MODE OF ACTION OF VASTI IN NEUROLOGICAL DISORDERS (VATA VYADHI) - A CONCEPTUAL STUDY

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Abstract

Vasti Karma is a unique and broad spectrum therapeutic and preventive approach. A Lot of emphasis has been given in our classics on vasthi Karma. Neurological problem in Ayurveda described mainly in the context of vatavyadhi. Ayurvedic treatments for neurological disorders will aim to correct the vata imbalance and bring the vata dosha in harmony with Pitta and Kapha dosha so as to eliminate the disease. People worldwide are affected by neurological disorders. There are over 600 known neurological disorders and conditions that affect the human nervous system and for many of them treatment options are extremely limited. The aim of this study is to analyze the effect of vasthi karma in neurological problems as a whole. In the present article, we have discussed certain important features of vasti karma. Recent advancement in Ayurvedic Clinical Research shows that so many incurable neurological problems can be successfully treated by Ayurvedic medicines and Panchakarma therapies.

Keywords: Mode of action of Vasthi, Vata vyadhi, Neurological disorders, Conceptual study.

Introduction:

Vasti karma is a unique among Pancha karma due to its multiple effects. Pitta and Kapha are dependent on vata as it governs their functions. Vasti is not only best for vata disorders but also equally effective in correcting the morbid Pitta, Kapha, and Rakta. Charaka considered Vasti therapy as half of the treatment of all the diseases, while some authors consider it as the complete remedy for all the ailments. Ayurveda emphasizes more upon normal maintenance of health, prevention and curing of diseases through systematic follow up of regimens. Ayurveda has given more importance to vatavyadhi, it has been explained elaborately in vedas, samhitas etc. Almost all Acharyas describe the vata vyadhi. Vata is one of three dosha, but the diseases which are caused by vata are more in number than compare to Kapha and Pitta, separate chapter has been described in samhitas. From this point it can be seen that the vatavyadhi is really an important vyadhi. There are 80 types of vatavyadhi, but it may be many according to its location. The causes and pathogenesis of vatavyadhi is varying from disease to disease according to their site. Vasti is one of the unique procedure explained for the management of vata vyadhi. Panchakarma therapy is designed to eradicate the vitiated dosas and to maintain a state of normalcy and equilibrium, which is the fundamental basis of health. It is not necessary to apply all the five measures in therapeutics. Any one of these measures can be utilized to prevent or cure a disease. In the present study we will now concentrate on vasti-karma and explore its various dimensions. This conceptual study deals with the mode of action of vasti in vatavyadhi.

AIM AND OBJECTIVE:

To study the Mode of action of vasthi in neurological disorders (vata vyadhi)

VASTI-KARMA AND ITS APPLICATIONS:

Vasti karma is considered as the most important procedure in five fold Panchakarma therapy. The word vasti, stands for a special instrument known as vasti yantra used for enema therapy. Made of urinary bladder (vasti) of animals and karma stands for chikitsa or therapy. Thus vasti karma is a specific therapeutic procedure, in which medicines are administered into body through gudamarga (per rectum). Sometimes medicines are also administered by other routes, like Urethra or vagina, and then this procedure is termed as Uttara vasti.
TYPES OF VASTI:
There are various types of vastis, as described in Ayurvedic classics. These are based on anatomical, pharmacological and physiological but their number and nomenclature are different. Basically vasti can be classified into three types:

1. Anuvasanavasti
2. Niruhavasti
3. Uttaravasti

(urethral/vaginal vasti)

However Susruta has classified Vasti in two types, under general classification. They are: A. Niruhavasti or Asthapanavasti. B. Snailikavasti or Anuvasanavasti

Bhavamisra and Sarangadhara have supported the view of Susruta in this context.

INDICATIONS OF VASTI:
Vastikarma can be implicated in number of ailments in general. There is long list of indications: Specific once are:  

ASTHAPANA VASTI-(Asthapya and anasthapya)
The indications of decoction of Asthapanavasti are neurological diseases, diseases of GIT, gout intermittent types of fever, unconsciousness (by providing instant absorption of the materials through rectal mucosa), thirst, dysurea, calculi, menorrhagia, loss of appetite, pain in abdomen, hyperacidity and heart diseases. Asthapana vasti is contraindicated in patients who are excessively fat or debilitated, hiccough, cough, dyspnoea, piles, inflammatory condition of anus, skin disorder vomiting diarrhea, gastroenteritis, pregnancy ascitis and diabetes, etc, this vasti is also contraindicated in persons who have just taken their food. Broadly speaking main indications of Asthanpana vasti can be grouped into four main categories.

