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## EFFECT OF SHASHTIKA SHALI PINDA SWEDA IN THE MANAGEMENT OF PAKSHAGHATA

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**Abstract:** Ayurveda considers that neurological disorders are caused primarily due to imbalance in the function of Vata. Pakshaghata is a most distressing neurological disorder among 80 vatavikaras. The clinical condition characterized by loss of function of one side of body. The stressful lifestyle, food habits, living conditions are influencing in manifestation of pakshaghata. Thesweda karma (sudation) performed by pindas (poultice) prepared with shastikadhanya is SSPS famous in kerala by navarakizhi. Main culprit is vatadosha along with dushyas namely siras, snayus, dhamanis, sandhis & mamsa in which joints of body become useless, inco-operative, SSPS possess qualities antagonists to pakshaghata. Acharyacaraka emphasized that sweda karma very useful in pakshaghata.chikitsa sutra includes snehaswedapakshaghata. SSPS one of sub variety of 13 sweda karma i.e. sankarasweda, shastikashali is tridosahara, brimhanaguna. Bala is balya, brimhana.

Balasangraha kavataharanamsrestam, ksheeramjeevaneeyamsrestam, dugdam is sadyasukralami. i.e. it gives immediate energy to body which is most essential for patients of pakshaghata. As it is vatavyadhilaghu, ruksha, khara, vishadagunas will prevail in body to neutralize those gunas, snehamsapadarthas should be administered. As gunas of sweda karma are ushna, tiksha, snigda, suksma, sara which are antagonists to vatadosha. SSPS imparts swedana & opens up the srotas in the sareera facilitating more nourishment & free movement of vatadosha. This result in relief of stambha & facilitates free movement of sandhi. SSPS include both sneha, swedasimultaneously. Hence, SSPS is effective in management of pakshaghata. Ayurvedic treatments for neurological disorders will aim to rectify this Vata imbalance and bring the doshasamyatha.

**Keywords:** Shastikashalipindasweda, pakshaghata, vatavyadhi, paralysis, swedam, SSPS.

**Introduction:** According to Ayurveda, the functioning of the mind and Nerves is dependent upon Vata. All the functions of the body are controlled by three doshas. Vata, pitta, kapha in their state of equilibrium, maintain homeostasis and preserve as well as promote positive health any disturbance leads to disease. <sup>[1]</sup> Among tridoshas, Vata is most important because Vata is responsible for all activities of the body <sup>[2]</sup>. Movement is an important characteristic of all living organisms. Vata is responsible for all types of movements and prime dosha among the three doshas. According to Ayurvedic Classics, Pakshaghata is one of the Central nervous system diseases, considered as VataVyadhi. The term *Pakshaghata* literally means paralysis of one half of the body where “paksha” denotes the right or left half of the body and “Aghata” or “paralysis”. *Pakshaghata* is a *Vatavyadhi* of

*Nanatmaja* variety according to *Charaka*, <sup>[3]</sup>. But *Acharya Sushruta* categorized *Pakshaghata* under *Mahavatavyadhi* <sup>[4]</sup>. *Pakshaghata* may be defined as loss of voluntary functions of one side of the body. *Caraka* described that morbid vata beholds either side of body, dries up sira and snayu of that part rendering it dead and producing *cheshta-nivritti* along with *ruja* and *vakstambha* <sup>[5]</sup>. *Acharya Sushruta* has described this ailment more precisely. He has considered pathological involvement of the joints of one half of the body along with sensory loss of affected part & *Sandhi-Bandha Shaithilya* (weakness of muscles) in *Pakshaghata* <sup>[6]</sup>. Vata is main culprit. Dushyas are Siras, Snayus, Sandhis. These are upadhatu of Medhodhatu. Therefore in patients of *Pakshaghata* medhodhatu and mamsadhatushosha takes place, so, Uttaradhatu will not be nourished properly. *Pakshaghata* is a

disease of the madhyamarogamarga involving the asthisandhis of the body. Asthis are the ashraya of the Vatadosha and the vitiation of Vata hampers the nourishment of asthis, thereby reflecting in Sandhis also.

The description of Pakshaghata can be interpreted with Hemiplegia. Modern medical science attributes this condition as damage to brain or CNS structures caused by abnormalities of the blood supply. Hemiplegia is defined as paralysis of musculature of the face, arm and leg on one side of the body. It is the most frequent distribution of paralysis in human beings.

Pinda[bolus]sweda is a process by which the whole body or a specific part of the body is made to perspire by the application of certain heated medicinal puddings applied externally in the form of pinda or boluses tied up in square pieces of cloths. Shashtikapindasweda is performed with the bolus of boiled Shashtikashali with Balamoolakwatha and ksheera. The technique is a combination of snehana (oelation), mardana (massage) and swedana (fomentation).

