



PHYSIO-CLINICAL SIGNIFICANCE OF KATI BASTI IN AYURVEDA

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ABSTRACT

Kati in common means waist, loin and described as that part of the body which falls below the abdomen and back. Terms like 'nivasa' and; achadana' are also holding good to denote basti. Therefore on the basis of etimological derivation of both Kati & Basti it could be an apt term indicative of specific therapy. In Ayurveda the probable mode of drug action can be explained on the basis of so many theories viz. Rasa-panchaka theory, Pancha-bhautik theory, Doshik theory and Dhatu nirman theory. But one common factor is divulged from all these theories that the drug having pharmaco-therapeutic property, similar to the qualities of a particular dosha, provoke/vitiate that particular dosha, and the drug having pharmaco-therapeutic properties, which are opposite to the particular dosha, result in pacification of that particular dosha. Taila itself being the principle pacifier of vata when processed with other such dravyas having pharmacotherapeutic properties opposite to the qualities of vata becomes more potent vata pacifier, so normalizes the vitiated vata hence alleviate pain.

KEY WORDS: Katibasti, 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, Shakhshrita & 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 Pradesh 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]

Kati Basti as such had not been incorporated as a regimen in Ayurvedic texts. But the process was frequently used in Keralayeyya cikitisa to treat the lumbar region disorders. Thus, Kati Basti can be defined as the process in which the oil is detained locally upon



the lumbar part of the body, by means of 'Masha Pishti'. The word Kati here used to denote Katipradesha. This may be compared to lumbar and sacral areas. As this is a treatment mainly used in the ailments of lumbar & sacral discs or spine, the word Kati may be used precisely. According to Vacaspatyam, the word —Basti has its origin from the root 'Vas' with the suffix of pratyaya 'Tich' gives rise to the word basti and it belongs to masculine gender. According to Siddhanta Kaumdi, the root 'Vas' has four meanings as follows : This means to stay, to reside and to dwell; It means to cover; It means to oil which is thrown up from the hole and removing blemishes; The verb 'Ardane' is derived from 'Arda Gatae Yachane Cha' thus Arda gives two meanings, one is to move or in motion and other is to beg or seek. Hence, Ardane indicates motion to basti drug which are introduced through rectum. Hence on the basis the above said 3 meanings we may infer that basti means not necessarily administered into the body at all times. Here in case of katibasti the aushada drawya is kept on particular area of kati for a stipulated period and this is covering a precise area. Hence we may opine that terms like 'nivasa' and; 'achadana' are also holding good to denote basti. Therefore on the basis of etimological derivation of both Kati & Basti it could be an apt term indicative of specific therapy.^[3]

Kati in common means waist, loin and described as that part of the body which falls below the abdomen and back i.e Kamara or lakka. Acarya Gannathasena has described shroni as pelvic region i.e. ilium which is shronifalaka. Hence to get precise position of kati in accordance with modern anatomy kati may be considered that part of the lumbar vertebrae which goes deep in the well of ilium and unite with sacrum forming sacroiliac joint and lumbosacral joints. Acarya Bhava Prakasha has mentioned the same anatomical position and termed it as Trika comprising of two hip bones and two bones of the back i.e sacrum and lumbar bone. under vatvyadhiadhikara in trikashoola. With this reference it is very clear that this area includes two sacroiliac joints and the joint of sacrum with fifth lumbar vertebra and this is the area which is the most common seat of low back pain. In the surface anatomy it has been described that the iliac crests are easily palpable along their entire length. They lie at the level of the 4th lumbar spine, again the common site for low back pain i.e 4th and 5th intervertebral space. The most common site of the problem in the vertebral column as described is at L5-S1 segment because this level bears more weight than any other part of the vertebral column. The word kati didn't denote a single portion but in Ayurvedic texts kati is included on different occasions with different parts of the body e.g prishtavansha and trika area and used as synonyms as has been mentioned by Acarya Susruta while counting the pratyangs, kati is included in the prishtavansha. (Su.sh5/3) though on occasions the three terms has been mentioned collectively in a sutra which explains the distinctive knowledge of trika, kati and prishtha but the occasions are rare, and on maximum times the terms are used synonymously where as in modern medicine it's denoted by lumbar region.^[4]

