



PHYSIO-CLINICAL SIGNIFICANCE OF BASTI (ENEMA THERAPY) IN AYURVEDA

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ABSTRACT

First sodium ion in Saindhava (rock salt) actively absorbs from colon. High concentration of sodium ion facilitates sugar influx. Increase sodium ion in mucosal membrane generate osmotic gradient. Water follows this osmotic gradient thus passive absorption of water take place. Free fatty acid is easily absorbed by passive diffusion in the colon. From above description, it can be understood that how Saindhava, Madhu (Honey), Sneha and Kwatha (decoction) is absorb from the colon along with the Sneha (lipids) and Kwatha. Lipid and water-soluble portion are absorbed from the colon. According to modern pharmacokinetics, it is also proved that rectal drug administration might exceed the oral value due to partial avoidance of hepatic pass metabolism. Puroakarmas like local Snehana-Swedana & slightly warm temperature of the Basti may cause increased colonic permeability; thus, increasing the absorption.

KEY WORDS: Marma, Therapy, Ayurveda, Management

INTRODUCTION

In Ayurveda Basti therapy is considered as Chikitsardhanga among all the therapeutic measures and some physician accept it as complete therapeutic measures because Basti has a vast field of action. Basti is the Pradhan Karma as it possesses a wide spectrum of effects. It not only cures Vatika disorders but it also becomes helpful in Dosha Sansarga & Sannipata, Kaphaja & Pittaja disorder, Shakhashrita & Kosthashrita diseases by combination of different types of Basti Dravya. Moreover, it is simple to perform & there is least chance of complications. There are references of Basti in Rigveda and Atharvaveda. Kaushika sutra of Atharva veda lays down use of enema as substitute for minor operation. Agnipurana has made direct reference to the Basti therapy especially designed for tired horses named as "Turanga Basti". The quotation states that the fatigue of the horse could be relieved by the use of Basti with Taila. In Jala Basti, Yogic person are using to sit in naval deep water in Utkatasana, and sucking water into Guda to clean the rectum and lower bowel by contraction relaxation of their Guda. In Shushka Basti the aspirant is asked to move the intestine slowly downwards then contract and dilate the Guda with the help of Ashvinimudra which is again instructed to make downward of Basti. This improves the Agni and cures many diseases. Jala Basti is indicated in Prameha, Udavarta, morbid Vata etc. Charaka samhita is one of the oldest text books of Ayurveda which is still practiced by the physicians since centuries. Detailed description about Bastikarma is available in this Samhita. Siddhi Sthana is the particular section of this book which deals with the Panchakarma procedures and full knowledge of Bastikarma, out of 12 chapter of Siddhisthana, 8 chapters contribute to Basti and in first 2 chapters properties of Basti, Samyakayoga, Ayoga Lakshana and indications and contra indications have been mentioned. Acharya Sushruta has devoted 4 full chapters completely for the description of Basti

in Chikitsasthana. In these chapters detailed information regarding Basti Netra, indications, contraindications, complications and classification of Basti etc has given. [1]

The word "Basti" is derived from the root 'Vas' by adding 'Tich' Pratyaya. - It denotes an organ situated below the umbilicus which holds the urine. The other meanings are to reside, to stay, to dwell, to cover, to coat etc. Basti denotes a Karma wherein the drugs administered through the anal canal stay for certain time in the body, then produces the coating of the Sneha in the body and draws the waste substances from all over the body into the colon and eliminates them out of the body. Acharya Charaka has defined the Basti as the procedure in which the drug prepared according to classical reference is administered through rectal canal, reaches up to the Nabhi, Kati, Parshva, Kukshi Pradesha churns the accumulated Purisha and Dosha and spreads the unctuousness (potency of the drugs) all over the body and easily comes out along with the churned Purisha and Doshas. [2]

The Basti, which eliminates Dosha from the body, increase the strength of the body or spreads the potency of the drug in the body due to the Prabhava (the reasoning of which is not possible), is called as Niruha Basti. The Niruha Basti is also called as Asthapana Basti as it stabilizes the Vaya (age) or the Ayu (Checks the process of ageing) by stabilizing the Dosha and Dhātu in their normal place in the state of their normalcy. Various types of Niruha Basti have been described in the classics. In order to have their proper understanding and their practical utility, they can be classified as follows 63 on the basis of their dose, chief drug, and taste of the drug, nature of the Basti Dravya, relation with the Dosha, their chief actions, disease specific and speciality. Acharya Charaka and Acharya Vagbhata considered Uttara Basti as a third type. But Acharya Sushruta has not included Uttara Basti in the classification



because Uttara Basti contains either decoction or oil. Hence it comes under the heading of either Niruha or Anuvasana Basti. [3]