1. In vata Roga and vata Pradhana rogas. 2. Diseases fit for sodhana, i.e. where sodhana of morbid dosa and dusyas are needed. 3. Vata Asraya rogas. 4. Diseases of gastrointestinal tract particularly of large intestine

ANUVASANA VASTI (ANUVASYA AND ANANUVASYA)
The indications of Anuvasanavasti are similar to Asthapanavasti. In addition, it is specifically indicated in pure vatika conditions or patients having excessive appetite (Tiksnagni) or in excessive dryness of body.

Anuvasana vasti should be given immediately after meals i.e Ardrapani. because if it is given on empty stomach, then due to empty gastrointestinal tract, it can reach up to upper GIT and obstruct the channels and produces nausea, vomiting etc. The Anuvasanavasti is contraindicated in similar conditions as indicated for Asthapanavasti. Additional contraindication are Navajwara, Anaemia, jaundice, polyurea, Poisoning and filariasis etc. The administration of Asthanpanavasti is useful for cutting and eradicating the morbid dosas at their base, it is like cutting the plant at the base. i.e sodhana effect. The administration of Anuvasana vasti on the other hand increases the flow of Snigdha dravyas in the body like watering of a plant at its root, i.e. Brimhna effect.

DISCUSSION

THERAPEUTIC EFFECT OF VASTI:

Sometimes vasti karma is wrongly considered as enema (retention) therapy. Actually it is fundamentally different than simple enema. Though in some situations simple enema shows it’s therapeutic effect in spite of procedural similarity to the enema therapy. Vasti therapy as number of actions, because of its unique formulations, further aided by medicines.

Depending upon the use of different drugs, vasti causes samsodhana or samana effects. It performs the sodhana of Vata, Pitta, Kapha and vit (faeces) and hence it is tridosahara. This therapy is very useful for the protection of health as a whole. It helps in rejuvenation and it provides happiness, long life, strength intelligence, clear voice and colour to healthy person. It is good for old as well as for the young. There is no obvious hazard in this therapy. It cures all kinds of diseases, due to its varied pharmacodynamics and various kinds of drugs used in its preparation. Vasti karma cures all the diseases relating to shakha, kostha, Marmasthi and sandhi etc.
Though vasti therapy has its scope in all kinds of ailments implicating different types of dosas, dusyas and Adhisthanas, vasti is supposed to be the specific treatment for vatika disorders, the relative importance of vata is already known and it has predominant influence on the three principal routes of diseases, which are sakha, kotha and marma, moreover it is responsible for the formation, communication and spread of biological humours (Sweda, mala etc.) vasti being the main therapy and it has a maximum importance, this is why, vasti therapy is said to be half of whole treatment and sometimes a complete treatment.

**MECHANISM OF ACTION OF VASTI:**

Vasti therapy is one of the most important therapeutic procedures in Ayurveda, Its effects are not limited only up to rectum and samsodhana of malas (faeces), but it produces widespread systemic effects. It is specifically indicated in vatika disorders, but with the addition of various types of medicines, it influences all the dosas, the next important question here is how does vasti act? Different views have been expressed by scholars, including some important researches carried in the department of kayachikitsa, institute of medical sciences, S.S. Hospital at Banaras Hindu University Varanasi. Vata plays a very important role in physiological action and production of diseases, Caraka is of similar views. He states the pakwasaya is the main seat of vayu and vasti strikes the root cause of vata and further normalizes its function.

Susrutha has stated that the actions of vasti are mainly due to veerya (Specific action or property). He further elabroates that the drugs used in vasti-karma will however spread in the body from pakwasaya due to their veerya through appropriate channels In the same way, as water sprinkled at the root of tree, circulates all over the tree by its own specific property (veerya) So vasti karma eliminates the morbid dosas and dusyas from the entire body (by Srotosudhi) whether lodged in an part. So its effects are also tridosahara.