Best among all sweda karmas mentioned in ayurvedic texts with slight modifications, This is famous in Kerala by name NAVARAKIZHI. Navan = Rice which is harvested in 60 days.

The line of treatment mentioned by Acharya Charaka for Pakshaghata as "Swedanamsnehasamyuktampakshaghate Virechanam"<sup>[7]</sup>. The word Swedana in beginning of quotation stresses the importance of karma. Sweda karma or sudation or fomentation therapy is one among the Poorvakarmas (Panchakarma sub-procedures). Acharya Charaka has included Swedana karma under Shadupakrama. Swedana is prime modality of treatment for number of disorders especially Vata & Kapha predominant diseases<sup>[8]</sup>. Charaka stated that Sweda karma very useful in treating Pakshaghata<sup>[9]</sup>. Charaka mentioned according to agniheda two types of sweda karma as Saagni, Niragni<sup>[10]</sup>. SANKARA SWEDA is one among of Saagni. The hot drugs are made into potali {bolus} form & then swedana is done by direct contact to the body of patient. This is of 2 types i.e. Snigdha & ruksha.

**Snigdhasankara:** The potali made from boiled tila, masha, shali, payasa, mamsarasa, amlavargadravya etc. it is used in vatavyadhi. SSPS, annalepa are examples of snigdha type<sup>[11]</sup> Here depending upon dosa, dushya, roga, rogi one uses tila, masa, amla, taila, mamsa, adana, payasa or krshara according to the condition to

be treated. But in keraliya pindasweda only shashtika rice payasa is used for pinda swedana. This type of description is available in ashtangahrdayam, pinda Sweda is indicated in diseases like Sarvangasosha, vatavyadhi, ayama, akshepa, sancoka, stambha, pakshavadha etc.<sup>[12]</sup>. Pinda Sweda will come under sankarasweda of Charaka and Kashyapa and ushmasweda of Sushruta and Vagbhat. Shashtikashali pindasweda is a type of Sankara sweda which has more importance due to its action and prevalence.

One of the important causes of Pakshaghata is srotorodha, the classical treatment for srotorodha is Swedakarma. the Sweda karma acts itself as Vata shaman by its Ushna, tikshna, teekshanadi etc., gunas<sup>[13]</sup>. By suppressing vatagunas i.e., Sheeta, rukshaadigunas<sup>[14]</sup>. The main bahyakaranas for vitiation of vata are ASAATMENDRIYARTA SAMYOGA, PRAGNAPARADA and PARINAMA and Abyantara karanas are basically divided into two types (i) Dhatukshaya (ii) Avaranatwa<sup>[15]</sup>.

In SROTO AVARODHA, MAMSA DHATU KSHAYA type of pakshaghata condition shashtika shali pindasweda is advised as Vata is vitiated here. laghu, ruksha, khara, vishada gunas will prevail in body to neutralize those gunas, snehamsa padarthas should be administered. The body which is affected by vata is just like a dry stick to make it flexible sneha sweda are most useful as per Charaka<sup>[16]</sup>. As gunas of sweda karma are ushna, tikshna, snigdha, suksma, sara which are antagonists to Vata dosha. The main properties of Shashtika are snigdha, guru, sthira, sheeta and tridoshaghna. Though a sweda karma, it has brimhanaguna. In Pakshaghata cases those are associated with rakta pitta, visha, stoulya, atisara, etc. swedana is contra indicated<sup>[17]</sup>.

#### Materials Required

1. Shashtikashali - 350g
2. Balamoola - 300g
3. Water - Q. S.
4. Cow's milk - 3litres
5. Cotton cloth (45cm X 45cm) - 4 pieces
6. Threads (75cm) - 8
7. Vessels:
  - a. For preparing kwatha
  - b. For cooking rice
  - c. To heat the boluses in mixture of kwatha and milk during the procedure (5 litres capacity with wide mouth made of bronze)
  - d. A plate for carrying heated pottali
8. Stove -1

9. Oil for talam - 10ml
10. Rasnadichoorna - 5g
11. Suitable oil for abhyanga - 100ml
12. Coconut leaves/tongue cleaner - 2
13. Tissue paper/towel - 2
14. Masseurs - 2
15. Attendant - 1

**Preparation of the Medicine:** *Balamoola kwatha*- 300g of Balamoola is cleaned, crushed and boiled in 12 liters of water and reduced to 3 litres. *Shashtika rice cooking:* In 1.5 liters of Balamoolakashaya and 1.5 liters of milk, 300g of Shashtika rice should be added and boiled till it becomes thick and semisolid. Sufficient quantity of hot water can be used for proper cooking of the rice. Another method is that the Shashtika rice can be semi cooked in pure water; gradually added milk and kwatha; cooked again.