Basti is to be administered when the patient is having the symptoms of Jirnahara and is not very much hungry. Patient is asked to lie down in the left lateral position on the Basti table which should be cleaned and covered with the bedsheets, Sthanik snehan(kati uru pradesha) with Triphaldi tail and sthanik Nadi Swedan is given. After Sthanik Snehan & Swedan patient is asked to keep his left hand below the head as a pillow, to extend the left leg completely and to flex the right leg at the Knee Joint keeping on the left leg by flexing the hip Joint. Then Sukhoshna Sneha is to be applied in the anal region and on the Bastinetra, remove the cotton piece and the air bubble if any and keep the thumb on the Netra till introducing it. Then introduce the Bastinetra gradually in the parallel direction to that of the vertebral column up to 1/4 part of the Netra i.e., till the nearer Karnika fixes over the anus. Then hold the Basti Putaka in the left hand and keep the right hand on the Putaka and press it gradually with the constant pressure neither too fast nor too slow without trembling the hand. By asking the patient to breathe in push the Basti Dravya into the rectum till a little 71 quantity remains in the Putaka otherwise Vayu enters into the Pakvashaya, and then withdraw the Netra gradually. Then the patient is asked to lie down in the supine position for 30 Matra (15-30 sec) and ask him/her to sit in Utkatasana and pass the urge. [4]

DISCUSSION

First sodium ion in Saindhava (rock salt) actively absorbs from colon. High concentration of sodium ion facilitates sugar influx. Increase sodium ion in mucosal membrane generate osmotic gradient. Water follows this osmotic gradient thus passive absorption of water take place. Free fatty acid is easily absorbed by passive diffusion in the colon. From above description, it can be understood that how Saindhava, Madhu (Honey), Sneha and Kwatha (decoction) is absorb from the colon along with the Sneha (lipids) and Kwatha. Lipid and water-soluble portion are absorbed from the colon. According to modern pharmacokinetics, it is also proved that rectal drug administration might exceed the oral value due to partial avoidance of hepatic pass metabolism. [5]

Madhu (Honey): It is considered as the Best among the vehicles, as it contains various substances in it, which denotes its drug (potency of the drug) Carrying Capacity. Owing to its Sukshma Guna it reaches up to the micro channels, in turn carries the drug (potency of the drug) at the molecular level through the micro channels. It forms the homogenous mixture with the Rock salt. Honey has Pre-digested sugar and it is easy to digest and rapidly absorbed and assimilated by the body. In this way it energized body in very short period. Charaka said that Basti dravya containing excess of Honey when administered to the person makes him extremely virile. Saindhava Lavana (rock salt): - Saindhava is considered best among all the Lavana described in Samhita. It plays an important role to initiate the absorption of Basti. Lavana (salt) in general are having the properties like, Vishyandi, Sukshma, Tikshna, Ushna and Vataghna and promotes the evacuation of

