as adhoga raktapitta. To stop bleeding raktastambhaka medicines are given. In this study nagakeshari yoga[3] which contains Raktastambhaka drugs like Nagakeshar, Lodhra, aamalaki & Kutaja[4,5] are given along with other supportive medicines like punarnavamandur vati to treat Pandu, arogyavardhini, Sukshma triphala & Gandharvaharitaki.

In this study we planned to see efficacy of nagakesharedayoga in Raktarsha (Bleeding piles).

**Material & Method:**

Total 20 patients having signs & symptoms of bleeding piles were selected from OPD & IPD of shalyatantra.

**Nagakesharadi yoga:** Contents: Nagakeshar, Lodhra, Aamalaki & Kutaja in choorna form.

Type of study: open random clinical study.

Sample size: 20

**Inclusion criteria:**

- Patient suffering from bleeding piles
- Patients between ages 10-70 years

**Exclusion criteria:**

- Complicated piles like thrombosed and inflamed piles were excluded.
- Other diseases like ulcerative colitis, Malignancy etc.
- Other systemic diseases like uncontrolled diabetes mellitus (DM)
- Tuberculosis (TB)
- Hypertension (HTN)

**Posology (Drug, Dose and Duration):**

Oral intake of nagakesharedayoga in choorna form i.e.

- **Nagakeshar:** 500mg and Lodhra churna: 500mg mixed & given thrice
- **Aamalaki:** 500mg a day with Sita & cream of milk
- **Kutaja:** 500 mg Along with this formulation following following medicines are given for 3 weeks:
  - **Arogyavardhini vati:** 2 tablets three times a day orally.
  - **Sukma Triphala:** 2 tablets three times a day orally.
  - **Punarnava Mandura vati:** 1 tablet 3 three times a day orally.
  - **Gandharava haritaki choorna:** 5 gms with lukewarm water at bedtime.

**INVESTIGATIONS:**

- CBC ESR, Bleeding time/Clotting time, HIV, HBsAG
- Urine (routine & microscopic),

**Criteria of assessment:**

Criteria for assessment done according to following signs & symptoms:

- **Raktasrava** (PR bleeding)
  - Other associated symptoms: vedana (pain).

No improvement: bleeding P/R persist even after 3 rd follow up.

Moderate improvement: bleeding stopped during 1st & 2nd follow up and recurrence of symptoms seen in subsequent follow-up.
Marked improvement: disappearance of symptoms seen after 3rd follow up with poor recurrence rate.

**Cured:**
Bleeding stopped completely in all follow-ups.
Grading of symptoms after treatment during follow-up:

<table>
<thead>
<tr>
<th>Grading</th>
<th>P/R Bleeding</th>
<th>Vedana (pain)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>No bleeding</td>
<td>No pain</td>
</tr>
<tr>
<td>1</td>
<td>Mild bleeding</td>
<td>Mild pain</td>
</tr>
<tr>
<td>2</td>
<td>Moderate bleeding</td>
<td>Moderate pain</td>
</tr>
<tr>
<td>3</td>
<td>Severe bleeding</td>
<td>Severe pain</td>
</tr>
</tbody>
</table>

**Criteria for diagnosis:**
Diagnosis was made on sign and symptoms like bleeding per rectum along with other associated symptoms such as prolapsed pile, itching, discomfort, pain and discharge. Per rectal examinations like inspection and digital

**OBSERVATIONS AND RESULTS:**

**DISCUSSION:**
In this study 80% patients were between the age group of 30-40 years which suggests that piles occurs more in middle & old age group. In this study more no of male patients seen i.e. 70% may be because of their food habit & improper diet. Maximum patients were from urban habitat may be because of hospital located in urban area. 80% patients having non-vegetarian food habit suffering from bleeding piles may be because of effect of non-vegetarian diet on digestion as non veg food takes longer time for digestion which ultimately can be leads to constipation & constipation is may cause of piles.

In this study 75% patients completely cured and 15% patients moderately improved, hence this study suggesting there is significant result seen in bleeding piles after administration of Nagakesharadi yoga. specifically symptom like bleeding got significant result may be because of particular action of drug on clotting factors.

**MODE OF ACTION OF DRUG:**
Nagakesharadi yoga contains nagakeshara, lodhra, aamalaki and kutaja\(^4,5\). These drugs are stambhaka in property. In case of bleeding piles, stambhan is primary goal as treatment for bleeding piles. These drugs may act on haemorrhoidal vessels and can leads to vasoconstriction of vessels which ultimately stops bleeding. Apart from bleeding these drugs also helps to treat symptom like pain and burning sensation.

Apart from this drug other drugs used are aarogya vardhini vati, sukshma triphala and gandharva haritaki acts on purish vaha srotas and relieves constipation.

**CONCLUSION:**
In this study, 75% patients were completely cured within 2 weeks. This study of Nagakesharadi yoga concluding that having significant result in symptom like P/R bleeding.

**Statistical analysis**
The assessment parameters i.e. Bleeding and Vedana were ordinal in nature, therefore we have used “Wilcoxon Signed Rank test” for testing significance of drug effect in reference to these two parameters.

1. **Bleeding**

<table>
<thead>
<tr>
<th>Bleeding</th>
<th>Mean score</th>
<th>% change</th>
<th>Sample size</th>
<th>Wicixon signed rank test (T⁺)</th>
<th>P-Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Before treatment</td>
<td>2.5</td>
<td>95.12%</td>
<td>20</td>
<td>210</td>
<td>&lt; 0.01</td>
</tr>
<tr>
<td>After treatment</td>
<td>0.1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Using one tailed Wilcoxon signed rank test, to test the hypothesis –

\( H_0 : \) Median reduction in Bleeding after treatment is zero.

\( H_1 : \) Median reduction in Bleeding after treatment is significant.

For Bleeding, The median reduction in Bleeding after treatment is significant (P-value < 0.01) at 5% level of significance. i.e. we can say that There is significant reduction in Bleeding.
1. Vedana

<table>
<thead>
<tr>
<th>Vedana</th>
<th>Mean score</th>
<th>% change</th>
<th>Sample size</th>
<th>Wicoxon signed rank test (T⁺)</th>
<th>P-Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Before treatment</td>
<td>1.5</td>
<td>96.67%</td>
<td>40</td>
<td>210</td>
<td>&lt; 0.01</td>
</tr>
<tr>
<td>After treatment</td>
<td>0.05</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Using one tailed Wilcoxon signed rank test, to test the hypothesis –

H₀ : Median reduction in Vedana after treatment is zero.

H₁ : Median reduction in Vedana after treatment is significant.

For Vedana, The median reduction in Vedana after treatment is significant (P-value < 0.01) at 5% level of significance.

i.e. we can say that There is significant reduction in Vedana.
The result of “Wilcoxon Singned Rank test” showed that there is significant reduction in both bleeding and pain when treated with “Nagakesharadi yoga”.

<table>
<thead>
<tr>
<th>Observations</th>
<th>No. of Patients</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (30-70 years)</td>
<td>16</td>
<td>80%</td>
</tr>
<tr>
<td>Male</td>
<td>14</td>
<td>70%</td>
</tr>
<tr>
<td>Hindu religion</td>
<td>16</td>
<td>80%</td>
</tr>
<tr>
<td>Married</td>
<td>14</td>
<td>70%</td>
</tr>
<tr>
<td>Serviceman</td>
<td>12</td>
<td>60%</td>
</tr>
<tr>
<td>Educated</td>
<td>18</td>
<td>80%</td>
</tr>
<tr>
<td>Middle class</td>
<td>15</td>
<td>75%</td>
</tr>
<tr>
<td>Urban habitat</td>
<td>16</td>
<td>80%</td>
</tr>
<tr>
<td>Non veg food habit</td>
<td>16</td>
<td>80%</td>
</tr>
<tr>
<td>No. of pts with no</td>
<td>2</td>
<td>10%</td>
</tr>
<tr>
<td>improvement</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No of pts with complete</td>
<td>15</td>
<td>75%</td>
</tr>
<tr>
<td>cure</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No of pts with moderate</td>
<td>3</td>
<td>15</td>
</tr>
<tr>
<td>improvement</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

REFERENCES:

Article 10

A comparative study between prawal bhasma and local application of leech (hirudo medicinalis) on post menopausal osteoarthritis

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ABSTRACT

Osteoarthritis is a degenerative joint disease the most common joint disorder. Osteoarthritis is of two types, primary (idiopathic) and secondary. In idiopathic osteoarthritis, the most common form of the disease, no predisposing factor is apparent. Secondary osteoarthritis is pathologically indistinguishable from idiopathic osteoarthritis but is attributable to an underlying cause. Most of the women suffer from osteoarthritis after the menopause. In Ayurveda the disease Sandhivata resembles with osteoarthritis which is described under Vatavyadhi (Sandhigata anila). The NSAIDs are the main drugs of choice in modern medicine which have lots of side effects and therefore are not safe for long-term therapy.

Prawala bhasma is an oral natural supplement which is rich in minerals calcium widely used in traditional system of Indian medicine as a supplement in the treatment of variety of bone metabolic disorders associated with calcium deficiency. Jalaukavacharana (leech application) is one type of Raktamokshana (Blood letting) has its medicinal values. The saliva of leech contains various biologically active substances, which have anti-inflammatory as well as anesthetic properties. After considering this view we started leech therapy in the patients of osteoarthritis in one group and Prawala bhasma was used orally in another group. Local application of Hirudina medino compared with prawal bhasma taken internally was found better as degree of pain reduced faster joint mobility and hence quality of life improved. Leech therapy can reduce symptoms caused by osteoarthritis. Repeated use of the leeches appears to improve the long-term results. But combination of both treatments may give be faster relief. In order to assess the degree of degeneration of bone study period of the trial should be longer.
Keywords: Jalauktavacharana, Leech therapy, Osteoarthritis, Prawala bhasma, sandhivata

Introduction

In Ayurveda-osteoarthritis can be correlated with Sandhivata. The word Sandhivata mainly having two parts, Sandhi - anatomical aspect and Vata - physiological aspect of the body.

In the symptoms of Sandhigatwat feature as bone crepetations-Vatrutipurna sparsha-is mentioned this can be correlated with osteoarthritis. It is a result of psychological changes in hormones opins modern science. Vitiated vata and kshaya of kapha are responsible for osteoarthritis or Sandhigatwat. Charaka has mentioned it under Vatavyadhi, Rakta is considered as dushya. These features can be corelated with osteoarthritis.

Acharya Charaka has described the disease first separately by the name of "Sandhigata anila" under the chapter of vata vyadhi. Acharya Charaka defined it as a disease, with the symptoms of sotha, which is palpable as an air-filled bag (Vata Purna Driti Sparsha) and pain on flexion and extension of the joints (Akunchana Prasarane Vedana). Sandhivata is not described in ashnitivatavikara i.e.80 types of nanatmaj vata vyadhi, but it may be related to Vatakhuddata (pain in joint) [1]. However Sandhivata is accepted by Chakrapani as GulphaVata or Sandhigata Vata. Acharya Madhavakara has mentioned the symptoms Hanti Sandhigata, Sandhishula, and Sandhishotha [2]. In this way, the disease Sandhigatavata can be defined as a disease of Sandhi (joint) with symptoms of Sandhishula, Sandhishotha, and Akunchana Prasarane Pravritti Svedana and in the later stage Hanti Sandhigatah.

In allopathic science the similar condition of joints is explained as osteoarthritis. Osteoarthritis is also erroneously called degenerative joint disease, which mostly affects cartilage. Cartilage is the slippery tissue that covers the ends of bones in a joint. Healthy cartilage allows bones to glide over each other. It also helps absorb shock of movement. In osteoarthritis, the top layer of cartilage breaks down and wears away. This allows bones under the cartilage to rub together. The rubbing causes pain, swelling, and loss of motion or restriction of the joint. After some period, the joint may lose its normal shape. Also, bone spurs may grow on the edges of
the joint called as osteophytes. Bits of bone or cartilage can break off and float inside the joint space, which causes more pain and damage is a worst condition.

Osteoarthritis is of two types, primary (idiopathic) and secondary \[3\]. In idiopathic osteoarthritis, the most common form of the disease, no predisposing factor is apparent. Secondary OA is pathologically indistinguishable from idiopathic OA but is attributable to an underlying cause. Worldwide, osteoarthritis is the most common joint disorder. In western countries, radiographic evidence of this disease is present in the majority of persons by 65 years of age and in about 80% of persons more than 75 years of age. Approximately 11% of persons more than 64 years of age have symptomatic osteoarthritis of the knee. In above 50 years of age, 1 out of 3 female and 1 out of 5 male persons are having osteoarthritis.

The nonsteroidal anti-inflammatory drugs (NSAIDs) are the main drugs of choice in modern medicines which have lots of side effects; therefore they are not safe for long-term therapy \[4\]. Raktamokshan, i.e., blood letting is one of the ancient and important parasurgical procedures described in Ayurveda for treatment of various diseases. The Jalaukavacharana or leech therapy has gained greater attention globally, because of its medicinal values. The saliva of leech contains numerous biologically active substances, which has anti-inflammatory as well as anesthetic properties. Keeping this view in mind started and evaluated the efficacy of leech therapy in the patients of osteoarthritis.