In an important study, Sastry, M.K. and Singh, R.H. (1993) postulated four dimensional views for pharmacological action and therapeutic effects of Vasti, as follows:

Action of vasti, due to its unique procedure (Procedural effect)
Action of vasti due to gunas of the drug used in vasti dravya (Drug effect)
Action of vasti by Srotosudhi and sodhana of body (Sodhana effect)
Action of vasti by regulating the enteric nervous system or GUTBRAIN (Regulating effect on gut brain). 8

Before going into detail and exploring new dimensions about mode of action of vasti, it will be beneficial to review the following:-

Applied anatomy and physiology of large gut in relevance to Vasti therapy.
Neurophysiology of large gut. 3. Microflora of large gut and its function.
The overall functions of the large intestine are the completion of absorption, the manufacture of certain vitamins, the formation of faeces and expulsion of faeces form the body. The structure of the colon varies more among mammals than does that of any GI organ. In man and man primates, the outer longitudinal muscle layer is not condensed into three thick bands, the taeniae, this arrangement characterizes most of the human colon except for the rectum and part of sigmoid colon were the taeniae broaden and fuse to produce a longitudinal muscle coat of uniform thickness around the colon. Tonic contraction of bands of the colon into a series of pouches called austral which give the colon its puckered appearance.
The myenteric plexus of most of the colon contains large uniformly spliced ganglia, that are connected by thick interganglionic fascicles and secondary and tertiary plexus are well developed. The density of the myenteric plexus is diminished in the ganglia and becomes both smaller and less abundant. The submucous plexus are also present in large intestine. The last stage of digestion occurs through bacterial action, not by enzymes as secreted by colon. Trough mucus is secreted in large gut no enzymes as secreted by colon. Through mucus is secreted in large gut, no enzymes are secreted. The bacteria ferment an remaining carbohydrates and release a few gases.
Several vitamins needed for normal metabolism including vitamin B and K, are synthesized by bacterial action and absorbed. The large intestine also absorbs water, electrolytes including sodium and chloride and some vitamins.
The nervous control of the gastrointestinal system is mediated by enteric nervous system (ENS) and central nervous system (CNS). The ENS is an independent integrative system with structural and functional properties that are similar to those in CNS. Nerve supply is derived from midgut (up to near the splenic flexure) and hindgut (from there onwards). The parasympathetic supply to large intestine is partly formed the vagi and partly from the pelvic splanchnic nerve. The sympathetic supply is from T10-L2. In whole GIT; there is a variety of neural receptor that can detect both chemical and mechanical stimuli. The transmission of chemical and mechanical stimuli to the target tissue is rapid and may involve only the ENS or sensor information may be processed in CNS.

The human intestinal flora is highly complex with more than 400 bacterial species isolated from faeces. So, colon is a complex ecosystem that contains both aerobic and aerobic microorganisms; the total bacterial count in the faeces is said to be 10^{10}-10^{12} colony forming units per ml (CFU/ml). Although there may be fluctuations in the composition of the flora. It is still not known, what controls the indigenous microflora. It is obvious that by virtue of their enormous enzyme potential, the micro flora may have wide range of influences on the physiology of host. They actively participate in metabolism and nutrition. Various actions of the intestinal flora on the general physiology of host organism have been found.

To return to our fundamental question, how vasti act? Any vasti can produce its effect in two ways:

**MEDICAMENTS EFFECT** (Pharmacological Effect)

**EFFECT OF VOLUME** (Pressure Effect)

In the process of vasti-karma, several drugs are used for several purposes, in the form of decoctions with or without snehadravyas. The vasti is having its pharmacological effect due to the cumulative pharmacodynamic effect of various drugs used in the process. Basically pakwasaya is the seat of vayu. Apart from it, Pakwasaya is also the seat of various flora (parasites), especially faecal ones. Some of them are pathogenic and others are non-pathogenic. This concept is very well described by the Caraka in vimanastana. It is similar to microflora concept of intestine. Through the medicaments used in the vasti, it can alter the colonic physiology, vasti can counteract the factors responsible for causation of disease. It is similar to prakrtivighata of krimi-cikitsa, with suitable combinations of drugs, Vasti can be useful in number of disorders.