The patient should be asked to lie down in prone position. The circular ring prepared out of the dough is placed over the lumbosacral region and fixed properly by pressing its edges from outside and inside. The height of the circular ring should be 5 - 6 cms and diameter is about 12cms. Take about 150-200ml of oil in a steel vessel and place it over the boiling water for few seconds (as initially oil is poured directly over the bare back, Luke warm oil is used, too hot oil initially will burn the skin). Take it out and pour some oil into the circular ring using a sparula, so that the underlying skin is completely immersed in oil, keep the remaining oil again for heating. check the temperature and again pour the oil into the circular ring, while pouring care should be taken that the oil is just glided over the oil which is present inside the ring as pouring from a height will result in burn injury. After pouring dip the finger into the oil and gently rotate in a clockwise direction. While rotating the oil the patient feels more temperature as the heat is distributed completely. As the temperature decreased the oil should be replaced with hot oil and this should be repeated for half an hour. The temperature tolerance varies from person to person. The oil is emptied from the circular ring by using a spatula and then the circular ring is removed. Mild massage is given over the area and the patient is asked to wipe the oil or take bath after one hour.^[5]

DISCUSSION

Fractional area available for absorption is 0.1 % human skin contains 40-70 hair follicles, 200-250 sweat glands on every square cm. of skin area. Water - soluble substances are diffused through the skin appendages faster than that of outer layers of skin. Sweat glands and hair follicles act as shunt i.e. easy pathway for diffusion through the rate limiting Stratum corneum. Epidermal barrier function mainly resides in horny layer i.e. Stratum corneum, the viable layer may metabolize/ inactivate/ activate a drug. The dermal capillary contains many capillaries so that the residence time of drug in dermis is only a minute deeper dermal layer do not influence percutaneous absorption. Within stratum corneum molecule penetrate either trans-cellularly or inter cellular.^[6]

In Ayurveda the probable mode of drug action can be explained on the basis of so many theories viz. Rasa-panchaka theory, Panchabhautik theory, Doshik theory and Dhatu nirman theory. But one common factor is divulged from all these theories that the drug having pharmaco-therapeutic property, similar to the qualities of a particular dosha, provoke/vitiate that particular dosha, and the drug having pharmaco-therapeutic properties, which are opposite to the particular dosha, result in pacification of that particular dosha. Tail itself being the principle pacifier of vata when processed with other such dravyas having pharmacotherapeutic properties opposite to the qualities of vata becomes more potent vata pacifier, so normalizes the vitiated vata hence alleviate pain. Therapeutic heating effects are achieved when a tissue temperature of 40-45°C is reached. When tissue temperature are more than 45°C tissue damage can occur. Much greater temperature than can be achieved with superficial heat (60-66°C) has been proposed to provide a



breakdown and structural change in the tissue shrinkage. Consequently, heating of tissues accelerates the chemical changes i.e. metabolism. The increase in metabolism is greatest in the region where most heat is produced, which is in the superficial tissues. (Tissue temperature changes have been recorded upto depth of 1 to 2cm after treatment with superficial heat. Superficial heat is purposed to effect deeper structures by conduction heat). As a result of the increased metabolism there is an increased demand for oxygen and food stuff and an increased output of waste products, including metabolites.^[7]

When an irritant agent is applied locally to the skin to relieve deep seated pain, it is referred to as counter-irritant. When the counter-irritant is applied to the skin situated over the organ responsible for pain. It stimulates the sensory nerve endings in the skin and the afferent impulses are relayed in the cerebrospinal axis to efferent vasomotor fibers supplying the internal organ. Thus resulting into the increased circulation to the skin has its counterpart in the deep integumental structures and viscera innervated from the same segmental level of the central nervous system. In addition, the sensory impulses emanating from the skin may interfere with the transmission of pain impulses, coming from the viscera and may even produce their partial or complete exclusion by occupying the final common sensory pathway. The vasodilatation and blockade of pain impulses may explain the relief of deep seated pain.^[8]