**Prawala bhasma** is an oral natural supplement rich in minerals calcium widely used in traditional system of Indian medicine as a supplement in the treatment of variety of bone metabolic disorders associated with calcium deficiency. **Prawala bhasma** was used in one group.

**Aims and Objectives**

The present research work has been undertaken with the two main objectives.

- To see the effect of **Jalaukavacharana** in osteoarthritis.
- To see the effect of internal medicine (**abhya**ntara chikitsa) **Prawala bhasma** in osteoarthritis.

**Materials & Methods**

**Grouping of Patients**

Total 60 female patients of post menopausal osteoarthritis were selected from study centre, and divided into two groups i.e. Group A (n=30) **prawal bhasma** 500 mg twice a day along with water for 4 weeks while in Group B (n=30) inducted application of leech (hirudo medicinalis) once a week for 4 weeks.

Both the groups were compared for four weeks. In each group patients were fully evaluated after seven days for four weeks.

The data was evaluated scientifically and statistically to compare between **prawal bhasma** and local application of Leech
(Hirudo medicinalis) on post menopausal osteoarthritis.

Six criterias as Pain (Visual analog scale), swelling of joints, tenderness of joints, restriction of movements, stiffness of joints, crepitations of joints were considered for assessment of the improvement. Four criterias out of this were considered for each participant at the beginning of the trial.

Patients were assessed weekly; total duration was 4 weeks for each patient.

A thorough physical and local examination, routine blood and urine examinations serum calcium were done before and after the trial.

Advise to patient given in both groups.

- The patient is advised to not to fold the knee.
- Advised to do exercise as possible like walking, cycling.
- Avoid strenuous exercise.
- Advised to take regular diet.

Follow up

Every patient was taken follow up after 7 days for 28 days.

1. Selection of Drug

Prawal bhasma was prepared from as described in text- Rasatarangini [5]

Method of preparation of pravala bhasma. It was given 500 mg twice a day along with water for 4 weeks.

For the local application of leech non poisonous and fresh leech properties described in text was used [6]. Single leech was reserved for a particular patient to avoid cross infection.

Method of application

Purva karma

Purification of leech done by pouring the leech in water mixed with turmeric powder.

Part preparation - cleaning of part of the body to which leech is going to be applied.

Pradhanaka karma

Before application pricked the skin with a sharp and sterile needle so that the drop of blood comes out and then apply the leech through its front end and covered the leech by wet cotton.

Observation of leech

Gradual distention seen in the central portion of the body.

Pulsations on the body of leech may be visible.

Itching and burning sensation at the site of bite.

Removal of leech

After 10-15 minutes the leech is removed by itself, or by application of turmeric powder on the mouth of leech.

Paschata karma
1. Patient is advised about bleeding for 4-6 hrs and not to worry about that.

2. Aseptic care of wound - After detachment of leech there is triangular wound created by the mouth of the leech. The blood comes out from the wound. The bleeding from wound is checked by application turmeric powder. All the aseptic precautions taken.

3. Emesis of leech - The leech was induced vaman by applying turmeric powder over the mouth of the leech. All the blood sucked by the leech vomited out. Little pressure given on the leech from mouth to front-end for proper emesis. After this leech kept put in fresh water. Water replaced weekly in a clean jar.

**Precautions during leech application**

- Bleeding and clotting time of the patient seen that is normal.
- Gentle handling of the leech
- Covered the leech with wet cotton.

**Frequency of leech application**

The frequency of leech application applied once in a week up to four sittings. Individual leech were used per women by labelling and isolating them on the jar.

**Inclusion criteria**

1. Female postmenopausal patients aged 40-80 years.

2. Clinical signs, symptoms, and history of present illness suggestive of osteoarthritis.

3. Willing to give informed consent and regular follow up and medicine.

**Exclusion criteria**

1. Patients having inconclusive diagnosis.

2. Traumatic arthritis, rheumatoid arthritis, psoriatic arthritis, and gouty arthritis.

3. Patients on allopathic medicines.

4. Patients having bleeding disorder, cardiac disease, renal disease, and endocrine disorders were excluded in the study to avoid overlapping of symptomatology.

**3. Diagnostic Criteria**

Post Menapausal womens having minimum four symptoms out of six criteria of clinically well diagnosed OA were considered for each participant at the beginning of the trial.

**4. Criteria for the Assessment**

**Parameters of Assessment - Subjective Improvement**

A. Pain (Visual analog scale)
0-No pain
2-Mild pain
3-Uncomfortable pain
4-Distressing
5-Intense
6-Worst possible

**B. Swelling of joints**

0- Nil, No swelling
1- Mild, feeling of swelling with heaviness of joints.
2- Moderate, apparent swelling.
3- Severe, huge swelling.

**C. Tenderness of joints**

0- Nil, No tenderness.
1- Mild, elicited on mild pressure.
2- Moderate, elicited on moderate pressure.
3- Severe, elicited on slight touch.

**D. Restriction of movements**

0- Absence of movement restriction.
1- <25% of movement restriction
2- 25-50% restriction of movement.
3- >50% restriction of movement.

**E. Stiffness**

0- Nil, No morning stiffness.
1- Mild, morning stiffness of 5-10 min duration
2- Moderate, morning stiffness of 10-15 min duration.
3- Severe, morning stiffness of 15-30 min duration

**F. Crepitations**

0- absence of crepitus
1- Mild, perception on touch.
2- Moderate, audible on attention.
3- Severe, clearly audible.

Patients were assessed weekly; total duration was 4 weeks for each patient.

The last follow up amongst these criteria was taken as the final score for improvement for a given patient.


**Pain**

Paired and unpaired ‘t’ tests were applied to the both group. Both the groups were compared statistically and the results of trial group B with leech application provided significant reduction in pain than that of *prawala bhasma*. And showed significant reduction in related symptoms like swelling of joints, tenderness of joints, restriction of movements, stiffness of joints, crepitations of joints were decreased compared to group A ie. *Prawala bhasma*.

**Statistics: Pain**
### Swelling of joints

<table>
<thead>
<tr>
<th>Examination</th>
<th>Group A Average (χ)</th>
<th>S.D. (δ)</th>
<th>Group B Average (χ)</th>
<th>S.D. (δ)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Before T/t</td>
<td>4.86</td>
<td>0.57</td>
<td>4.86</td>
<td>0.57</td>
</tr>
<tr>
<td>After T/t</td>
<td>0.93</td>
<td>0.63</td>
<td>0.63</td>
<td>0.55</td>
</tr>
</tbody>
</table>

#### Paired ‘t’ test

<table>
<thead>
<tr>
<th>Group A</th>
<th>‘t’ value</th>
<th>P</th>
<th>‘t’ value</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.93</td>
<td>23.74</td>
<td>&lt;0.001</td>
<td>1.43</td>
</tr>
</tbody>
</table>

#### Unpaired ‘t’ test

<table>
<thead>
<tr>
<th>Group</th>
<th>Mean difference</th>
<th>‘t’ value</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>0.63</td>
<td>2.933</td>
</tr>
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</table>

### Significant/Not significant Tenderness of joints:

<table>
<thead>
<tr>
<th>Examination</th>
<th>Group A Average (χ)</th>
<th>S.D.(δ)</th>
<th>Group B Average (χ)</th>
<th>S.D.(δ)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Before T/t</td>
<td>2</td>
<td>0.64</td>
<td>2</td>
<td>0.56</td>
</tr>
<tr>
<td>After T/t</td>
<td>1.03</td>
<td>0.71</td>
<td>1</td>
<td>0.62</td>
</tr>
</tbody>
</table>

#### Paired ‘t’ test

<table>
<thead>
<tr>
<th>Group</th>
<th>‘t’ value</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>0.96</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>B</td>
<td>1.43</td>
<td>&lt;0.0001</td>
</tr>
</tbody>
</table>

#### Unpaired ‘t’ test

<table>
<thead>
<tr>
<th>Group</th>
<th>Mean difference</th>
<th>‘t’ value</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>0.4667</td>
<td>2.586</td>
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</table>

---

**Significant/Not significant**
Significant/Significant Restriction of movements

<table>
<thead>
<tr>
<th>Examination</th>
<th>Group A Average (χ)</th>
<th>S.D.(δ)</th>
<th>Group B Average (χ)</th>
<th>S.D.(δ)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Before T/t</td>
<td>2.1</td>
<td>0.95</td>
<td>2</td>
<td>0.94</td>
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<td>After T/t</td>
<td>1.03</td>
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<td>0.96</td>
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Paired ‘t’ test

<table>
<thead>
<tr>
<th>Group</th>
<th>Difference of symptoms</th>
<th>‘t’ value</th>
<th>P</th>
<th>Mean difference</th>
<th>‘t’ value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group A</td>
<td>1.06</td>
<td>6.440</td>
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<td>0.5884</td>
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<td>1.2</td>
<td>7.761</td>
<td>p&lt; 0.0001</td>
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</table>

Significant/ Not Significant Stiffness

<table>
<thead>
<tr>
<th>Examination</th>
<th>Group A Average (χ)</th>
<th>S.D.(δ)</th>
<th>Group B Average (χ)</th>
<th>S.D.(δ)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Before T/t</td>
<td>1.96</td>
<td>0.66</td>
<td>1.19</td>
<td>0.66</td>
</tr>
<tr>
<td>After T/t</td>
<td>0.53</td>
<td>0.62</td>
<td>0.4</td>
<td>0.49</td>
</tr>
</tbody>
</table>

Paired ‘t’ test

<table>
<thead>
<tr>
<th>Group</th>
<th>Difference of symptoms</th>
<th>‘t’ value</th>
<th>P</th>
<th>Mean difference</th>
<th>‘t’ value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group A</td>
<td>1.43</td>
<td>10.785</td>
<td>p&lt; 0.0001</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Group B</td>
<td>1.5</td>
<td>12.042</td>
<td>p&lt; 0.0001</td>
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</table>

Significant Not Significant

Crepitions

<table>
<thead>
<tr>
<th>Examination</th>
<th>Group A Average (χ)</th>
<th>S.D.(δ)</th>
<th>Group B Average (χ)</th>
<th>S.D.(δ)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Before T/t</td>
<td>1.63</td>
<td>0.92</td>
<td>1.46</td>
<td>0.81</td>
</tr>
<tr>
<td>After T/t</td>
<td>1.13</td>
<td>0.73</td>
<td>0.9</td>
<td>0.66</td>
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</table>

Paired ‘t’ test

<table>
<thead>
<tr>
<th>Group</th>
<th>Difference of symptoms</th>
<th>‘t’ value</th>
<th>P</th>
<th>Mean difference</th>
<th>‘t’ value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group A</td>
<td>0.5</td>
<td>3.525</td>
<td>p&lt;0.0001</td>
<td>0.0666</td>
<td>0.3660</td>
</tr>
<tr>
<td>Group B</td>
<td>0.56</td>
<td>t = 4.958</td>
<td>p&lt;0.0001</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Significant/ Not significant

6. Observations & Results

Out of 78 total females, 18 patients dropped out of the trial in the first 2 to 3 weeks for unknown reasons of the 60 that completed the trial grouped into Group A & Group B.

In Group A 18 (60%) had 100% improvement, 4 (13.33%) had 75% improvement and 5 (16.66%) had 50% improvement. Follow up of the patients revealed only 3(10%) patient with relapse and that also only of 25%.

In Group B 22 (73.33%) had 100% improvement, 5 (16.66%) had 75% improvement and 1 (3.33%) had 50% improvement. Follow up of the patients revealed only 2(0.66%) patient with relapse and that also only of 25%.

Tables are showing the pattern of total clinical recovery in patients of osteoarthritis treated i.e. in comparison with Group A and Group B.

This indicates the result obtained by leech application in osteoarthritis is more significant than that of Prawal bhasma.

Clinical Recovery

After the course of treatment for 28 days, in group A joint pain reduced in 16 patients(n =30) and in Group B in 22 patients(n =30); When compared with Group A, reduction in all other related symptoms like swelling of joints ,tenderness of joints , restriction of movements , stiffness of joints and crepitations of joints were decreased significantly when compared with Group B.

No any other clinical side effects were seen by giving treatment.

Discussion

Regarding the nidana factors mainly ageing, dietary, genetic, environmental, sedentary lifestyle etc factors were observed practically, it may be asserted, though it is known as multifactorial disease, predominantly menopause is major nidana of osteoarthritis in elderly female. An estrogen level decrease in menopause resulting in joint inflammation, cartilage deterioration and eventually the onset of osteoarthritis [7]. Leech application used relives inflammation locally as is showing to pacify the inflammation and pain is relieved. As well prawal bhasma used as a supplement for metabolic disorders associated with calcium deficiency which plays key role for restoration of calcium and minerals. Likewise this is natural supplement without having any known side effect.

Even though the mode of action of leech is not well known, review of literature revealed that one of the substances contained in the saliva of the leech is exopeptidase-proteolytic enzyme, which has an action similar to anti-inflammatory drugs or NSAIDs. This may be the active compound responsible for the improvement of symptoms. Saliva of Leech may also contain any anesthetic substances. Probably these substances help
to decrease the symptoms like pain and tenderness of joints \[8\].

The anti-inflammatory substances such as bdellins and eglins are helpful in reduction of inflammation by which swelling of the joint get decreases. As a result of decrease in inflammation of the joint pain decreases; pain reduction decreases restriction of the joint.