bladder and rectum. Owing to the Sukshma (micro or extremely small) property it helps the drug (potency of the drug) to reach in the micro-Channels, Saindhava (rock salt) mixed with honey, is capable of liquifying the viscid Kapha and breaking it into minute particles for their easy elimination. Similarly, it may liquefy the morbid Dosh Sanghata and breaks it into smaller particles by virtue of its Ushna and Tikshna property respectively and thus helps their elimination. Apart from this, Saindhava (rock salt) destroys the Picchila, Bahula and Kashaya properties of Madhu (honey), and makes close union with it to form a homogeneous mixture. Sneha (lipids): - It includes Ghrita, Taila (oil), Vasa, Majja (bone marrow) and each one is having its specific properties accordingly it produces beneficial effects. By using Sneha the fat soluble portion of the drug easily absorbed from the colon. Lipids and lipid soluble substances can easily enter the cell. Sneha in general is Vatahara, Mrudukara (Produces softness in the channels and tissues, in turn helps for easy elimination of waste substances) and destroys the compact Mala and removes the obstruction the channels produced by the Mala i.e., Malanam Vinihanti Sangam. Owing to the Guru Snigdha Guna, it produces unctuousness in the body & soften body Srotas (microchannels) in turn helps for easy elimination and by Sukshma Guna it helps the drug (potency of the drug) to reach into the micro channels. Apart from these functions, it protects the mucous membrane from the untoward effect of irritating drugs in the Basti Dravya. Kalka Dravya (paste of herbs): - It serves specific function of Utkleshana or Doshaharana or Samshamana depending upon its contents and is selected accordingly. It gives required thickness to the Basti material. Less quantity or absence of Kalka (paste of herbs) makes the Basti Dravya thin which comes out immediately after administration. Excess quantity of the Kalka (paste of herbs) makes the Basti Dravya thick and difficult for administration and may not come out within the expected time. Kvatha (Decoction Drugs): - It is the Drava Dravya (liquid part), usually the Kashaya (decoction of herbal drugs) is used, but as per the need Kshira (milk), Mamsarasa (decoction of meat), Amlakanji, cow urine, Dadhimastu (curd's water) etc. are also used in place of decoction of herbal drugs or for the preparation of Kvatha (decoction of herbal drugs) itself. the drugs used for the preparation of Kalka and Kvatha are selected on the basis 80 of Dosh, Dushya and Srotas involved in the pathogenesis of the disease, hence they are the main constituents of the Basti Dravya. Avapa Dravya: - They are used sometimes in order to make the Basti either Tikshna or Mridu and to affect the particular Dosh. Examples: Cow's urine is added to make the Basti Dravya Tikshna and to eliminate the Kapha Dosh. Amlakanji is added to make the Basti Dravya Tikshna and to eliminate Nirupastambhita Vata. Kshira is added to make the Basti Mridu and to alleviate Pitta Dosh. Mamsarasa is added to increase the tissue enhancing capacity of the Basti Dravya. In this way, each and every constituent of the Basti Dravya is having its own importance. Hence proper justification is necessary for their selection. [6]

Absorption in systemic circulation through small intestine is supposed to be an important organ for absorption of food & drugs colonic administration of drug has a specific importance. Thus, colon targeted drug delivery is gaining popularity. It is a concept that is being used in Ayurveda in the form of Basti.



Need of colon targeted drug delivery- Targeted drug delivery to the colon would ensure direct treatment at the disease site, lower dosing and fewer systemic side effects. Colon-specific drug delivery system is considered to be beneficial in the treatment of colon diseases. The colon is a site where both local or systemic drug delivery could be achieved, topical treatment of inflammatory bowel disease, e.g., ulcerative colitis or Crohn's disease. A number of others serious diseases of the colon, e.g., colorectal cancer, might also be capable of being treated more effectively if drugs were targeted to the colon. Formulations for colonic delivery are also suitable for delivery of drugs which are polar and/or susceptible to chemical and enzymatic degradation in the upper GI tract, highly affected by hepatic metabolism. Drug absorption in the colon Drugs are absorbed passively by either paracellular or transcellular route. Transcellular absorption involves the passage of drugs through cells and this is the route most lipophilic drugs takes, where paracellular absorption involves the transport of drug through the tight junction between cells and is the route most hydrophilic drug takes. The colon may not be the best site for drug absorption since the colonic mucosa lacks well defined villi as found in the small intestine. The slower rate of transit in colon lets the drug stay in contact mucosa for a longer period than in small intestine which compensates much lower surface area. Standing gradient osmosis Water absorption at the colon typically proceeds against a transmucosal osmotic pressure gradient. The standing gradient osmosis is a term used to describe the reabsorption of water against the osmotic gradient in the intestines. This hypertonic fluid creates an osmotic pressure that drives water into the lateral intercellular spaces by osmosis via tight junctions and adjacent cells, which then in turn moves across the basement membrane and into the capillaries. As a site for drug delivery, the colon offers a near neutral pH, reduced digestive enzymatic activity, a long transit time and increased responsiveness to absorption enhancers; however, the targeting of drugs to the colon is very complicated. Due to its location in the distal part of the alimentary canal, the colon is particularly difficult to access. In addition to that the wide range of pH values and different enzymes present throughout the gastrointestinal tract, through which the dosage form has to travel before reaching the target site, further complicate the reliability and delivery efficiency. However, Basti has, direct access to colon. Quick action as transit time is not an obstructive factor. No enzymatic degradation as in case of oral drugs targeting colon while travelling from upper G.I. tract. Successful delivery through this site also requires the drug to be in solution form before it arrives in the colon or, alternatively, it should dissolve in the luminal fluids of the colon, but this can be a limiting factor for poorly soluble drugs as the fluid content in the colon is much lower and it is more viscous than in the upper part of the GI tract. Basti itself is a thick liquid consistency fluid providing enough solution media for drug absorption. In addition, the stability of the drug is also a concern and must be taken into consideration while designing the delivery system. The drug may potentially bind in a nonspecific way to dietary residues, intestinal secretions, mucus or faecal matter. The volume of Basti is considerably large that ensures required dose delivery & the protocol for administration is well designed by Acharyas to avoid faecal matter or dietary residue binding by stating do's & don'ts for Basti administration. The resident microflora

could also affect colonic performance via metabolic degradation of the drug. Lower surface area and relative tightness of the tight junctions in the colon can also restrict drug transport across the mucosa and into the systemic circulation. [7]

