

THEORETICAL ESTABLISHMENT OF MAINTENANCE OF HEALTH OF SUTIKA THROUGH BIOACTIVE INGREDIENTS OF SAUBHAGYA SUNTHI PAK*¹Kamde Rahulkumar R. and ²Mohite Swati S.¹Assistant Professor (Prasutitantra & Streerog); KVTR Ayurved College, Boradi, Dist-Dhule (India) 425428.²Professor & HOD (Prasutitantra&Streerog); BV(DU) College of Ayurveda, Pune- 42 (India).

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ABSTRACT

Delivery of a baby is considered as rebirth of the female. Recovery from the stress and strain of labor is a process which takes some period of time. This period of 6 weeks post natal is regarded as (puerperium) sutikawastha. Wound healing, start of lactation and involution of reproductive system are major events during sutikawastha. Saubhagya Sunthi Pak is one classical multi herbal Ayurvedic preparation which take care of needs in sutika (puerperal phase woman). This article review bioactive compounds in the herbal ingredients of saubhagya sunthi pak. The desirable effect and contributing bioactive component are compared to conclude that most of the needs of a puerperal woman can be fulfilled by consuming Saubhagya sunthi pak as a dietary supplement.

KEYWORDS: sutika, puerperium, saubhagya sunthi, bioactive compound.**INTRODUCTION**

In Ayurveda, care of a female during every segment of her life has been given importance, especially when it comes to antenatal (garbhini) care and postnatal (sutika) care. The postnatal period beginning immediately after the expulsion of placenta and extending up to 6 weeks post-delivery, otherwise called as puerperium or puerperal period. The puerperium is the time when the mother's body is returning to its pre-pregnant state. Most of the physical changes are complete by 6 weeks^[1] Postnatal care can certainly be co-related with Sutika Paricharya explicated in Ayurvedic classics. Garbhini and Sutika Paricharya are well described by the Ancient Ayurvedic scholars in their respective Samhitas. They have described dietary regimen, living style, and other required management for whole pregnancy and up to 6 month after delivery. In this stage mother should be educated to take care of herself and the new born baby. This period is of happiness and contentment, on one hand and on the other hand the psycho-physical fatigue, loss of blood and body fluid during delivery, makes her weak or emaciated. Garbhini (pregnant woman) is much inclined to the disease due to aggravation of Doshas. This further may be provoked during delivery and puerperium due to loss of blood and other important Dhatus of body. Therefore women need special and proper care during pregnancy as well as during puerperium. The regimen that helps the woman to regain her lost vitality and helps her body to revert back to pre-

pregnant state is called Sutika Paricharya, as during this period she restores her health and strength.^[2]

Along with the sutika paricharya quite a few medication are labelled as 'Sutikarog chikitsa adhikar'. This is because though sutikaawastha is a physiological condition of female body, it is not the healthy stage. As there is impaired function of dosh, dhatu and agni, the definition of 'swasth' is not met precisely during sutika kal. Hence this vulnerable condition to variety of ailments need special medicines to prevention of diseases. Commonly observed problems during puerperium or post-partum period are fever, diarrhea, edema, colic pain, abdominal distension, loss of strength, drowsiness, anorexia, delirium, and other diseases.^[3]

Saubhagya sunthi pak is a multiherbal Ayurvedic formulation, which is described in classical texts of Ayurveda and believed to provide beneficence during sutika kal.^[4] Any formulation for sutikawastha must meet the need of the psycho-physical condition and changes in the physiology during puerperium. As stated about objectives of Ayurveda, prevention of disease has been given first priority and dealing with illness being the other one. Saubhagya sunthi pak is effective in both ways, with assured benefits for a healthy motherhood.

The Ayurvedic Formulary of India has included Saubhagya sunthi Pak in the list of drugs used in Sutika^[5]

MATERIAL AND METHODS

Literature survey

Sutika: The etymological origin of word “sutika” is found in Sanskrit literature, ‘Su-presage’ meaning “lady underwent prasav (labor), another from Sanskrit grammer Tudadi gana of Panini, ‘Su-prerace’ refers to either expulsion or instigation, means a woman who expels out the fetus is termed as *Sutika*.

The classical texts of Ayurveda labels a woman as Sutika only after expulsion of placenta (apara), as stated in khil sthana of Kashyap Samhita 11/6.

About Sutika kal i.e. duration of puerperium, there are more than one opinion. The most relevant though is 1½ months. Range of sutika kal is from first 10 days post-partum to recommencement of menses of the woman. Sushrut Samhita Sharir sthan 10/16 and chikitsa sthan 15/27 are the quotable references.