Saliva of leech also contains hirudin-, calin-, and destabilase-like substances result in increased microcirculation by decrease in blood viscosity. Carboxypeptidase A inhibitor increases the inflow of blood at the local bite site \[9\]. Histamine-like substances are also present in leech saliva which acts as a vasodilator. By this way these substances that are present in leech saliva increase the microcirculation, decrease the inflammation as well as stiffness and restriction of movement of the joints \[10\].

The principle in osteoarthritis treatment at present lies in treating it to improve the quality of life, prevent further degeneration of joints and most important is relief from pain and debility, as NSAIDs have lots of side effects mostly gastritis. In both therapy we can avoid the hazard of analgesic drugs, internally prawal bhasma and leech locally is effective, relatively non-toxic and easy to administer as penetration of the drug is local, no chance of systemic absorption and adverse effects. Although the results are encouraging and no side effects were observed within a short observation period, long-term follow up is necessary to prove the efficacy prawal bhasma and local application of leech (hirudo medicinalis) on post menopausal osteoarthritis. Follow up with biochemical, radiological and hematological tests are required to establish its safety.

Conclusion

The pilot study appears to suggest that leech therapy is effective treatment for rapid reduction of pain associated with osteoarthritis of the knee in comparison with Prawala bhasma taken internally. Prawala bhasma taken internally has to be taken for long time and helps relief of symptoms steadily. It helps in prevention of further degeneration of the involved joints and bone strengthening.

Both prawal bhasma and leech are easily available, cheap and easily applicable with good absorption very useful in osteoarthritis. The prawal bhasma is found effective after leech application and collectively used will show better result. Simultaneous use of both should be tested in larger randomized controlled trials with assessment of expectation bias.

Scope for future study

Prevent complications

To prevent complications like drug induced gastritis.

Prolongs the relapse of disease as no complete cure.

It can be used in seropositive arthritis dependant on steroids to avoid dependency.
To prevent further degeneration of the disease-Panchatikta ksheerbasti

Panchatikta ksheerbasti as treatment modality for disease is supposed to be of Asthi Dhatu.

References


3. Efficacy of leech therapy in the management of osteoarthritis (Sandhivata) PK Rai, AK Singh, OP Singh, NP Rai, AK Dwivedi


Article 11

Transcutaneous Electrical Nerve Stimulation (TENS) An Approach To The Management Of Postoperative Pain Over Extremity

Pradeep Pandharinath Waghmare* [1], Vinay R. Sonambekar [2], Pankaj P. Dixit [3]
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Abstract-

The management of postoperative pain has been and continues to be a significant problem in surgical practice. Pain is an individual experience and this fact is reflected in a wide variation in the incidence and severity of pain and in the need for analgesics.

Various strategies for the management of pain have been proposed. Transcutaneous Electrical Nerve Stimulation (TENS) has been an effective alternative approach to the management of postoperative pain. TENS is a afferent stimulation techniques, often called neuromodulation, is based on application of the ‘gate control theory of pain’. Briefly, the gate control theory postulates that impulse transmission from afferent nerve fibers to the spinal cord transmission cells is modulated by a spinal gating mechanism in the substantia gelatinosa.

In this study, 20 patients with recent operative procedure over extremities were selected and they were categorized in two groups, namely group ‘A’ and group ‘B’. Patients from group A were subjected to TENS along with oral and/or systemic analgesics, where as patients from group B were subjected to only oral and/or systemic analgesics.
TENS was applied over the extremity and close to the operative site for 15 minutes daily for 5 consecutive days. For which among 10 patients from experimental group A 4 patients got Uttam Upashay, 3 patients got Madhyam Upashay 2 patients got Alpa Upashay and 1 patients got Anupshay in their post-operative pain.

Keywords: tens, post operative pain, extremities, gait control theory, Analgesics, Tab. Diclofenac 50mg, Inj. Diclofenac 50mg.

Introduction:

The management of postoperative pain has been and continues to be a significant problem in surgical practice. Pain is an individual experience and this fact is reflected in a wide variation in the incidence and severity of pain and in the need for analgesics. A number of factors including age, anesthetic technique, site of operation, and surgical management affect the incidence of postoperative pain. Various strategies for the management of pain have been proposed. The most commonly used method stresses the use of systemic analgesics, narcotics, and related drugs. Regional analgesia offers an attractive alternative to the use of narcotics. The patient can be made pain free for extended periods using long-acting local anesthetics. But its use requires the presence of an anesthesiologist. Recently, the use of epidural morphine has been advocated for the treatment of postoperative pain. Unfortunately, epidural morphine also has its disadvantages. Transcutaneous Nerve Stimulation (TENS) has been an effective alternative approach to the management of postoperative pain. Historically, the use of electrical analgesia is an ancient technique. Electrical fish were first used to provide electricity for pain relief. The torpedo fish or electric ray, which is capable of emitting 200 V, was used by Greek and Roman physicians in the treatment of gout, headaches, and other ailments. The use of afferent stimulation techniques, often called neuromodulation, is based on application of the gate control theory of pain. Briefly, the gate control theory postulates that impulse transmission from afferent nerve fibers to the spinal cord transmission cells is modulated by a spinal gating mechanism in the substantia gelatinosa. The relative amounts of activity in the large myelinated A-beta fibers and small A-
delta and C fibers influence the gating mechanism in a way such that large fiber activity inhibits transmission (closes the gate) while small fiber activity facilitates transmission (opens the gate).

In the current study, we aimed to investigate the effects of TENS therapy for pain management of operative over extremities e.g. Excision of osteochondroma, Diabetic foot amputation, in terms of –Pain- on visual analogue scale and Tenderness. To assess the effects of TENS better, patients were categorized in two groups, Group ‘A’(Experimental Group) receiving TENS for 5 consecutive days for 15 minutes daily and oral and/or systemic analgesics as and when required, where as Group ‘B’(Control Group) receiving only oral and/or systemic analgesics as Tab. Diclofenac 50 mg BD And Inj. Diclofenac 50 mg IM sos.

**Aims:**

1) To study the effective management of the localised postoperative pain.

2) To evaluate the Transcutaneous Electrical Nerve Stimulation (TENS) as an effective alternative, to the management of postoperative pain.

**Objective:**

To reduce the pain in the postoperative wound over extremities using TENS as an alternative and reducing the usage of analgesics.

**Study Design And Patients:**

In the present study 20 patients of post operative wound over their extremities were selected randomly [1] from surgical ward of Arogyashala Rugnalaya, A.S.S. Ayurved Mahavidyalaya, Panchavati, Nashik.

A detailed case record form was designed to receive the detail history of the patients. 10 patients from Experimental Group were subjected to TENS. These patients were given oral and/or systemic analgesics as described above whenever the post-operative pain was not bearable. Where as, 10 patients from control group were subjected to oral and/or systemic analgesics. This made us able compare the effects of TENS on the basis of requirement of analgesics.

**Inclusion Criteria:**

1) Patients with post operative pain over extremity (within 3 days of operative).

2) Patients from either age group between age 10 to 60 yrs.

**Exclusion Criteria:**

1) Patients with fracture of foot bones

2) Infection around operative wound.

3) Pacemakers

4) Heart disease

5) Epilepsy

6) Pregnancy: first trimester.
**Method:**

The study was a controlled study, clinical trial over 20 patients from Arogyashala Rugnalaya, containing 18 male and 2 female patients.

Among these patients 1 patient was young male with osteo-chondroma over Rt. Femur, one with Spindle Cell Tumour over Rt. Popliteal region with skin Grafting done, one female patient had osteomyelitis of Rt.Calcaneum who underwent Below knee Amputation, while rest all patients were having infected wound over extremity who underwent operative and having clean surgical wound.

All 10 patients from Experimental Group were subjected to TENS over the affected limb and around surgical wound/scar for 5 consecutive days 15 minutes daily. These patients were given oral and/or systemic analgesics as described above.

In control group, patients were not subjected to TENS but only oral and/or systemic analgesics as that in experimental group.

All the 20 patients were assessed every day upto 5 days of therapy based on criteria of assessment.

**Criteria For Assessment:**

Clinical symptoms of wound viz. ‘Pain’ and ‘Tenderness’ will be recorded based on the scoring index.

**a) Subjective Criteria: 1. Pain:**

*Pain around post-operative wound will be assessed as follows:

<table>
<thead>
<tr>
<th>SIGN</th>
<th>GRADE</th>
</tr>
</thead>
<tbody>
<tr>
<td>No pain (0)</td>
<td>0</td>
</tr>
<tr>
<td>Mild Pain with no additional analgesics required (1 to 4)</td>
<td>+</td>
</tr>
<tr>
<td>Moderate Pain requiring oral analgesics (5 to 7)</td>
<td>++</td>
</tr>
<tr>
<td>Severe Pain requiring systemic analgesics (8 to 10)</td>
<td>+++</td>
</tr>
</tbody>
</table>

*Numerical pain rating scale (Visual Analogue scale):

*Pts will be shown above scale and will be asked which number equals the pain they fill. After treatment this will be reassessed and recorded.

2. **Tenderness:** Soft tissue tenderness grading scheme:

*Grade 0: No tenderness
*Grade 1: Tenderness to palpation with grimace.
*Grade 2: Tenderness with reflexive jerk.*
Follow Up:

1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup>, 4<sup>th</sup>, 5<sup>th</sup> postoperative day.

Investigations: 1) Hb% 2) BSL(R)

Investigations done on 1<sup>st</sup> and last day of therapy.

Criteria For Assessment Of Result:

The data obtained by clinical trial will be analyzed by applying suitable statistical test.

With follow up, study progress will be observed and analyzed to assess benefit and improvement of condition.

<table>
<thead>
<tr>
<th>Grade</th>
<th>Percent Relief</th>
<th>Upashay</th>
</tr>
</thead>
<tbody>
<tr>
<td>3+ to 0, 2+ to 0, 1+ to 0 i.e. from initial gradation to 0</td>
<td>76% to 100% relief in 15 days</td>
<td>Uttam</td>
</tr>
<tr>
<td>3+ to 1+</td>
<td>51% to 75% relief in 15 days</td>
<td>Madhyam</td>
</tr>
<tr>
<td>3+ to 2+, 2+ to 1+</td>
<td>upto 50% relief in 15 days</td>
<td>Alpa</td>
</tr>
<tr>
<td>No change in gradation or raised</td>
<td>No relief in symptoms or increases in 15 days</td>
<td>Anupshay</td>
</tr>
</tbody>
</table>

Observations:

Among 10 patients from experimental group A 4 patients got Uttam Upashay, 3 patients got Madhyam Upashay 2 patients got Alpa Upashay, and 1 patients got Anupshay in their post-operative pain.

The observations are analyzed using appropriate statistical test namely, Student’s paired t-test considering the ‘p’ value to be <0.005. The end result of TENS in post operative pain management over extremity was statistically proved significant. All the observations and statistical analysis are given in the table.

<table>
<thead>
<tr>
<th>Symptoms</th>
<th>Mean ± SD Before T/t</th>
<th>Mean ± SD Before T/t</th>
<th>Paired t-test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pain</td>
<td>2.4 ± 0.8</td>
<td>0.699 ± 0.788</td>
<td>P&lt;0.001</td>
</tr>
<tr>
<td>Tenderness</td>
<td>2.4 ± 1</td>
<td>0.699 ± 0.816</td>
<td>P&lt;0.001</td>
</tr>
</tbody>
</table>

Discussion:

As post-operative pain management continues to be the significant problem in surgical practice and patients want an alternative to the regular oral or systemic analgesics, due to their adverse effects on the health of patient. We chose to select the very upcoming therapy called “Transcutaneus Electrical Nerve Stimulation (TENS)” in the pain management of post-operative wound over the extremity.
In this study, we selected the patients who recently underwent surgeries over their extremities for various reasons e.g. Amputation, Excision of osteochondroma. All these were experiencing the discomforting post-operative pain. So we applied the TENS to the respective extremity daily for 15 minutes for 5 days in patients from experimental group and they were assessed daily on the basis of subjective criteria of pain and tenderness over operative site.

Patients from control group were also subjected to oral and/or systemic analgesics as that in experimental group, but no TENS was applied. During this therapy patients from both group were observed for their requirements of oral and/or systemic analgesics.

During this study, significant reduction of post-operative pain was achieved for in experimental group after 2nd or 3rd sitting of TENS[1], reducing the usage of analgesics by the patients. Almost all patients from experimental group experienced good results by TENS application at the end of 5th sitting.

We believed that this study indeed have a certain role in pain management of operative over extremities.

**Conclusion:**

In conclusion, we can say that Transcutaneous Electrical Nerve Stimulation (TENS) is a definitive alternate to the oral and/or systemic analgesics, reducing their usage in post-operative pain over extremities.[3]

**Acknowledgement:**

I am grateful to Dr. S. L. Dasari Sir, Principal A. S. S. Ayurved College, Nashik, for permit me to do this research work. I also very grateful to Dr. V.R. Sonambekar Sir, HOD Shalyatantra dept., Dr. Santosh Pathak Sir-Asst. Professor, Dr. Pankaj Dixit Sir-Asso. Professor-Shalyatantra dept. A.S.S. Ayurved College, Nashik for giving me opportunity to do this work and to guide me in each and every step of this study.

