PHARMACODYNAMICS OF BASHPA SWEDA- REVIEW ARTICLE

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ABSTRACT

Swedana (sudation/ medicated Vapour) is an independent Upakrama (therapy) as included under the Shadavidha Upkramas as well as Purva Karma measures (prepurificatory procedure). Susruta and Vagbhata mentioned the four types of Swedana (sudation). Dalhana described Ushma Sweda as Bashpa Sweda. Bashpa Sweda as per Susrut included under Prastara, Nadi, Ashmaghan, Bhoo, Kumbhi Sweda types described by Charaka. Perspiration or sweating is produced by the sudoriferous glands. It is mixture of water, salts, urea, uric acid, amino acid, ammonia, lactic acid. Sudation therapy activates these glands to produce more sweating so as to flush out the bodily wastes or toxins which can be eliminated through sweat, from the body through secretary portion of eccrine sweat glands. Acharyas describes effects of Swedana (sudation) as Gauravghana, Sheetaghana, Agnideepti, Twakamardavata, Twak Prasadan and Sandhichestakar. Therapeutic heat acts by increased vascular blood flow helps to remove some of pain provoking metabolites resulting from tissue metabolism i.e. lactic acid, pyruvic acid and the products of tissue injury like prostaglandins and bradykinin. It increases extensibility of connective tissue, & decreases joint stiffness, & muscle spasm. It produces analgesia by releasing endorphin and other neurotransmitters which break the pathway of pain. Heat exerts a modulating effect at the spinal and supraspinal levels. In Bashpa Sweda medicated water vapour used. Water is an ideal medium to deliver heat to the affected tissues due to its high specific heat, produces pain relieving effects even in deeper tissues. Thus Bashpa Sweda simultaneously provides heat by convection method with medicinal properties which are Kapha Vataghna in nature and helps to cure various disorders by eliminating the morbid factors through Sweda.

Keywords: Bashpaswedana, Heat transmission, Pain relief, Swedana, Vatashamana.

INTRODUCTION

Ayurveda the ancient system of medicine showering its valuable treasures to mankind since ages and even today competing with the modern system of medicine which has incorporated latest biotechnologies and developments of the science and also getting immense global
Ayurveda is a holistic system of medicine; it treats the individual as a whole but not independent system wise. Among the Tridoshas (Body humours), Vata has given prime importance both in physiological and pathological conditions. The remaining two are being inert, their equilibrium depends on Vata. Vayu is also chief driving force of all the normal movements in the body. When Vayu gets vitiated, all these movements get hampered. The Vayu vitiates by different etiological factors, spreads through different channels of the body and get settle in the particular site to manifest the disease. In Ayurvedic classics, our Great Sages have given so many special therapeutic procedures for specific disease along with thousands of medication. Panchakarma (Purificatory therapy) is a very unique therapeutic procedure, because of its preventive, promotive, and rejuvenative properties as well as providing a radical cure. Among these Panchakarma (Purificatory therapy), Swedana (sudation) is such a treatment that is applicable in all the Vatavyahdis (Vata diseases). Uses of Swedana (sudation) are explained by Lord Buddha for Vatyadhi (Vata diseases) in ancient time. E.g. Sambhar Sweda, Mahasweda. Swedana (sudation) is also described in Brahman literature like Hiran�akeshi. Panchakarma (Purificatory therapy) deals with elimination of the provoked Doshas from the body. It helps to eradicated the disease completely by acting at the root of disease¹ i.e. Malas or disease causative factors by eliminating them, thus purifies the body. Prior to Panchakarma (Purificatory therapy) therapy, Purva Karma (preparatory measures) viz. Snehan (oleation) and Swedana (sudation) to be performed. Swedana (sudation) is defined as the process which produces perspiration in the body and removes stiffness, heaviness, coldness of body.² Susruta and Vagbhata described four types of Sweda – viz- Ushma, Tapa, Upanaha and Drava. Dalhana described Ushma Sweda as Bashpa Sweda (Warm steam).³ Bashpa sweda (Warm steam) is one the variety of Sarvang, Snigdha, Agni Swedana. Here the perspiration is produced by exposing the body to Bashpa or medicated steam or vapours. Bashpa Sweda as per Susrut included under Prastara, Nadi, Ashmaghan, Bhoo, Kumbhi Sweda types described by Charaka. Harita describes seven varieties in which Bashpa Sweda is main variety.

MATERIAL & METHOD:
This is conceptual type of study. All sorts of references has been collected and relevant material is compiled from various available Ayurvedic classics texts like Charak Samhita, Sushruta Samhita and Ashtanga Hridya and available commentaries on it. Research articles are also searched from various websites. All Compiled matter is reorganized and critically analyzed for the discussion and attempt has been made to draw some fruitful conclusions.