Intensity of injury may remain same, but different person/or the same person at different times, may feel the pain differently. This is because our body has endogenous pain inhibiting system. If this system is overactive, pain perception may be abolished altogether. PAG (periaqueductal gray) is an area round the aqueduct of Sylvius in the midbrain. From PAG a bunch of descending fibers arises – relays in magnus raphe nucleus (situated in the middle at the junction of pons and medulla) – next order neuron terminates at SGR (substantia gelatinosa Rolando, situated at the tip of posterior horn of spinal cord). This is DPI pathway. As the first order neuron, which carries pain from the periphery are depicted as APC, terminates at SGR. From SGR the second order neuron emerges and constitutes the STT (spinothalamic tract) to terminate in the thalamus. The neurotransmitter (NT) at the synapse between terminal part of APC and beginning of STT is substance P. When DPI system is stimulated, the terminal part of DPI fibers releases some endogenous opioid peptides as NT at SGR. These endogenous opioid peptides cause inhibition of substance P, leading to transmission blockade of pain sensation hence no pain is felt.^[9]

At SGR, the primary afferent pain carrying neuron contains receptors for endogenous opioid peptides. When the descending pain inhibitory fibers are stimulated, they (= the DPI fibers) release opioid peptides, when these opioid peptides bind with the opioid peptide receptors mentioned above, then release of substance P is inhibited. DPI fibers are stimulated with the stimulation of limbic system and with the mechanism of auto-feedback i.e. when STT is stimulated collaterals from STT can stimulate the DPI. On fomentation by Kati-Vasti with Vishgarbha tail (laghu), in the region of disc prolapse, the lateral STT tracts get stimulated. As these are concerned with the transmission of temperature (= cold + warmth) sensations and these in turn stimulate DPI. When a painful stimulus alone is applied, the pain is more intensely felt than the stimulus of same intensity is applied concomitantly with a tactile stimulus for example application of heat in the form of fomentation by Kati-Basti, in this case. This occurs because of the gate control, a theory proposed by Melzack and Wall in 1965. Let a painful (nociceptive) stimulus be applied in the periphery – the pain is carried by primary afferent which terminates in SGR – from here 2nd order neuron emerges to constitute STT (spino thalamic tract). Also, tract of Goll and Burdach (lemniscal fibers) carrying tactile sense (coming from the periphery) passes through the dorsal column remaining close to the SGR. While the tract of Goll and Burdach ascend upwards, it gives collaterals to the termination of primary pain carrying afferent at SGR. When a tactile sensory stimulus is applied in the periphery – the tract of Goll and Burdach is stimulated and via the collateral mentioned above it effects a presynaptic inhibition on the primary pain carrying afferent – pain sensation is inhibited.^[10]

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. In case of katibasti the aushada drawya is kept on particular area of kati for a stipulated period and this is covering a precise area. Terms like 'nivasa' and; 'achadana' are also holding good to denote basti. Therefore on the basis of etimological derivation of both Kati & Basti it could be an apt term indicative of specific therapy. In Ayurveda the probable mode of drug action can be explained on the basis of so many theories viz. Rasa-panchaka theory, Pancha-bhautik theory, Doshik theory and Dhatu nirman theory. But one common factor is divulged from all these theories that the drug having pharmacotherapeutic property, similar to the qualities of a particular dosha, provoke/vitiate that particular dosha, and the drug having pharmacotherapeutic properties, which are opposite to the particular dosha, result in pacification of that particular dosha. Tail itself being the principle pacifier of vata when processed with other such dravyas having pharmacotherapeutic properties opposite to the qualities of vata becomes more potent vata pacifier, so normalizes the vitiated vata hence alleviate pain.

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