**References-**


2. Review article on internet: transcutaneous electrical nerve stimulation (TENS) a possible aid for pain relief in developing countries? available from: http://www.ljm.org.ly; date : 16/08/2014; 11.30 AM

3. Article on internet: Jan Magnus Bjordal, Mark I. Johnson, Anne Elisabeth Ljunggreen.
Transcutaneous electrical nerve stimulation (TENS) can reduce postoperative analgesic consumption. A meta-analysis with assessment of optimal treatment parameters for postoperative pain.

Article 12
Clinical efficacy of lodhra, Nagkeshar and udumbar churna with honey in the management of Raktpradar (DUB)

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ABSTRACT
Objective of this clinical study is to decide action of Ayurvedic drugs on uterus and endometrium. For this study all patients were taken from study center. Total 40 patients were included in study group; Group-A (n=20) A Nagkeshar(Mesua ferra), Lodra(Symlocos racemosa), and Udumbar churna(Ficus glomerata) 3gms. with 5ml honey three times a day while in Group-B(n=20) Lodra 3gms with 5ml honey three times a day was given from 1st day of menstrual cycle up to next three months. In all patients Pelvic USG done before starting treatment and reports were noted. Follow ups were taken on 7th day for three consecutive menstrual cycle. In Group-A out of 20 patients 18 patients were got total relief & in 2 patients no relief. After completion of treatment cured 18 patients of Group-A were called for follow up after 6 months to observe relapse of symptoms. The endometrial thickness observed by USG on 24th day menstrual cycle in both groups. In study group endometrial thickness & duration of bleeding significantly decreases, but in control group which was slightly decreased. The Group-A when compared with Group-B showed good result then the in Raktapradara (DUB). Study concluded that Nagkeshar, Lodra and Udumbar churna with honey is very effective in treating Raktapradara (DUB).

Cite this article:
Clinical efficacy of lodhra, Nagkeshar and udumbar churna with honey in the management of Raktpradar (DUB)
Shailendra D. Katakdound
INTRODUCTION

Over the year’s menorrhagia has become an increasingly frequent complaint for two main reasons. Firstly, the women of today experiences about 10 times more menstrual cycles than her ancestor did. This is related to a decrease in lactational amenorrhoea with the advent of effective contraception. Secondly, women are increasingly unwilling to accept menstrual difficulties. There have been rise in expectations and increasing intolerance of the inconvenience of monerrhagia. These factors have both lead to an increased demand on the health services.

In all Ayurvedic classics Raktapradara defined as “an excessive intramenstral bleeding or Hypermenorrhoea”. In Pathophysiology Acharyas describe Pittadosha is main culprit and causative factor for Raktapradara. When Raktapradara compared with dysfunctional Uterine bleeding (DUB) it shows subjective similarities. According to Allopathy in pathophysiology of DUB various hormonal combinations, some intrauterine surgeries, endometrial ablation, resection, balloon therapy uterine curettage had advised and all these procedures have limited significance. Most of the time 30-40% patients require hysterectomy and loss their womb. As according to Allopathy all therapeutics related to proliferation, histopathological changes and shedding of endometrium with hormonal changes.

Keywords: Lodhra, Nagkeshar, Udumbar churna, Rakta pradara, Endometrium

When herbal medications were given to the Rakta pradara (DUB) patients they got symptomatic relief, but still no evidence could prove objectively effect of herbal drug on endometrium. Nagkeshara, Lodhra & Udumbara are indicated herbal drugs for Rakta pradara (DUB). Therefore this is effort of mine to decide effectiveness of herbal drugs on endometrium in Rakta pradara (DUB).

Materials & Methods:

Material:

Inclusion criteria:

1. 40 patients of Rakta pradara (DUB) were selected for this study.

2. Age 20-45 years.

Exclusion Criteria:

1. Known case of Carcinoma Endometrium, cervix and genital tract.

2. Postmenopausal bleeding per vaginal bleeding due to organic cause.

3. Thyroid Dysfunction.


Drug:

Nagkeshar (Mesua ferra), Lodra (Symplocos racemosa), and Udumbar churna (Ficus glomerata) - 3gms & honey 5ml.( Srishail Farmacy, Nagpur)

Method:
Raktapradara (DUB) patients were selected & divided into two group. In Group A (n=20) Nagkeshar, Lodhra and Udumbar churna 3gms with 5ml honey three times a day while in Group B (n=20) Lodhra churna 3gms with 5ml honey was given for three consecutive menstrual cycle. In all patients pelvic USG done before starting treatment all patients were called for follow up on 7th day of menses. Quantum of p/v bleeding was calculated from number of sanitary pads used by patient during her menstrual phase and recorded as objective parameter. In all patients pelvic USG were done after completion of treatment on 24th day of menses. All patients were called for follow up after six months to observe final result.

Effect of treatment evaluated as per specially designed assessment criteria as follows.

**Endometrial thickness:**

12-14mm – 0(normal), 14-16mm – 1(mild), 16-18mm - 2(mod), above 18mm 3(sev).

**Quantity of P/V bleeding:**

80ml - 0(normal), 80-100ml – 1(mild), 100-120ml - 2(mod), above 120ml 3(sev).

**Duration of p/v bleeding:**

3-7days – 0(normal), 7-8days – 1(mild), 8-9days – 2(mod), above 10days – 3(sev).

<table>
<thead>
<tr>
<th>Sr. No</th>
<th>Parameter</th>
<th>X1</th>
<th>X2</th>
<th>S.D.1</th>
<th>S.D.2</th>
<th>S.E</th>
<th>t</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Endometrial thickness</td>
<td>2.15</td>
<td>1.85</td>
<td>0.67</td>
<td>0.48</td>
<td>0.2</td>
<td>1.1</td>
<td>&gt;0.05</td>
</tr>
<tr>
<td>2</td>
<td>Duration of p/v bleeding</td>
<td>2.15</td>
<td>1.8</td>
<td>0.48</td>
<td>0.52</td>
<td>0.2</td>
<td>1.5</td>
<td>&gt;0.05</td>
</tr>
<tr>
<td>3</td>
<td>Quantity of P/V bleeding</td>
<td>0.95</td>
<td>0.9</td>
<td>0.39</td>
<td>0.64</td>
<td>0.2</td>
<td>0.2</td>
<td>&gt;0.05</td>
</tr>
</tbody>
</table>

Unpaired ‘t’ test used for the difference of difference in both groups for Endometrial thickness, duration of p/v bleeding & quantity of P/V bleeding s’t’ value is 1.158, 1.545 &0.2160 respectively and ‘P’>0.05 which shows that there is statistical significance hence Group A showed better effects to minimize endometrial thickness, duration of p/v bleeding & quantity of P/V bleeding then Group B.

In this clinical study all efforts are made to establish effect of ayurvedic drug on endometrium in Raktapradara (DUB). In Group-A 18(90%) patients got total relief from excessive p/v bleeding with endometrial normalization & 2 patients no endometrial normalization observed. In Group-B 13 patients got relief from excessive p/v bleeding with less effect on endometrial normalization.

**DISCUSSION:**

To prove the effectiveness of Nagkeshar, Lodhra and Udumbar churna in the
management of excessive p/v bleeding i.e. Raktapradara (DUB). Vata & pitta doshas are mainly responsible for raktapradara. These drugs acts on pitta due to following properties once pitta comes to normal it acts on ama and breaks samprapti of raktapradara. Lodhra (S. racemosa) increases serum level of FSH & LH hence drugs of choice for the treatment of all gynecological disorders and for restoration of fertility among women who fail to conceive$^4$.

Lodhra shows the great oestrogenic potentiality of this herbs as uterine tonics$^2$. Two alkaloids (Loturine and Colloturine) $^7$have been reported from the bark reported the following biologically active chemicals$^5$.

Monomethyl pelargonidin glucosides (I & II), loturine, colloturine, loturidine, reducing sugars, oxalic acid, phytosterol, 3-mono glucofuranoside of 7-0-methylleucopelargonidin(bark), pelargonidin-3-0-glucoside, betulinic, acetyloleanolic, oleanolic and ellagic acids (plant)$^8$.

The Nagkeshar (mesua ferrea) contains Mesuferron, Mameism and Mesuanic acid$^3$. There is B-Sito steral and a Triterpenoid – Guttiferol. There is also an antibiotic – Mesuagin and essential oils and fatty acids (Palmitic, Stearic, Linoleic and Oleic acids) hence shows astringent, haemostatic & antibacterial action$^9$.

The Udumbar (ficus glomerata) processes astringent taste, cool in potency$^{11}$. ethanol extract steam bark inhibited COX-2 with IC$_{50}$ value of 100ng/ml and treats inflammatory condition methanol extract of steam bark at the dose of 250 to 500ng/ml shows hepatoprotective properties and reverses SGOT, SGPT, serum bilirubin & alkaline phosphate levels to normal$^{12,13}$. The bark contains tannin and these tannins will give astringent property to the drugs it shows antibiotic, antiulcer, antipyretic, antihelmintic, antidiarrhoeal, analgesic, antitussive, antiuretic, antifilarial, anti inflammatory, hypoglycemic, hypolipidemic, hepatoprotective, renal anticarcinogenic, radio protective$^{13,14}$. These drugs shows shothahara, kushaghna, chakshushya, sara, raktastambhana, vranaropana, shonisthapana, stambhana, mridurechana, raktashoshaka, kaphagha, jvaraghna properties. Bees honey also shows haemostatic property hence it enhances action of these drugs$^{20,22,23}$.

All these properties of Nagkeshar, Lodhra and Udumbar churna & honey acts on uterus & endometrium to normalize growth of endometrium hence useful in the management of excessive p/v bleeding i.e. Raktapradara (DUB).

CONCLUSION:

Study concluded that Nagkeshar, Lodhra and Udumbar churna with honey is effective in endometrial normalization & treating Raktapradara (DUB). Hence Nagkeshar, Lodra and Udumbar churna is practically reliable to use in Raktapradara (DUB).

References:


Evaluate efficacy of shunthyadi churna in management of tamakshwasa w.s.r. Asthma in Childhood

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Abstract

Asthma is a one of chronic disease seen in children. It have high prevalence rate in developing as well as developed countries. A clinical study on Tamak shwasa has been subjected to trial with “Shunthyadi churna” (groupA) and “Krishnadi churna” (group B) under equally divided two groups each having 30 patients. Statistically more significant improvement was observed in clinical, functional as well as hematological parameters in group A compare to group B after course of treatment. Out of 30 patients included in each Group were shown improvement like significant, satisfactory, slightly and no cure in 20%,73.33%,6.66%,0% & 0%,10%,63.33%,26.66% respectively. No side or adverse effects were noted in any of the patients included in this study.

Cite this article:
Evaluate efficacy of shunthyadi churna in management of tamakshwasa w.s.r. Asthma in Childhood
Vipul Ramesh Dixit, Karuna Ratnaparhi
Ayurlog: National Journal of Research in Ayurved Science-2014; 2(4):100-

Keywords: Tamak shwasa, asthma, Shunthyadi churna Krishnadi churna,

Introduction

Asthma is the most common disease and highly prevalent worldwide. It affects nearly all age group. Children are more vulnerable to this disease and contribute majorly to mortality rate due to asthma. Ayurveda has its own pathway of diagnosis and treatment. The term TamakShwasa in Ayurveda correlates with Asthma. Symptoms of TamakSwasa resembles to that of Asthma in modern medicine. Swasa could be defined as the
dyspnoeic condition due to various factors (hereditary, ecological, etc). Shwasa is present as symptom at the terminal stage of various disease such as jalodar (ascitis), adhman, COPD. The most common type of swasa is Tamakashwasa. Trachea and Bronchus (parts of lungs) responding to various stimuli characterizes it\(^1\) (Meena et al, 2008). Asthma is chronic in nature and in the long term with the frequent and severe episodes of acute exacerbation, severe episodes of paroxysmal bouts of cough and dyspnoea could lead to progressive pulmonary damage\(^2\).

Treatment for asthma in modern medicine is limited. Thus providing instant or symptomatic treatment with Bronchodilators, steroids, orally, parenterally and sometimes artificial providing supply of oxygen. According to Dravyagunshastra in ayurveda, the drug which has property of katu - tikta rasa, katu vipak, ushna virya, laghu and ruksha guna should be used for treating asthma\(^3\). The medicine Shuntyadi churna which is blend of various drugs has the above mentioned property and also with effect of Shwasahar, Kasahar\(^4\). Modern pharmacological study has stated that Antihistaminic and antispasmodic drugs are suitable for treating asthma which is present in Shuntyadi churna according to various pharmacological studies\(^5\). Thus shuntyadi churna was used in this clinical trial to study its efficacy in treating Asthma.

**Aim and objectives**

A clinical study on the efficacy of SHUNTHYADI CHURNA in management of TamakaShwasaw.s.r. to Asthma in childhood

1) To study efficacy of SHUNTHYADI CHURNA.
2) To detail study Tamakshwasa mention in Ayurvedic texts.
3) To study Asthma in childhood.

**Materials and Methods**

Total 60 Children aged from 5-11 years suffering from shwasa were selected. This children were randomly selected from OPD and IPD of Kaumarbhritya dept. and divided into two groups. Group A consisted of 30 children and group B consisted of 30 children and the study was carried out in the P.G. department Kaumarbhrity, C.S.M.S.S. College, Aurangabad, Maharashtra

Group A - 30 children were treated with Shunyadi churna. Dose: Grantokhtamatra as per the age of the child\(^6,7\).