**Preparation of the Boluses:** The cooked rice should be divided into 4 equal parts and put into 4 pieces of cotton cloths. The three corners should be folded neatly together so as to come under the fourth corner and the fourth fold is used to cover the other three corner folds underneath. One end of the thread is held tight with left hand and the other end is wound around the folds. In short, the boluses should be tied in such a way that the mouth of the sac leaves a tuft at the top of the bundle, for holding it with ease.

**Pre Operative Procedure:** The patient should be seated with leg extended over the droni and talam of rasnadi churna is applied on scalp. Abhyanga should be then performed with prescribed oil for about 10 minutes in 7 postures. Out of 8 pottalis, 4 are kept in the mixture of Balamoola kwatha and milk (1.5 litres of each was already kept for this purpose), which should be put on a stove with moderate heat.

**Procedure:** Abhyanga is done in 7 postures. 4 warm potalis should be gently applied in a synchronised manner by the four therapists on two sides of droni. It is followed by a gentle massage with other hand. They should ensure that the heat of the bolus is bearable to the patient by touching them over the dorsum of their hand. The temperature of the boluses should be maintained throughout the procedure by continuous relay of the four bolus after reheating by dipping in milk kwatha mixture. The process should be continued till the patient gets samyak swinnalakshana or until the contents of the bolus exhausted. This procedure is done in the seven positions.

**Duration:** 45 minutes-1 hour, preferable time is in between 7 - 11 am and 4 - 6 pm. The

procedure can be stopped if the medicine in the boluses or the milk mixture is exhausted.

**Post Operative Procedure:** At the end of the procedure, the medicine remained over the body should be scrapped of with the coconut leaves or with any similar device and the body is wiped dry with tissue paper or soft towels. After that medicated oil should be applied. Talam of rasnadi choorna is to be removed and Rasnadi choorna applied over the head. The patient should take complete rest for at least half an hour, and then the patient is allowed to take warm water bath.

#### Precautions

1. During the preparation of the rice, care should be taken to avoid over/under cooking and should be stirred frequently for the better extraction and cooking.
2. Tie bolus firmly to avoid leaking of contents during rubbing.
3. The therapists in both the sides of the patient should massage with the bolus in a synchronized manner.
4. Ensure uniformity of pressure and temperature on all the body parts.
5. Boluses should be applied with sufficient warmth (45 oC - 50oC).
6. The therapy should be stopped at any time if the patient gets good perspiration or shivering.

#### Complications and Management

1. **Shivering:** It usually occurs due to the uneven distribution of temperature or prolonged time gap in between the taking up of new bolus; or if body is exposed to cold breeze immediately after the procedure. Allow the patient to take rest cover with a blanket and give warm liquid diet.
2. **Fainting:** Due to increased body temperature or low heat threshold of the patient or atiyoga of kriyakrama. Sprinkle cold water over the face and body, and put talam with appropriate medicated oil and choorna. Drakshadikashaya can be given internally.
3. **Rashes:** Due to heat intolerance of the patient of pitta prakriti. Apply madhu & ghrita, preferably ShatadhoutaGhrita or Murivenna.

#### Mechanism of Action of Swedana

1. Application of heat,
2. Physical effect of massage and
3. Therapeutic effects of medicaments used.

**1. Application of Heat:** Application of heat on an unctuous area causes the generation of a temperature gradient across the cell membrane. Besides facilitating the diffusion of liquid

substances through the cell membrane, this plays key role in the formation of lipoid vesicles from the dropouts in the membrane in areas of flow temperature. This causes an expansion in the cell volume as well as surface area. But it cannot expand freely especially in the peripheral direction as it is bound by other cells around. This makes the blebbing of cell membrane inside. The temperature gradient caused by the heat further helps in blebbing in this particular direction. These lipoid vesicles or blebs gets detached from the cell organelle or other side of membrane and remain there till a critical surface is reached. This membrane then blebs out and spread further, thus providing *nourishment* to the tissues. The chief beneficial effects of any kind of thermal therapy are due to the *increase in the circulation* and local metabolic process with the *relaxation of the musculature*. Application of heat causes *relaxation of muscles and tendons*, *improves the blood supply* and activates the local metabolic processes which are responsible for the relief of pain, swelling, tenderness and stiffness. Routine application of heat preceding the application of massage renders the applied area less painful than when the heat is not applied. The lumina of the contracted body architecture get smoother and wider. This rendering a stiff entity smooth relieves variety of obstructions. Widening of the core and simultaneous liquefaction of the solid or semi-solid material makes the flow easier. Widening of the tract and fluid character of the material inside makes the obstructions released slowly.