Purvakarmas like local Snehana-Swedana & slightly warm temperature of the Basti may cause increased colonic permeability; thus, increasing the absorption. Colon Cleansing: Colon cleansing come with many beneficial effects out of which some are as follows: Removal Of Wastes and Toxins With irregular bowel movements and lack of defecation, faecal wastes start accumulating in the colon. Digested and undigested food from the stomach travels to the small intestines. Here, only nutrients from the food we eat are absorbed in the small intestines and the rest of the food matter containing dead cells, unhealthy or 84 dead microbes and other harmful bi-products then move on to the large intestine or colon. These are largely waste materials with little nutrients except for some water and electrolytes which can be absorbed by the colon for use in our body. However, if these wastes are not removed from the body on daily basis, they began to putrefy and a bacterial load starts to build up and in no time our colon is filled with toxic substances. Certain unhealthy bacteria and microbes flourish in these waste products which will undoubtedly cause harm to our body eventually. A parasite colon cleanse will effectively kill parasites and destroy their eggs. Colon cleansing helps to remove these wastes and toxins from the body before auto-intoxication takes place. At the same time, colon can slowly recover its intended functions and return to its healthy state. Better Absorption One of the major effects of colon cleansing is better absorption. The frequent layering of toxins and wastes over the intestinal walls in the colon blocks the function of the villi. The villi are hair-like protrusions in the intestines. The purpose of the villi is to slow the passage of food, and to allow food particles to be trapped among these finger-like villi. This allows the blood inside the villi to absorb nutrients in the digested food. Though the colon only absorbs electrolytes and water, it still performs a very important function as our body is made up of 70% water. If the function of the colon is impaired, there is a likelihood of dehydration occurring. Therefore, when the wastes and toxins are quickly removed from the colon, the villi can perform their functions readily. [8]

An unhealthy colon affects all the other organs as well. When a colon is stuffed it compresses the liver, disturbing its functions. The liver is one of the major organs for toxin removal in the body together with the colon, kidneys and skin. The liver's role in detoxification is to convert and detoxify harmful toxins into substances that can be safely eliminated from the body. When digestion is poor, bacteria in the intestines began to multiply when putrefaction takes place and create toxins. These toxins, in turn, can damage the mucosal lining of the intestine, which increases its permeability and allows toxins to enter the bloodstream and gain systemic access to all areas of the body. This places additional stress in both the liver and kidneys. An unhealthy liver leads to an unhealthy kidney. This is a vicious cycle. A healthy colon helps to remove the wastes before they become toxic. So, having a healthy colon is the first major step to ensure that the other organs can perform their functions



efficiently. Impaired functioning of colon leads to accumulation of toxins which can be stated in Ayurvedic terms as Ama formation. Thus, by colon cleansing action Basti prevents Ama formation which is responsible for deterioration of the Santarpanottha Vikara like Sthaulya, Medoroga etc. [9]

CONCLUSION

The Basti, which eliminates Dosha from the body, increase the strength of the body or spreads the potency of the drug in the body due to the Prabhava. Basti is to be administered when the patient is having the symptoms of Jirnahara and is not very much hungry. Patient is asked to lie down in the left lateral position on the Basti table which should be cleaned and covered with the bedsheet, Sthanik snehan(kati uru pradesha) with Triphaldi tail and sthanik Nadi Swedan is given. Sodium ion in Saindhava (rock salt) actively absorbs from colon. High concentration of sodium ion facilitates sugar influx. Increase sodium ion in mucosal membrane generate osmotic gradient. Water follows this osmotic gradient thus passive absorption of water take place. Free fatty acid is easily absorbed by passive diffusion in the colon. From above description, it can be understood that how Saindhava, Madhu (Honey), Sneha and Kwatha (decoction) is absorb from the colon along with the Sneha (lipids) and Kwatha. Lipid and water-soluble portion are absorbed from the colon. According to modern pharmacokinetics, it is also proved that rectal drug administration might exceed the oral value due to partial avoidance of hepatic pass metabolism.

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