Group B - 30 children were treated with Krishnadi churna. Dose : Grantokhtamatra as per the age of the child\(^6,7\).

**Inclusion Criteria**

Children’s aged 5-11 years old irrespective of sex were included. The patients suffering from Tamaka Shwasa and having the signs and symptoms of TamakaSwasaas mentioned by Charaka samhita\(^8\) which are described below

- Ayasenswasakashtata(Dyspnoea)
Study was conducted for period of 60 days. The physical symptoms & investigation were assessed initially before the treatment. Follow up was given at every 15 days interval.

**Objective criteria**

- Peak Flow meter for lung capacity
- ESR
- Eosinophil count

**Preparation of drug**

Shuntyadichurna was prepared in the dept. of Rasashastra and Bhaishajyakalpana, CSMSS Ayurved Mahavidyalaya, Aurangabad. Contents of Shuntyadi churna are Tvak, Ela, Nagdal, Marich, Pippali, Shunthi, Sharkara

**Table 1: Showing effect of therapy on physical parameter of 30 patients of Tamak Shwasa in group A.**

<table>
<thead>
<tr>
<th>Physical Parameter</th>
<th>Mean BT</th>
<th>Mean AT</th>
<th>% of relief</th>
<th>SD</th>
<th>SE</th>
<th>t value</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Respiratory Rate</td>
<td>25.93</td>
<td>21.73</td>
<td>19.08</td>
<td>0.96</td>
<td>0.17</td>
<td>23.93</td>
<td>&lt;0.05</td>
</tr>
<tr>
<td>Peak Expiratory flow rate</td>
<td>159.83</td>
<td>173.17</td>
<td>19.02</td>
<td>4.42</td>
<td>0.80</td>
<td>16.52</td>
<td>&lt;0.05</td>
</tr>
</tbody>
</table>

**Table 2: Showing effect of therapy on physical parameter of 30 patients of Tamak Shwasa in group B.**

<table>
<thead>
<tr>
<th>Physical Parameter</th>
<th>Mean BT</th>
<th>Mean AT</th>
<th>% of relief</th>
<th>SD</th>
<th>SE</th>
<th>t value</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Respiratory Rate</td>
<td>26.00</td>
<td>21.53</td>
<td>18.08</td>
<td>1.4</td>
<td>0.26</td>
<td>16.8</td>
<td>&lt;0.05</td>
</tr>
<tr>
<td>Peak Expiratory flow rate</td>
<td>153.17</td>
<td>166.00</td>
<td>17.02</td>
<td>6.78</td>
<td>1.23</td>
<td>10.36</td>
<td>&lt;0.05</td>
</tr>
</tbody>
</table>
The efficacy of *Shuntyadichurna* and *Krishnadichurna* on physical parameters of the respective group of patients.

**Respiratory rate**

In group A, the mean grade score of respiratory rate was 25.93 before the treatment while that of group B was 26.00 before treatment. After the treatment mean grade score of respiratory rate was reduced to 21.73 of group A and its t value was 23.93 (p<.05) which is statistically significant. While that in group B the mean grade score of respiratory rate reduced to 21.53 and its t value was 16.8 (p<.05) which is statistically significant.

**Peak Expiratory Flow Rate**

<table>
<thead>
<tr>
<th>Investigation</th>
<th>Mean BT</th>
<th>Mean AT</th>
<th>SD</th>
<th>SE</th>
<th>t value</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>TLC</td>
<td>6856</td>
<td>6953</td>
<td>55.6</td>
<td>10.15</td>
<td>9.52</td>
<td>&lt;0.05</td>
</tr>
<tr>
<td>Eosinophil</td>
<td>7.63</td>
<td>5.70</td>
<td>1.48</td>
<td>0.27</td>
<td>7.13</td>
<td>&lt;0.05</td>
</tr>
<tr>
<td>Erythrocyte Sedimentation Rate</td>
<td>19.70</td>
<td>16.16</td>
<td>1.5</td>
<td>0.27</td>
<td>12.68</td>
<td>&lt;0.05</td>
</tr>
</tbody>
</table>

Table 3 showing the effect of therapy on HB, TLC, Neutrophil, and Eosinophil& ESR in group A.

<table>
<thead>
<tr>
<th>Investigation</th>
<th>Mean BT</th>
<th>Mean AT</th>
<th>SD</th>
<th>SE</th>
<th>t value</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>TLC</td>
<td>6886.7</td>
<td>6993.3</td>
<td>98.02</td>
<td>17.89</td>
<td>5.96</td>
<td>&lt;0.05</td>
</tr>
<tr>
<td>Eosinophil</td>
<td>7.16</td>
<td>4.66</td>
<td>1.4</td>
<td>0.26</td>
<td>9.4</td>
<td>&lt;0.05</td>
</tr>
<tr>
<td>Erythrocyte Sedimentation Rate</td>
<td>17.56</td>
<td>13.43</td>
<td>2.25</td>
<td>0.41</td>
<td>10.04</td>
<td>&lt;0.05</td>
</tr>
</tbody>
</table>

Table 4 Showing the effect of therapy on HB ,TLC ,Neutrophil, Eosinophil, ESR of group B

The efficacy of *Shuntyadichurna* and *Krishnadichurna* on Investigation parameters of the respective group of patients.

**White Blood Corpuscles (TLC)**

In group A, the mean score of White Blood Corpuscles (TLC) was 6856 before
the treatment while that of group B the mean score of White Blood Corpuscles was 6886.7 before the treatment. After the treatment the mean score in group A increased to 6953 and its t value was 9.52 (<.05) which is statistically significant while that of group B the mean score increased to 6993.3 and its t value was 5.9 (<.05) which is statistically significant.

**Eosinophil Count**

The mean grade score of Eosinophil was 7.63 before the treatment which was reduced to 5.7 after the treatment and its t value was 7.13 (<.05) which is statistically significant. While that of the group B, the mean score of Eosinophil was 7.16 before the treatment which was reduced to 4.66 after the treatment and its t value was 9.4 (<.05) which is statistically significant.

**Erythrocyte Sedimentation Rate**

The mean grade score of Erythrocyte Sedimentation Rate was 19.70 before the treatment which was reduced to 16.16 after the treatment and its t value was 12.68 (<.05) which is statistically significant. While that of the group B, the mean score of Erythrocyte Sedimentation Rate was 17.56 before the treatment which was reduced to 13.43 after the treatment and its t value was 10.04 (<.05) which is statistically significant.

Table 5 Statistical Analysis of Symptoms of patient of Tamakshwasa, Wilcoxon–matched pairs signed ranks tests in group A

<table>
<thead>
<tr>
<th>Symptoms</th>
<th>Sum of ranks of BT</th>
<th>Sum of ranks of AT</th>
<th>No of patients</th>
<th>Z</th>
<th>Comment (critical value of z at 5% level of significance=1.96)</th>
</tr>
</thead>
<tbody>
<tr>
<td>AyasenShwasakashtata</td>
<td>49</td>
<td>20</td>
<td>30</td>
<td>12.76</td>
<td>&lt;.05 ,Highly significant</td>
</tr>
<tr>
<td>Kasa</td>
<td>53</td>
<td>17</td>
<td>30</td>
<td>12.80</td>
<td>&lt;.05,Highly significant</td>
</tr>
<tr>
<td>Ghurghuratvam</td>
<td>53</td>
<td>20</td>
<td>30</td>
<td>12.59</td>
<td>&lt;.05,Highly significant</td>
</tr>
<tr>
<td>Asinolabhyatesaukhyan</td>
<td>41</td>
<td>20</td>
<td>30</td>
<td>12.92</td>
<td>&lt;.05,Highly significant</td>
</tr>
</tbody>
</table>

Table 6 Statistical Analysis of Symptoms of patient of Tamakshwasa, Wilcoxon–matched pairs signed ranks tests in group B

<table>
<thead>
<tr>
<th>Symptoms</th>
<th>Sum of ranks of BT</th>
<th>Sum of ranks of AT</th>
<th>No of pairs</th>
<th>Z</th>
<th>Comment (critical value of z at 5% level of significance=1.96)</th>
</tr>
</thead>
<tbody>
<tr>
<td>AyasenShwasakashtata</td>
<td>47</td>
<td>32</td>
<td>30</td>
<td>12.74</td>
<td>&lt;.05,Highly significant</td>
</tr>
<tr>
<td>Kasa</td>
<td>54</td>
<td>40</td>
<td>30</td>
<td>4.26</td>
<td>&lt;.05,Highly significant</td>
</tr>
<tr>
<td>Ghurghuratvam</td>
<td>54</td>
<td>29</td>
<td>30</td>
<td>12.49</td>
<td>&lt;.05,Highly significant</td>
</tr>
</tbody>
</table>
The efficacy of *Shuntyadi churna* and *Krishnadi churna* on symptoms parameters of the respective group of patients.

1. **Ayasenshwasakashtata**

   In group A, out of 30 patients i.e. 100% it was observed that 59.18% relief was there after the treatment. Also the Z value was 12.76 (p<.05) after the treatment which is highly significant. While in group B, out of 30 patients i.e. 100%, 31.91% relief was observed after the treatment. Also the z value was 12.74 (p<.05) which is highly significant.

2. **Kasa**

   In group A, out of 30 patients i.e. 100% it was observed that 67.92% relief was there after the treatment. Also the Z value was 12.80 (p<.05) after the treatment which is highly significant. While in group B, out of 30 patients i.e. 100%, 25.92% relief was observed after the treatment. Also the z value was 4.26 (p<.05) which is highly significant.

3. **Ghurghuratvam**

   In group A, out of 30 patients i.e. 100% it was observed that 62.26% relief was there after the treatment. Also the Z value was 13.85 (p<.05) after the treatment which is highly significant. While in group B, out of 30 patients i.e. 100%, 25.92% relief was observed after the treatment. Also the z value was 4.26 (p<.05) which is highly significant.

4. **Asinolabhyatesaukhyam**

   In group A, out of 30 patients i.e. 100% it was observed that 51.21% relief was there after the treatment. Also the Z value was 11.35 (p<.05) after the treatment which is highly significant. While in group B, out of 30 patients i.e. 100%, 34.09% relief was observed after the treatment. Also the z value was 8.79 (p<.05) which is highly significant.

**Discussion**

*Shuntyadi Churna* played an important role in reducing the symptom and also the severity and complications associated with it. It was proved efficient in improving the physical parameters, biochemical parameters. *Shuntyadi churna* has content majorly *ushna virya dravya* and *katu, tikta vipaka dravya*. Which helped in agnidipan so as to increase the appetite and thus weight gain was observed in the patient during the treatment. According to pharmacological study *Shunthyadi churna* act as anti-inflammatory as well as anti-microbial5. *Shunthi, Pippali, Maricha* is *Shleshmahara, Strotooshodhana* so vitiated *kapha* normalize and it help for normal circulation of *vatta*. Therewere no side effects observed during the study in both groups.

**Conclusion**

| Asinolabhyatesaukhyam | 44 | 29 | 30 | 12.59 | <.05, Highly significant |
Tamak shwasa is Yapya vyadhi. During the comparative study values of both the groups has been compared and conclusion were drawn. This is seem that the significant effect of Shuntyadi churna is more effective than Krishnadi churna. The highly significant results were observed on each and every parameter.

References:

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Article 14

Review of agnikarma in the management of asthi-sandhigata vat (musculoskeleton pain)


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Abstract:

Sushruta has dedicated a full chapter on Agnikarma based on the principles of Ayurveda and age old experiences to manage many diseases including pain related to Asthi-Sandhigata Vata (Musculoskeletal pain). The result of Agnikarma are unparallel and the principles lie behind it are still to be explored to establish it as a simple, effective and complication free treatment modality for managing musculoskeletal pain. This therapy guides us towards the drugless i.e. non-pharmacological approaches for the management of musculoskeletal pain where non-steroidal anti-inflammatory drugs (NSAID) and other drugs fail to provide satisfactory and acceptable result. This review article attributed to the researches on Agnikarma carried out at Y.M.T AYURVED MEDICAL COLLEGE & HOSPITAL & P.G INSTITUTE KHARGHAR.

Cite this article:

Review of agnikarma in the management of asthi-sandhigata vat (musculoskeleton pain)

Yuvraj c. Mahajan, Sanjeev S. Yadav


Key words: Agnikarma; Asthi-Sandhigata Vata; Musculoskeletal Pain; NSAID.

INTRODUCTION:

Agnikarma, is an unique Chikitsa (treatment) modality described in Veda as well as Ayurvedic literatures. In Vedic period, application of Agni has been found as a remedy for different disorders like Yoni Roga (disorder of Vulva), Arsha (Piles) etc. and to kill Krimies (bacteria/Virus). This treatment modality is prescribed in Ayurveda for management of musculoskeletal pain (MSP), various non specific swelling, to achieve the haemostasis etc. In this technique heat is
transferred in to the affected body parts with the help of many devices including Lauha (Metal) Shalaka (Rod Like Instruments). For easy transfer of heat and to produce Samyak Dagdha Vrana (Therapeutic Burn), Acharyas have mentioned various Dahana Upakaranas (Cauterizing agents) considering different body parts, constitution of patients and disease. But, the use of Pancha Dhatu Shalaka, an innovated device by late Prof. P. D. Gupta, has become routine practice. Agnikarma modality of treatment can be observed in most of the Ayurveda institutions of India. Agnikarma is known as Tau–Dam among the rural Himalayan people and it is in routine practice for many diseases related to liver, stomach, spine etc. This therapy is practised by the elder persons of the village and it is compulsory for every child of 6 month to 1 year old age group. A 45-60 cm long iron rod is called Tau, which is curved and pointed at one end and after heating that end, one or two spots are made over the skin of affected part and number of spots may be more as per the severity of the disease. In Dam technique, a fresh seeds of Bibhitaki (Terminalia chebula) is burnt on fire and touches directly over the diseased part of the body for a moment.