**2. Physical Effect of the Massage:** It *stimulates the sensory nerve endings* there by producing relaxation. It produces a hyperaemic effect causing the *arterioles to dilate* and thereby achieving *more circulation*. Also, the venous and lymphatic return is assisted. Massage causes movements of the muscles thereby accelerating the blood supply, which in turn relieves the muscular fatigue. The application of massage may cause displacement of the exudates and thus may relieve tension and pain increase of tonicity of muscle and ligaments.

**3. Medicinal Effect:** Shashtikashali contains anti-oxidants, polyphenols, iron, zinc which rejuvenates muscle, tissue. Bowman Briktrypsin Inhibitor (BBI) protein present in shashtikashali having anticarcinogenic, anti inflammatory, anti allergiacation. When combines with Casein present in milk, BBI will become Low Molecular Weight Protein (LMWP). This can be easily absorbed are give nutrition to the muscle tissues.

Cow's milk contain fat which accelerates the absorption of active ingredients. The alkaloid epederine present in bala also contributed to medicinal effect.

**Shalidhanya:** Shashtikashali is snigdha, Sthira, balavardhana, and dehadardhyakrit. Bhavaprakasa explained the properties as Tridosahara, Balya, varnaetc., useful in vatavyadhis, madhurarasa, sheetaviryra, madhuravipakagunas<sup>[18]</sup>.

**Bala:** balya, brimhanaetc, Charaka quotes that "Balasangrahakavataharanamsrestam"<sup>[19]</sup>. Gunas are Madhurarasa, Guru Snigdha, Pichila, Sheeta, Madhuravipaka. Bala very name indicates it gives strong or energy either nerves or the body as a whole. bala is *Rasayana* which gives most strength to the body and also it helps in the formation of new tissues in the places of damaged one which is known as Rejuvenation.

**Ksheeram:** Cow's milk is one of best wholesome foods. "Ksheeramjeevanee-yamsrestham"<sup>[20]</sup> gunas are madhurarasa, gurusnigdha, pichila, sheeta, madhuravipaka, strengthpromoting. Dugdham is sadyashukralam which indicates that it gives immediate energy to the body which is most essential for the patients of Pakshaghata.

The karma imparts Swedana and this opens up the srotas the shareera facilitating more nourishment and free movement of Vatadosha. This results in the relief of stambha and facilitates free movement of the sandhis. Thereby, it is an ideal treatment of choice in Pakshaghata.

**Conclusion:** The term Pakshaghata denotes a specific variety of Vatavyadhi. The disease is characterized by dhatukshaya and lakshanas reflective of vitiated Vata. Snehana and Swedana are both described as Poorva karmas and also find place among the Shad upakramas. Therefore, the agents/therapies of brimhana-shoolahara-stambhahara-balya properties should be used in this disease. Shashtikashali-pindasweda is a modification of Sankarasweda and it contributes the principles of Snehana and Swedana. All the ingredients of the panda sweda are of Snehana nature and Abhyanga also is performed as a part of this procedure. The massage performed during the procedure is advantageous in relieving shoola and stambha. Heat is maintained for more time period inside the pinda. Also the pindas are heated often and hence there is no reduction in the amount of heat applied over the body. Hence the advantages of the karma can be listed as, (1) temperature

gradient produced is higher which facilitates the absorption of the snehaamsha, (2) simultaneous massage performed creates the pressure gradient necessary for the absorption of the snehaamsha and (3) dravyas used are of snehana-brimhana qualities. This procedure includes snehasweda simultaneously. Shashtikashalipindaswedakarma imparts Swedana and opens up the srotas in the shareera facilitating more nourishment and free movement of Vata dosha. This results in the relief of stambha and facilitates free movement of the sandhis. The upakrama of Vatadosha emphasizes the necessity of these two karmas in correcting the vitiated Vatadosha. Snehana corrects the shuska dhatus that are the root cause for the Vata vitiation and imparts strength to the body and agni. Swedana relieves all types of Vata symptoms such as toda, ruk, ayama, shotha, stambha etc. and smoothens the body part. Repetitive uses of these two karmas are essential for the total control of Vata and restoration of its normal functions. Pakshaghata is a *Yapya vyadhi* but the drugs included in shashtikashalipindasweda are Bala, Dugda and Shashtikadhanya the gunas of these three drugs quite antagonists to the disease Pakshaghata. Shashtikashalipindasweda is believed to have a note worthy role in the management of such degenerative conditions by imparting strength to the body musculature and nervous system.

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