PHARMACODYNAMICS OF BASHPA SWEDA
Heat and cold have been used in the treatment of pain since the time of Hippocrates. Swedana (sudation) is an independent Upakrama (therapy) as listed in the Shadvidha Upakramas. Most of the Swedana (sudation) procedures described by various Acharyas can be included under the Bashpa Sweda. Through the different methods of Bashpa Sweda, Sweda can be induced at a required site i.e.at local by way of Sweda Petika. In the present era it is most convenient, effective, more practiced procedure, so we should know the pharmacodynamics of Bashpa Sweda. It relieves the stiffness which may be due to Sama and Dustha Kaphadosha (Vitiated), Aavarana of Meda on Vata (covering of
Meda over Vata), which are subside by Teekshna Guna of Swedana Dravya (penetrating quality of sudation substance). It produces lightness in body by excreting the morbidities in the form of Sweda. Ushna Guna (hot) is predominate as Aagneya and having in corporating property. Teekshna guna (penetrating quality) having Pak-kara, Stravana (perfusion), Shodhana properties, so Ushna (Hot) and Teekshna gunas (penetrating quality) helps to digest the Ama and liquefies the Vikruta Malas (waste product) producing lightness in body. They also help to enhance the Agni (digestive fire) and improve the appetite causing desire for food. Skin is the site for Swedana (sudation). Romakupas (hair follicles) are the Moolasthan (principle organ) of Swedavaha Srotas which are located in skin. Swedana (sudation) eliminates the waste product from skin and also cause Prasadana, & softness to skin. It helps in proper movement of joints due to relaxation of muscles, tendons by supplying more nutrition through increased blood flow. Drugs used for Swedana (sudation) which increases the mobility of channels are generally Snigdha (unctous), Sara (mobile), Dravya (liquid) in nature, due to these quality joints becomes lubricant. Perspiration or sweating is produced by the sudoriferous glands. It is mixture of water, salts, urea, ammonia, uric acid, amino acid, lactic acid. Sudation therapy activates these glands to produce more sweating, so as to flush out the bodily wastes or toxins which can be eliminated through sweat from the body through Secretory portion of eccrine sweat glands. Heat transmitted in body by – conduction, convection, radiation methods which induces sweating. In Bashpa Sweda heat is transferred to the body by convection method. Sweda relieves the pain by –

1) Increased vascular blood flow helps to remove some of pain provoking metabolites resulting from tissue metabolism i.e. lactic acid, pyruvic acid and the products of tissue injury like prostaglandins and bradykinin.

2) By releasing endorphin and other neurotransmitters which breaks the path way of pain.

3) Sensation of temperature and pain both are carried to the higher centres via same neural path ways. Heat exerts a modulating effect at the spinal and supraspinal levels.

4) Relieves the muscle spasm by reducing the levels of ischemia associated with prolonged contraction in affected muscles by removing fatigue products and by induction of fresh blood. Sweda relieves pain and muscle spasm which is interdependent, a reduction in one will cause a reduction in other.

5) Increase of range of joint of motion by neural and mechanical mechanisms. The analgesic effect of heat allows tolerance for stretching of tendon and ligaments during movement. Sweda also increase extensibility of collagen tissue providing free movements of joints. It helps to increase blood flow improving the nutrition and drains the products stagnated in cells and tissues. It also controls the infection by enhancing defence mechanism.
At the time of Snehana (oleation) and Swedana (sudation) as every nearby cell expands peripherally the blebbing of the cell membrane is restricted tangentially. The only possibility that remains is a blebbing of the cell membrane inside. The temperature gradient and pressure gradient caused by the Swedana further helps blebs detached. From the cell membrane and remain there till a critical surface area is reached. These membrane then blebs out and spread further. Same principle explained in Ayurveda. Sweda helps to dissolve the waste product. Sweda (sudation) cause Srotovivruutha (enlargement of channels) with the help of Sukshma (Subtle), Drava (liquid), Sara (mobile) quality, and Malas (waste product) comes to the Kostha (alimentary canal) under control of Vata for further elimination by Panchakarma (Purificatory therapy) procedures. In Bashpa Sweda medicated decoction vapour is used. Water is an ideal medium to deliver the heat to the affected tissues due to its high specific heat. This principle helps to produce pain relieving effects even in deeper tissues.

**DISCUSSION:**

Shoola or pain is the main symptom of Vata Vyadhi. Our Acharyas prescribe Swedana (sudation) as prime remedy for Vata since it contain opposite quality of Vata. Hence Swedana (sudation) is described as independent Upakrama as listed in Shadvidha Upkramas. In the present era it is most convenient, effective and more practiced procedure. Bashpa sweda relieves the stiffness and heaviness in body by in corporting the Sama and vitiated Kaphadosha. According to modern science Sweda relieves the pain by
1. Increased vascular blood flow – removing lactic acid, pyruvic acid, prostaglandins.
2. Release of endorphin and other neurotransmitters – breaks the pathway of pain.
3. Heat exerts a modulating effect at the spinal and supraspinal levels.
4. Relieves muscle spasm - by reducing levels of ischemia.

CONCLUSION:

_Bashpa Sweda_ transmits heat through convection method the effects of Sweda Dravya (sudation substance) and the effects of heat will reach to micro level. Hence _Bashpasweda_ is superior to all other types of _Sweda_, since it is able to takeout the morbid factors even at cellular level and also removes the obstruction of _Stotras_ at that level which enable free movement of _Doshas_ and more specifically _Rasa - Raktha_ to nourish the tissue at desired part.

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