A significant Indian population experiences heavy burden of illness and finance due to musculoskeletal pain and its inevitable consequences. Now-a-days, the disorders like Gridhrasi (sciatica), Sandhigata Vata (lumbar spondylisis, cervical spondylosis), Katisshoola (ankylosing spondylitis, lumbago), Sandhi Vata (osteoarthritis), Snayugata Vata (Tennis elbow), Mansagata Vata (myofascial pain), Jirna Vatika Vedana (chronic fatigue pain), Kandraragat Vata (tendonitis) etc. are found in routine clinical practice. The prime factors for those disorders are Vatvardhaka Ahara and Vihara, degenerative changes, trauma leading to fracture, dislocation, tendon / ligament injury, repetitive stress, prolonged immobilization, postural strain etc. Irrespective of these disorders, pain, tenderness, swelling, stiffness of joints and muscles are the common features.[4][5] Sushruta has mentioned clear instruction of Agnikarma for such disorders which involves structures like Asthi (bone), Sandhi (joint) and Snayu (ligament/tendon) In addition to that, various herbal and herbo-mineral formulations are also prescribed for internal as well as external administration. Use of other para-surgical techniques like Jalaukavacharan and Siravedha are also recommended for such disorders with significant relief without any untoward effect.

AIM AND OBJECTIVE

To review the research works carried out on Agnikarma, a para-surgical modality, for Asthi-Sandhigata Vata (Musculo - Skeletal Pain) management.

MATERIAL AND METHODS

Thesis on research works done on Agnikarma in different disorders in the Dept. of Shalya Tantra, Y.M.T AYURVED MEDICAL COLLEGE & HOSPITAL & P.G INSTITUTE KHARGHAR were collected manually and data available in Ayurveda Research
Database, all PG thesis carried out at Y.M.T AYURVED MEDICAL COLLEGE & HOSPITAL & P.G INSTITUTE KHARGHAR also were reviewed. The methodology and results were reviewed qualitatively in systematic way and summarized under the following paragraph.

**Procedure of Agnikarma**

Agnikarma, being a para-surgical procedure, is performed under proper aseptic precaution. There are trividha upkarmas (three steps of management) i.e. Purva Karma (Preoperative procedure), Pradhanaka Karma (Operative procedure) and Pashchat Karma (Post operative) which are equally important to obtain satisfactory result.

**Purva Karma (Pre-operative Procedure)**

Agnikarma. In this stage, after getting written informed consent, the selected patients were prepared mentally by explaining the procedure so as to remove the fear of procedure from his/her mind. Patients having metabolic disorders, cardiac problems and Pittaja Prakriti were excluded. Patients were advised to consume Pichhila Aahara (khichadi) a day before main procedure to be carried out. On the day of Pradhanaka Karma, freshly prepared Kumari Swarasa (Prepared from fresh pulp of Aloe vera) along with other essential instruments and material are arranged in an instrument trolley. After that, patient is asked to lie down in a position suitable for Agnikarma which may be different as per the disease and part involved. The affected part is painted with beta dine and after drying it with sterilized gauze piece with the help of a sponge holding forceps, the area is covered with a sterilized cut sheet. At the same time, Panache Dhatu Shalala (is heated up to red hot on a stove flame. If Agnikarma is to be done with Ghrita / Taila, then it should be heated up to boiling point.

**Pradhan Karma (Operative Procedure)**

Agnikarma in the form of Samyak Twak Dagdha (Therapeutic Superficial Skin Burn) is performed on the skin of the diseased site by making a Valaya Dahana Vishesa (Multiple Dots in a circular form) or Vilekha Dahana Vishesa (Multiple Dots in a Straight Line) or Bindu Dahana Vishesa (Making a Dot) as per the disease and site involved with red hot Panache Dhatu Shalaka or Shalaka made up of different Dhatus (metals). In case of boiled Ghrita / Taila, it is applied with help of pointed cotton piece, holding with an artery forceps. The size of the burnt spots should cover 3-5 mm area of skin with minimum gap of 5 mm between two spots. During entire procedure, a swab soaked in Kumari Swarasa is applied with a sponge holding forceps just after making every spot of burn. Always appropriate precaution should be taken to avoid Asamyak Dagdha Vrana (Neither superficial nor too deep burn).

**Paschat Karma (Post operative Procedure)**

After completion of the Pradhanaka Karma, Kumari Swarasa is wiped out completely by sterilized gauze pieces and burnt wounds are covered by dusting Haridra (Curcuma longa) / Yastimadhu.
(Glycyrrhiza glabra) powder. Some researchers also used Ghrita (ghee) mixed with honey to cover burnt wounds. Finally, patients are allowed to go home and advised to apply paste of Haridra powder mixed with coconut oil at bed time. Patients are also instructed to avoid water contact to burnt area for 24 hours and Vata Vardhaka Ahara - Vihara (Diet and activities which aggravate Vata Dosha) during the treatment and follow up period. This procedure was repeated for minimum four times at the interval of one week.

Results of Agnikarma

Finally, study was concluded that 80% relief in swelling, 66.60 % relief in painful restriction of movement, 50% relief in continuous pain, 100 % relief in joint crepitus was observed after completion of four weeks treatment., In this study total 7 patients of Sandhivata (Osteoarthritis of knee joint) were treated by Agnikarma with help of pancha Dhatu shalaka applied on the affected joint, at seven days interval for four weeks. After completion of treatment, it was noted that 82% relief in swelling, 85.70 % relief in painful restriction of movement, 71% relief found in pain & tenderness and100 % relief in joint crepitus was observed. Finally, the study was concluded that overall result of Agnikarma had shown highly significant result in comparison to the patients of other group which were treated with internal medication.

The study was conducted on 15 patients, suffering from Gridhrasi (Sciatica). Agnikarma was done with the help of Pancha Dhatu Shalaka at the site of Antara-Kandara-Gulpha-Madhya with Bindu Dahana Vishesa. There was 58.82% relief observed in Ruk and 58.33% relief in Toda. Stambha was relieved up to 50.00% where as 64.71% relief was noted in the feature of Spandana. 40.00% relief was observed in S.L.R. test. Finally, it was concluded that Agnikarma provides better result in Graha Pradhana Gridhrasi (e.g. Vataja Gridhrasi)

Total 11 patients of Sandhigata Vata (Cervical Spondylosis) were selected for Agnikarma. Vilekha type Agnikarma was done in cervical spine area and total four sittings were given at seven days interval. After completion of treatment, 76% relief was found in Ruka (Pain), 63% patients got relief in Stambha (Stiffness) and 62.50% patients got relief in Graha (Restricted movement). The associated symptom Sirashoola (Headache) was relieved in 61.00% of patients.

The study was conducted on 60 patients, suffering from Avabahuk(Frozen shoulder) were selected for Agnikarma with the help of rajada shalaka. There was 80% pain relief was noted, movements improve in 65.35% patients.

Again study conducted on cervical para spinal muscles pain. Agnikarma done by pippali,after completion the treatment, 79% relief in pain,78.56%relief was noted in neck region movements like rotation, extention, etc

has reported a case study on management of tennis elbow, published in Journal of Ayurveda and Integrative Medicine. The patient was effectively managed by
Agnikarma along with oral medication of Aswagnadha churna and Navajivan rasa for three weeks.

**DISCUSSION**

Agnikarma is a clinically established para surgical treatment modality for disorders of Asthi, Sandhi and Snayugata Vyadh without producing any untoward complications and its effectiveness is well documented in Ayurveda. The studies have revealed that the prevalence of MSP in peoples is very common due to sciatica, osteoarthritis, cervical / lumbar spondylosis and tennis elbow. As per the Ayurvedic concept, these disorders are manifested due to vitiation of Vata and Kapha Dosha. The vitiated Doshas are held responsible for production of Ama (auto toxin) and Srotovaigunya (obstructions in channels) in the body. Consequently, Vata Kaphaja Vikriti Lakshana like Shoola / Ruka (Pain), Shotha (Swelling), Toda (Pricking pain) etc. are manifested in a particular joint or in a certain parts of the body and same things are proven in contemporary science as the vital features of musculoskeletal disorders (MSD).[20][21][22] Agnikarma is one of the effective treatment modalities to pacify Vata and Kapha Dosha by virtue of its unique and opposite Guna (Qualities) like Ushna, Tikshna, Sukshma and Ashukari. According to Sushruta, one of the Dahana Vishesa (type of Agnikarma) is to be selected by considering the Samprapti of Dosha and clinically the Agnikarmaja Vrana is evaluated on the basis of Samyaka Dagdhavrana characters such as Sabda Prdurbhava (Appearance of cracking sound), Twak Sankochar (Contraction of burnt wound), Durgandhata (Bad smell), Talaphala Varnata (Colour of wound looks like Tala Phala).[23][24] In all 09 studies, Vilekha and Bindu type of Dahana Vishesa was made with Panchadhatu Shalaka and Taila by considering the site and pathogenesis of the diseases. In one study of Babita B, it is quoted that Tamra (Copper) Dhatu Shalaka provides better result whereas, most of the scholars preferred to transfer the heat by using Pancha Dhatu Shalaka and found it more effective.

In India, osteoarthritis is a most prevailing musculoskeletal degenerative disorder in aged persons with incidence of 22% to 39%. Among them, 29.80% patients, between age group of 45-64 years, have been reported as well diagnosed cases of osteoarthritis. It affects men and women equally before age of 55 years, but after that the incidence becomes higher in women. All the researchers reported that there was instant relieve in pain after the Agnikarma and gradually the range of movement was found increasing. Many have reported that for the long term benefit, more number of sittings of Agnikarma may be required. There was quite effective result recorded in a single case study of tennis elbow managed by Agnikarma and some oral Ayurvedic medication. Unanimous conclusion was made that as the age advances, the Vata Dosha becomes more predominant and the process of degenerative disorders including MSD are found more in number of patients. These disorders can be managed effectively by performing Agnikarma without fear of any untoward complications. This unparallel result of
Agnikarma was attributed to its inherited properties of Ushna, Tikshna, Sukshma and Ashukari.

CONCLUSION:

Musculoskeletal disorders are quite a significant global burden, particularly for general working population and create heavy socio-economic burden over the families. For that, Agnikarma can be practiced as an effective, safe and drug less therapy. It is an ambulatory treatment modality and can be performed as an office procedure in routine practice.

References:

Study of Virechan in Urdhwag Raktapitta w.s.r to Branch Retinal Venous Occlusion (BRVO)

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Abstract:-
Branched Retinal Venous Occlusion (BRVO) is the second most common retinal vascular disease after diabetic retinopathy. Today as prevalence of hypertension, cardiovascular disease, obesity diabetes mellitus has increased there is increased risk of BRVO. In BRVO visual acquit is variable & is principally dependent on extent of macular involvement. we can observe dilatation & tortuosity of affected venous segment & marked macular edema. According to Ayurveda raktapitta is a disease in which due to various pitta prakopak hetusevan it get increased in body & causes increase in vitiated rakta leading to increased pressure on vessels due to which they get break and blood comes out through vessels. Raktapitta is of three types 1)Urdhwag 2) Adhog 3) Tiryak .Here we can correlate BRVO with Urdhwag Raktapitta as there is occlusion of vein leading to hemorrhage in the eye. Keeping this view in mind an attempt has been made to conquer the situation with Ayurveda. This has been observed through clinical case study of 5 patients with virechan & abhyantaraushadhi to overcome the disease.

We got better result in all symptoms of BRVO specially in Retinal hemorrhage after completion of virechan treatment. So we can prove sidhant that is Pratimargm cha haranam... in Urdhawag Raktapitta.

Keywords:- BRVO, Raktapitta, Urdhwag, Adhog, TiryakVirechan
Introduction:-

Branched Retinal Venous Occlusion (BRVO) is caused by occlusion of one of the branch of Central Retinal Vein. In BRVO when a single branch of the central vein is blocked, the edema & hemorrhages are limited to the area drained by the affected vein.[1] 50% of cases occur in patients over the age of 65 years. Venous occlusion causes elevation of venous capillary pressure with stagnation of blood flow, results in hypoxia of the retina drained by the obstructed vein, which in turn result in damage to the capillary endothelial cells and extravasations of blood constituents. The tissue pressure is increased, causing further stagnation of the circulation and hypoxia.[2]

In Urdhwag Raktapitta pitta has anubandh of kapha which leads to bleeding through mouth, ear, nose & eyes.[3] Urdhwag Raktapitta is treated by pratimargm cha haranam that is virechan treatment[4]. Here we can correlate BRVO with Urdhwag Raktapitta as there is occlusion of vein leading to hemorrhage in the eye. Keeping this in mind to consideration, the present study was planned to evaluate the effect of virechan in BRVO.