Caraka states that, Anuvasana Vasti when given nourishes all the cannels after reaching the Nabhi (main seat of Sira and Dhamani). He also states a particular position for administering vasti with justification. So vasti can go deep into gastrointestinal tract and produces widespread affects. By proper volume, vasti also produces mechanical (pressure) effect and helps in various motility disorders.

C.Dwarikanath in early sixtees suggested that vasti therapy by virtue of its medicaments greatly influences the normal bacterial flora of colon. By doing so, it modulates the rate of endogenous synthesis of vit B12 which is normally manufactured in bacterial flora of colon. This Vit B12 may have a role to play in the maintenance of regeneration of nerves. According to him, it was one of the possible mechanisms through which vasti could help in vatika disorders. However this hypothesis is to be tested on scientific parameters.

Devaraj. T.L. and Chaturvedi, G.N. (1971) also studied effect of Panchakarma therapy with special reference to vasti karma on colitis, they reported that this vasti increases the total serum protein and Hb%, reduces the ESR there by suggesting that it arrests the disease process and improves the metabolism of protein. He also reported a significant degree of improvement in their absorption capacity of vit B12 which further help in maintaining the integrity of vata system. In another study, Tripathi, A.K et al (1996) also studies effect of vasti in colitis and found significant results especially vata predominant symptoms of colitis. Similarly Edirweera, E.R.H.S.S et al
(1992) also reported that vasti therapy was more beneficial in cases with predominance of vata and pitta dosa.

**VASTI AND GUT BRAIN:**

In Ayurveda, much importance has been given to vayu. It controls the entire physiological functions in the human body. Pakwasaya is supposed to be main seat of vata. Vasti chikitsa is supposed to best therapy for vayu. This is most probably due to its controlling and regulating mechanism over the enteric nervous system (ENS).

The autonomic innervation comprises components both extrinsic and intrinsic to the colon. The former includes the ganglia, plexuses and nerve fibers that serve the colon, but lies outside its wall. The later consists of rich network of nerve fibers and ganglion cells situated within the layers of the colon wall, although the extrinsic components are clearly of greater functional significance. The connection by which the enteric nervous system of colon, these neural elements within the wall of bowel, integrates and modulates contractile events is still unclear. Wood (1981) described the enteric nervous system as “The brain of the Gut”, that integrates informations received and issues and appropriate response. Enteric nervous system is connected to the central nervous system by for more afferent fibers than afferent fiber. Furthermore, gut brain (ENS) integrates sensor information from mucosal receptor and organizes an appropriate motor response form a choice of predetermined programmes. So enteric nervous system of gut brain is an independent integrative system with structural and functional properties, that are similar to those in CNS (wood, 1981) and Physiological and pharmacological properties of vasti cikitsa are said to be outcome of modulation of Gut brain up to certain extent.¹¹

It is also reported in some studies (Ayurvediya Panchakarma- by Kasture) that after vasti karma, there is reduction of pyruvic acid content of ketoacids in blood, due to reduction in pyruvic acid content, three is rise in vitB1 in blood which is responsible for integrity of peripheral nerve functioning and prevents its degeneration. This vitamin also influences the heart and circulatory system.

**CONCLUSION:**

Vasti therapy is one of the most important therapeutic procedures in Ayurveda. Its effects are not only limited up to rectum and samsodhana of malas (faeces) but main focus of this study was on its action on the body. We have already discussed various views and studies. We are fully supported the views given by sastry, M.K. and Singh, R.H. (1993) about its possible mechanism of action. In addition we have said that vasti can produce its effect though medicament effect (pharmacological effects) and effect of volume (pressure effect). Thus with the help of suitable medicaments vasti therapy may modify the colonic physiology and alter pathogenic krimis, by prakrtivighata. On the other hand certain vasti may enrich the normal bacterial flora of the colon and may be expected to promote their sustaining role in body. By doing so, it modulate the rate of endogenous synthesis of Vit V12, which may have a role to play in maintenance or regeneration of nerves. Thus by improved functioning of neural system vasti could help in vatika disorders, secondly, vasti through the volume of its contents may produce an therapeutic intrvisceral pressure influencing various receptors in rectum and lower part of colon and result may be absorption of medicaments leading to added vasti effect.

**REFERENCES**