Aim & Objectives

Aim:-

To Evaluate the effect of Virechan in Urdhwag Raktapitta w.s.r. Branched Retinal Venous Occlusion (BRVO).

Objectives:-

1) To study effect of new ayurvedic regimen on branch retinal vein occlusion.

2) To re-evaluate the ayurvedic principles in netrarog.

3) To suggest a effective remedy to treat a urdhwag raktapitta w.s.r. BRVO
Material & Method:-

Study design: Clinical study with pre & post study design.

Patients: Patients with classical signs & symptoms were selected by preset inclusion and exclusion criteria from the OPD and IPD of shalakyantra of Podar college worli Mumbai.

Trial drug: The ingredients of study drug were purchased from local market.

All the herbs were identified, authenticated

Diagnostic criteria:

Diagnosis was established on the basis of history, symptoms mentioned in classical texts and by objective parameters / investigations mentioned in contemporary texts.

Inclusion criteria:

- Pts between age group 30-80
- Both sex
- Pts fulfilling the diagnostic criteria of BRVO

Exclusion criteria:

- Other retinopathies like DR etc.
- Pts having infective & inflammatory disease
- Glucoma

Laboratory investigations:

Blood Hb%, C.B.C., ESR, B.T., C.T, PT.
Lipid Profile, LFT, RFT, BSL-Fasting & PP
Fasting Plasma Homocystine Level, TFT, ECG, Chest x-ray

Treatment Group:

5 patients were selected for study purpose.

Procedure of Virechan:

Pachan with Ras-Raktpachak kwath - 100ml-100ml twice a day after meal up to sign & symptom of niramawasta.

Method of kwath preparation:

The Indrayab, patol, kutki, musta, patha and sariba were taken in equal quantity (10gm) each added with 8 parts of water (800ml) for kwath preparation. The formulation is subjected for kwathana and reduced to 1/4th (200ml) of its total quantity. The kwath is filtered and use for pachan.

Snehpan with Vasadighrut for 7 days with increasing matra.
Starting from 30ml & increasing daily 30 ml.

*Virechan* with *Aragwadh falmaiija phانت* 100ml + *Trivrutkwath* 100ml + *Abhayadimodak* 2 Tab

Study duration, follow up: - 3 months study was done.

Recurrence: - 2 followup every 6 month

Method of collection of data:

The disease assessment and the response of therapy were assessed based on following subjective & objective parameters.

### Subjective parameters

1. Dimness of vision
2. Floaters in front of the eyes

### Objective parameters:

1. Retinal hemorrhage was assessed by Fundus photographs before and after treatment.
2. Attenuation of vessels
3. Macular edema

### Gradation:

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>SIGN &amp; SYMPTOM</th>
<th>Observation in Gradation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>0Wk</td>
</tr>
<tr>
<td>1</td>
<td>DOV</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>RETINAL HAMRRHAGE</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>ATTNUATION</td>
<td></td>
</tr>
</tbody>
</table>

### Observation in tabular form:-

Gradation point

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Symptom</th>
<th>Gradation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>DOV</td>
<td>0 – 6/6 to 6/12</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 – 6/12 to 6/24</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2 - 6/24 to 6/60</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3-6/60 to 6/fc2-6ft</td>
</tr>
</tbody>
</table>
Reno. | Sign | Gradation
---|---|---
2 | Retinal Hemorrhage | 0 – No Hemorrhage in any quadrant  
1 – Hemorrhage in 1 quadrant  
2 – Hemorrhage in 2 quadrants  
3 – Hemorrhage in 3 quadrants  
4 – Hemorrhage in All 4 quadrants
3 | Attenuation | 0 – No Attenuation  
1 – Attenuation in 1 to 2 vessels  
2 - Attenuation in 2 to 4 vessels  
3 – Attenuation in 4-6 vessels  
4 – attenuation in 6-8 vessels

Total % of Sign & Symptoms Present in the Patients Week wise

<table>
<thead>
<tr>
<th>Symptoms</th>
<th>0wk</th>
<th>4wk</th>
<th>8wk</th>
<th>12wk</th>
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</thead>
<tbody>
<tr>
<td>DOV</td>
<td>93%</td>
<td>60%</td>
<td>46%</td>
<td>40%</td>
</tr>
<tr>
<td>Attenuation</td>
<td>85%</td>
<td>60%</td>
<td>35%</td>
<td>30%</td>
</tr>
<tr>
<td>Hemorrhage</td>
<td>90%</td>
<td>50%</td>
<td>25%</td>
<td>15%</td>
</tr>
</tbody>
</table>

Result:-

Gradation wise Improvement in Sign & Symptoms

<table>
<thead>
<tr>
<th>SN</th>
<th>Symptoms</th>
<th>Total BT</th>
<th>Total AT</th>
<th>Total Difference BT-AT</th>
<th>Result BT-AT* 100/BT</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>DOV</td>
<td>14</td>
<td>6</td>
<td>8</td>
<td>57.14%</td>
</tr>
<tr>
<td>2</td>
<td>Attenuation</td>
<td>17</td>
<td>6</td>
<td>11</td>
<td>64.70%</td>
</tr>
<tr>
<td>3</td>
<td>Hemorrhage</td>
<td>18</td>
<td>3</td>
<td>15</td>
<td>83.33%</td>
</tr>
<tr>
<td>BEFORE T/T</td>
<td>AFTER T/T</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-----------------</td>
<td>-----------------</td>
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<td></td>
</tr>
<tr>
<td><img src="image1.png" alt="Image before" /></td>
<td><img src="image2.png" alt="Image after" /></td>
<td></td>
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<tr>
<td><img src="image3.png" alt="Image before" /></td>
<td><img src="image4.png" alt="Image after" /></td>
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<tr>
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<td><img src="image6.png" alt="Image after" /></td>
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<tr>
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<td><img src="image10.png" alt="Image after" /></td>
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</tr>
<tr>
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<td><img src="image12.png" alt="Image after" /></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Discussion:-

Probable mode of action of Ras-Raktapachak kwath:-

- All drugs are tiktarasatmatk, pittashamak & raktaprasadak.

- **Kutki** - With its laghu ruksh & bhedan properties It breaks blockages & eliminates pitta & helps for dhatuprasadan.

- **Musta** – it acts on rasagatdoshas & doing pachan it absorbs excessive kleda & help for raktaprasadan.

- **Patol**- with its tikta, madhur & ushnaguna do pitta kaphashodhan, raktaprasadan with tiktaras & madhur vipak. acts on raktagat kled so can be used in raktapitta.

- **Indrayav**- with its tikta, katu, kashayras - katuvipak –sheet virya acts as raktashud-
  - dhikar & raktastambhan

- **Sariva**- with its madhur tiktaras-madhur vipak-& sheet virya it acts on raktagat pitta.

- **Patha**- with its tiktaras & ushna virya it do pachan & shaman of raktagat doshas.

**Action of snehan:-**
As our body is made up of different type of cells membrane is made up of phospholipids lipid soluble substance can easily cross the cell membrane because of this, the base of the snakepana medicine which we used in lipid form (ghee oil from processed with medicated herbs indicated for the particular disorder).

When these lipids are processed with medicine which are having the active ingredients which acts on the particular disorder crosses the cell membrane and the functions of phospholipids will increase and affinity of cellular elements or impurities which are responsible for the formation of diseases takes place and the lipid along with these impurities changes its density with the help of swedana or sudation therapy. then these impurities are expelled along with the lipids (which is used as medicine)from the cell membrane to the gut through circulatory symptom.

Action of Vasadi-Ghrut:-

- It acts as deepan action on rasraktadhathwagni.
- Due to tiktaras & sheet virya it acts as raktastambhan.
- Vaghbhat has told this ghritshreshtha in Raktapitta.

It also strengthens to vessels.

**Action of virechan:-**

Drugs (used for purgation) which are Ushna (hot), Tikshna (sharp), Sukshma (subtle), Vyavayi (those pervading the entire body before getting digested) and Vikasi (those causing looseness of joints), by virtue of their own potency, reach the heart, and circulate through the vessels. Because of their Agneya nature, they liquefy the compact doshas, and because of their tikshna guna they separate the adhered doshas located in the gross and subtle channels of the entire body. Like honey kept in a pot smeared with fat, the morbid material, after separation, moves floating without adhesion in the body which has been oleated (by the administration of oleation therapy). Because of its nature to move through subtle channels and to flow towards the gastro-intestinal tract, this morbid material reaches the stomach, and gets propelled by udan vayu. Because of the predominance of prithvi and jala mahabhutas in these purgative drugs and because of their specific action (prabhav) to move downwords, the morbid material...
get expel through the downword tract (anus).

- **Virechan** was given with the help of –

**Aragwadh Phalmajja**-

As it is *madhurras vipaki & sheet virya* it acts as *pittashaman & raktaprasadan*.

It also do *pitta shodhan* by *adhomarg*.

Dose -100ml *falmajjafant*

**Abhayadimodak**-

It acts on *aamashaygat dosha* s& in *vyadhis* due to increased *dravaguna* of *pitta* like *jwar, pandu & vyadhi* having *avrodhjanya* pathogenesis like *udar & kasa* etc.

- It helps in removing *pittagat drav* by *anulomak* action.
- *Haritki* helps to remove *avrodh* in the vessels by its *anulomak* action.
- Dose- 2 tab

**Probable Correlation:**-

BRVO can be correlated with *Urdhwa Raktapitta* in which due to *pitta rakta* *prakopak hetusevan* when it get *kaphanubhandhi* it leads to bleeding through ear, nose, throat, & eyes.

In BRVO retinal vessel get blocked & leads to bleeding.

In *Urdhwa rakta virechan* is advised to eliminate *pitta* at *amashay* by opposite way keeping this point in view *virechan* is conducted in patients to eliminate *dushtrakta & pitta*.

**Conclusion:-**

- The explanation of clinical features of BRVO in all texts collectively give complete picture resembles with *Raktapitta* specially *urdhwa rakta pitta*.
- Excess use of *ushna, tkishna dravya, amla-lavan-katu rasa pradhan, vidhahi aana* or *pittaprakopak nidan sevan* more prone to cause *Urdhwa raktapitta*.
- The hypothesis of *Charak* proved that *virechan* is best treatment in *Urdhwaag Raktapitta*[5]
The effect of *virechan* is better in immediately after treatment in *Urdhawag Raktapitta*.

We got better result in all symptoms of BRVO specially in Retinal hemorrhage after completion of treatment. So we can prove *siddhant* that is *Pratimargm cha haranam*... in *Urdhawag Raktapitta*.

We have advise the patients for *nidan parivarjan* and *Raktapitta shamak* treatment according to patients as per our classical text for remaining sign &symptoms.

**Reference:-**

ABSTRACT:

Anosmia is lack of functioning of olfaction. Ageusia is lack of functioning of taste sensation. A case was found with anosmia and ageusia. This patient was treated by ayurveda and panchkarma treatment. This patient was diagnosed as jeerna pratishay and was treated accordingly. Primarily Nasya karma was performed later medicinal treatment was given. Vedhana karma was helpful. After completion of treatment patient was relieved completely from chief complaints. Hetu sevana resulted dosha prakop which ended in jeerna pratishay. Jala mahabhut vitiated Ghranendriya and Rasandriya which caused Anosmia and Ageusia. Treatment given helped samprapti bhang and hence retaining normal of functioning of sense organs.

KEY WORDS:

Anosmia, Ageusia, Ayurveda, Panchkarma, Vedhana karma.

INTRODUCTION: A patient age 61 yrs old came to opd with complaints of loss of smell and taste sensation since two years. He had no other significant complaints.
Causes of Loss of smell:

- Normal aging - gradually reduces the sense of smell and taste.
- Recent upper respiratory infection
- Rhinitis
- Common cold
- Allergies
- Vasomotor rhinitis
- Allergic rhinitis
- Sinus infection
- Sinusitis
- Nasal polyps
- Nasal blockage
- Nasal tumor
- Smoking
- Tobacco smoke exposure
- Formaldehyde
- Acid exposure
- Certain chemicals

Causes of Loss of taste:

- Loss of smell - many cases of "loss of taste" are actually loss of smell

Causes of loss of taste bud function include:

- Normal aging - causes reduced ability to taste or smell.
- Tongue infection
- Glossitis
- Oral candidiasis
- Excessive smoking
- Poor oral hygiene
- Tooth infection (type of Dental conditions)
- Dental cavities

CASE REPORT:

A patient age 61 yrs old came to opd with complaints of loss of smell and taste sensation since two years. He had no other major complaints. He was known case of Hypertension and Diabetes since 7 yrs. Further history taking gave history of chronic rhinitis since 35 yrs. He retired from chemical factory. On complete physical examination nasal passage obstruction was noted though tongue appeared normal. He admitted addiction of tobacco, alcohol and smoking. Primarily he was treated as jeerna pratishyay. Along with medicines nasya karma was done for one week by vachadi taila. This treatment provided small relief. After 15 days of medication patient had 60% relief. Taste sensation was normalized but smell sensation was not satisfactory.

For Vedhana karma tip of nose was punctured by insulin needle 8-10 times within a fraction of second. This produced very small amount of bleeding. Next follow up was given by 1.5 months. Smell sensation was enhanced patient had 75% relief. Another follow up was after 1.5 months. This time patient had maximum results. As Apunarbhav chikitsa again Vedhana karma was performed. On further follow up patient was completely relieved from symptoms of anosmia and ageusia.

DISCUSSION:

To treat anosmia and ageusia was challenge. Primarily it was diagnosed as jeerna pratishyay. For pratishyay vachadi taila was used for nasya. It mainly removes kapha and helps to reduce pratishyay. For anosmia, Vedhana karma was performed. This was done by insulin
needle/syringe by pricking tip of nose 8-10 times within a second. This Vedhana karma is practiced by many senior practitioners for various purposes. Sushruta has advised to perform siravedha at tip of nose for anosmia and nasal diseases.

**Samprapti:**

| Hetu Sevana | Jeerna Pratishyay | Jala mahabhut dushti | Ghranendriya vikruti (Prithvi) | Rasanendriya vikruti (Jala) |

Hetu sevana resulted jeerna pratishyay which afterwards vitiated jala mahabhut. This vitiated jala mahabhut attacked Ghranendriya and Rasanendriya resulting anosmia and ageusia.

**Treatment details:**

Firstly for jeerna pratishyay the nasya by vachadi tail for 8 days was given in which helped to remove nasal obstruction and removing excessive kapha from sinuses. Vacha by ushna, teekshna and pramathi guna removes kapha.

All medicines used were mainly acting on kapha or jala mahabhut. Due to this treatment pratishyay was relived but anosmia and ageusia showed no significant result. Hence Vedhana karma was done. It is practiced by senior vaidya for many purposes. This procedure is done at sites advised by Sushruta for siravedha. In this procedure with help of insulin needle or syringe pricks are taken on site within short time. Same was done at tip of nose for Anosmia. At next follow up patient had significant relief regarding anosmia and ageusia. As Apunarbhav chikitsa Vedhana karma was repeated.

<table>
<thead>
<tr>
<th>DATE</th>
<th>TREATMENT</th>
<th>PANCHAKARMA</th>
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</thead>
<tbody>
<tr>
<td>18/7/2009</td>
<td><strong>Arogyavardhini</strong>- Malashuddhikari, Dhatwagni vardhan.</td>
<td>Nasya</td>
</tr>
<tr>
<td></td>
<td><strong>Shankhavati</strong>– Deepan, Paachan, Kaphaghna.</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Gokshuradi Guggul</strong> – works on jala mahabhut</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Taalisadi mishran</strong>- It is combination of Taalisadi churna,</td>
<td></td>
</tr>
<tr>
<td></td>
<td>yashtimadhu and tankan bhasma. It acts on kaasa and</td>
<td></td>
</tr>
<tr>
<td></td>
<td>pratishyay.</td>
<td></td>
</tr>
</tbody>
</table>
CONCLUSION:
The case of anosmia and ageusia was noted. It was diagnosed as jeerna pratishyay and treated. Nasya with vachadi taila was performed. Medicinal treatment and nasya relieved symptoms of pratishyay. Vedhana karma on tip of nose gave maximum results by restoring capacity of olfaction and taste.

REFERENCES:
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3. Sushruta samhita, hindi translation by ambikadattashastri, sharirsthana adhyay 22, verse no.16, page no. 89.
Ayurvedic Approach In The Management of Buerger's Disease: A Case Study

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Abstract

Buerger's disease is a condition characterized by occlusive disease of small and medium sized arteries. This disease involves small to medium sized arteries and veins of upper and lower extremities. This condition is strongly associated with smoking, commonly found in males and common age group between 20-40 yrs [1]

In Buerger’s disease pain is main symptom. No doubt allopathic system of medicine has got an important role to play in overcoming agony of pain in Vatarakta. Simultaneously prolonged use of analgesic, anti-inflammatory drugs may give rise to many side effects, adverse reaction and complication. Hence the management of this disease is merely insufficient and patients are continuously looking with a hope towards Ayurveda to overcome these challenges.

In Ayurveda on the basis of its clinical presentation and pathogenesis, it can be correlated with VATARAKTA. Name of the disease Vatarakta, itself suggest that, vitiated vata and dushit raktadhatu plays vital role in the samprati. Vitiated vata is responsible for decreasing viscosity of blood which reduces its circulating rates, ultimate resulting in partial or complete obstruction of raktavahasrotas. Hence we can make hypothesis that Vatarakta in its gambhir avastha could be correlated with today Buerger’s disease. On the basis of this hypothesis we have successfully treated one patient of buerger’s disease with Ayurvedic approach. We treated this patient with jaloukaavacharan on alternate day, and yogabasti for 20 days in our Shalyatantra I. P.D. of A.S.S.Aarogyashala Hospital Nashik.
We found that the treatment was significantly effective in treating the buerger’s disease specially associated with shool and daha.

**Key Words:** buerger’s disease, *Vatarakta*, jaloukavacharan, yogabasti, anti-inflammatory drug, Ayurvedic approach.

**Introduction:**

Buerger’s disease is the inflammatory reaction in arterial wall with involvement of the neighboring vein and nerve and terminating in thrombosis of artery. Etiology of buerger’s disease is unknown, addiction of tobacco has major role for both initiation and progression of disease\(^1\)

The patients suffering from buerger’s disease have following clinical presentation\(^1\)

1. Pain (intermittent claudication)-due to ischemia of muscle and nerves.
   - Grade-1- patient walks for distance & gets the pain, continues to walk then pain disappears.
   - Grade 2-walks for distance patients gets pain, continues to walk with the pain.
   - Grade3-patient walks and get the pain he has to take rest.

2. Numbness and tingling sensation in extremity.
3. Skin color changes and ulceration.
4. Gangrene of one or more digits which may extend even to foot or lower leg.

Most of the patients are from age group of 20-40 yrs, male patients are affected almost three times more than females. Often the patients are from low socioeconomic status. Almost all patients are chronic smoke.

Arteriography & colour Doppler are diagnostic tools\(^1\)

**Aims And Objectives:**

1. To evaluate the efficacy of Ayurvedic management in *Vatarakta* for buerger’s disease.
2. To correlate the signs and symptoms of *Vatarakta* with those of buergers’s disease.

**Comparative Illustrations Of Vatarakta Versus Buergers’s Disease.**

In Sushruta Nidansthan first adhyaya, he has described the *Vatarakta* in detail. According to *Sushrutacharya,*
kandara, Sira are upadhatu of Raktadhatus. Aacharya charak has mentioned the types of Vatarakta uttan and gambhir. According to Sushrut Vatarakta it self develops in to gambhir avastha\[2\].

In Sushruta samhita the sign and symptoms are described as –sparsa asahishnuta, Toda, Bheda, Swapa (numbness). Sweta (pallor), Sheeta (cold), Shopha (swelling) Vaivarnya (discolouration).

In early manifestation of Vatarakta include Sphuran, Bhedan, Supti, Osha , Daha which are nothing but early manifestation of ischemia like numbness, diminished sensation, pricking and burning pains (parasthesia) in lower limb\[3\]

Vaivarnya and twak parushya, kharispasha are the discolouration, scalyness and roughness of skin due to Rakta and vata involvement. From above discussion we can be correlate buerger’s disease with Gambheer Vatarakta.

Ayurvedic Approach In The Management Of Buergers Disease:
A Case Study

- Black discoulouration of left great toe .
- Ulceration of plantar aspect of first webspace
- All above symptoms were presents since 2 month with gradual increase in it.

Past History-
No h/o HTN/DM/KOCHS/BRONCHIAL ASTHAMA any other illness

On Examination-
Inspection -
Clear demarcation line of discoulouration and impending necrosis at left great toe.

Blakish discoulouration of skin around the left great toe

Non healing ulcer at base of left great toe

Palpation
- Decresed distal pulsation
- Absent dorsalis pedis pulsation
- Cold left lower extremites compare to right
- Hyperaesthesia over the left great toe and ulcer

habbits: Chronic smoker and tobacco chewer: since 20 yrs.

Investigation:
1. **Colour doppler of Lt leg**-complete intraluminal contrast filling defect is seen in lower one third of left superficial femoral artery 22 cm away from its origin and popliteal artery.

2. **Arterial and venous angiography-Lt leg** suggest

Complete intraluminal contrast filling defect is seen in lower one third of left superficial femoral artery and popliteal artery

**Suggestive of complete lumen occluding thrombosis.**

After diagnosis, patient was initially advised modern treatment as follows analgesic drugs for one month

- Tb trental 400mg tds (pentoxyphyllin- peripheral vasodilators)
- Tb complamina 150 mg bd (xanthinol nicotinate)
- Tb ecosprin 75 mg od (antiplate le drugs)

But patient didn’t respond to above conservative line of treatment. Subsequently he was advised amputation of left great toe. Unfortunately even after amputation pain didn’t relived.

Then this patient was treated with Ayurvedic approach keeping in to mind a hypothetical conclusion with Vatarakta.

In Vatarakta while treating Vatadosha, precaution should be taken for not to increasing the vitiating of Rakta by Ushmna and Snigdha Guna of treatment for this karmas like Snehavirechan, Blood letting, Basti, Sheka, Abhyang etc adopted. Therefore the aim in the treatment of Vatarakta is to treat the vata and Rakta simultaneously and not separately.

The Ayurvedic treatment was given as follows for 20 days.

1. jaloukaavacharan (leech application) on alternate day (10 settings) at affected part for 20 days.
   Two leeches are applied over left great toe and at about 10-15 ml blood letting was done on each setting.
   Yoga Basti upakrama for 8 days. (2 setting)
   Niruha Basti was given with Dashamula kwatha and Anuvasan Basti by Tila taila (sesame oil)
   Daily vranakarma with help of Jatyadi taila.

**Observation**  Patient relived sympatomaclly

<table>
<thead>
<tr>
<th>BEFORE TREATMENT</th>
<th>AFTER TREATMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>1)Intermittent claudication</td>
<td>1)decreased Intermittent claudication</td>
</tr>
<tr>
<td>2)Throbbing pain over Lt. great toe (grade3)</td>
<td>2)Pain relived from grade 3 to no pain</td>
</tr>
</tbody>
</table>
3) Blackish discoloration of Lt. great toe  
4) Non healing ulcer at the base of Lt. great toe  
5) Cold Lt. lower extimities compared to Rt side  

3) Skin colour changed to normal  
4) Reduction of wound size upto 75%  
5) Limb felt warm and pink.

Wound healed completely after 20 days.

Discussion And Probable Mode Of Action:

1. Jaloukaavacharan:
Raktamokshana is also considered one among shodhan procedure. In Vatarakta the dushit raktadhatu plays vital role in Samprapti. Jalouka drains the impure blood and stabilize the raktadhatu. There may be decrease in obstruction of raktavahastotas and ultimately decrease in pain. Also bloodletting by leech therapy is effective in inflammation and to relieve pain and inhibit suppuration so it is helpful in wound healing.

In buerger’s disease, the occlusion of vessel by thrombus is main pathology. By frequent use of leech therapy there may be resolve of thrombus and decrease in inflammation of vessels. The leeches secrete specific proteolytic enzymes that tone up the vessels and increase the permeability of capillary vessel.

Anti-inflammatory effects of leech:

Bedellins is a compound in the leech ‘s saliva acts as anti-inflammatory agent by inhibiting trypsin as well as well as plasim.

Vasodilating effect:

In saliva of leech there are compound histamine, acetylcholine, carboxypeptidase inhibitors which acts as vasodilators causing inflow of blood to site.

Bacteriostatic and anesthetic effect of leech:

The saliva of leeches also contains anesthetic substance which decrease pain on the site. Also bacteria inhibiting substance which inhibit the growth of bacteria.

2. Yogabasti:

In ayurveda pain (ruja) is due to the vata dosha. In Vatarakta basti chikitsa is more important chikitsa for shool prashaman. Basti enters the pakvashaya which is the main sthana of vata dosha. By subsiding the vata at pakvashaya all vikara located in the other parts of body also decreases. Just as by the eradication of the roots a plant the stem, the branches, prouts, however fruits, leaves etc also vanish. In Vatarakta the cause of pain is attributed to vitiated vata dosha. The treatment of this pain is nothing but stabilization of the kupit vata for
which basti is the most efficient treatment.

And also by giving drug through anal route we can avoid drugs metabolism which occurs in the stomach or upper gastrointestinal tract, in this way we may enhance drug effect.

Jatyadi tailam applied after jaloukavacharan for effect of soothing, cleaning and healing effect.

After above discussion we came to a conclusion that there may be increase in peripheral blood circulation due to frequent use of jaloukaavacharan. Jalouka sucks the impure blood from the diseased area of the body so there may be chances of formation of new collaterals vessels. The ultimate result of above treatment was the severe pain of patient was disappear and there was formation of granulation tissue and helps in wound healing and there was no progression of disease occur gradually to the foot and legs.

Conclusion

- This is a single case study, but this treatment may be useful for management of buerger's disease. There is need of further study on large population.
- The treatment was found to be significantly effective in treating Vatarakta (peripheral arterial disease) specially associated with shool and daha.
- Prompt attempt by treating the condition with jaloukaavacharan and basti at the earlier stage itself can decrease pain and NSAIDS drugs and their side effects and long continue use of this may help to avoid surgical intervention
- Progress of disease can be arrested by treating the buerger's disease with Ayurvedic management.

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