Acharya Vaghbhat (Indu commentry) had narrated condition of Sutika precisely. The woman becomes durbal (emaciated) during pregnancy due to growth of fetus and during labor, the labour pains, excretion of kleda (moisture) and rakta (blood) creates shunya-shariratvam (empty bodiedness) due to instability or languor of all the dhatus. With the Sutika paricharya, she can attain stability and get back her pre-pregnancy stage.

The word “Parichrya” stands for attention or service in all respects. The Sanskrit etymology of paricharya is *dhātu- “Char-gatau”* by prefixing the *upasarga “pari”*. So the attention provided to post natal woman is known as “sutika paricharya”.

Table: 1.

Sr. No.	Drug	Latin Name	Rasa	Vipak	Virya	Doshghanata	Karya
1.	Shunthi ^[6]	<i>Zinziberofficinale</i> (RHIZOME)	Katu	Madhur	Ushna	Vata-Kaphaghna	Agnideepan, aampachan, balya, shothaghna
2.	Gou dugdha ^[7]	Cow milk	Madhur	Madhur	Sheeta	Tridoshashamak	Jeevaniya, dugdhavardhak, medhadayak, balakarak, rasayana
3.	Gou ghrita ^[8]	Cow Ghee	Madhur	Madhur	Sheeta	Tridoshashamak	Jeevaniya, dugdhavardhak, medhadayak, balakarak, rasayana
4.	Sharkara ^[9] (Khand)	Sugar	Madhur	Madhur	Sheeta	Rakta pitta shamak	Vrushya, Dahashamak
5.	Shatapushpa ^[10] (Shatahva)	<i>Anathumsowa</i> (SEED)	Katu Tikta	Katu	Ushna	Kapha-Vatashamak	Deepan Anuloman Krimighna Aartavjanan Stanyajanan
6.	Jeerak ^[11]	<i>CuminumCuminum</i> (SEED)	Tikta, Katu, Madhur	Katu	Ushna	Tridoshghna	Vedanasthapana, Vranaropan, stanyajanana,

The base of Sutika Paricharya is a complete health regimen for the post natal woman. It provides assistance for the woman to recover physically and emotionally and manage the care of her infant. This consists of the following principles:

1. To refurbish the health status of mother.
2. To prevent possible infection.
3. To take care of lactation, breasts and promotion of breast feeding.
4. To arrange for care of the baby.
5. To encourage and direct for family planning.
6. To provide case specific health education.

The first 3 points may need some or other kind of medicine. Saubhagya sunthi pak is one of the kind of Ayurvedic formulation, which is advocated to benefit puerperal woman.

In this survey, bioactive ingredients in Saubhagya Sunthi Pak will be discussed. Following table is a display of ingredients in Saubhagya Sunthi Pak. According to the table pharmacodynamics of Saubhagya Sunthi Pak can be determined as;

- Rasa: Tikta, Katu
- Vipak: Katu
- Virya: Ushna
- Doshaghna: KaphaVataghna
- Karya: Shoolprashaman, Shothhar, Agnideepan, Aampachan, Stanyajanan, Stanyavardhan, Garbhashaysankochak, Garbhashayshodhak, artavjanan, Krimighna, Jantughna, Balakarak, Rasayan.

							garbhashayshodhan, deepan, pachana
7.	Marich ^[12]	<i>Piper nigrum</i> (SEED)	Katu	Katu	Ushna	Vatakaphagnapittakar	Yakrututtejjan, vedanasthapana, shothghna, artavajanan
8.	Pippali ^[13]	<i>Piper longum</i> (FRUIT)	Katu	Katu	Ushna	Kapha-vatagnapittakar	Garbhashayasankochak, strotorodhahara, vatanuloman
9.	Twak ^[14] (Dalchini)	Cinnamomumzeylanicum (Bark)	Katu Tikta Madhur	Katu	Ushna	Kapha-Vatashamak Pitta vardhak	Vedanastapak, Jantughna, Garbhashaysankochak
10.	Ela ^[15] (Wilaychi)	Elettariacardamomum (Fruit)	Katu Madhur	Madhur	Sheeta	Tridosahar	Rochan, Deepan, Pachan, Hridya, Balya
11.	Tejpatra ^[16]	Cinnamomumzeylanicum (Leaf)	Madhur	Madhur	Ushna	Kaphavatashamak	Aruchinashak
12.	Yavanika ^[17] (Owa)	<i>Trachyspermumammi</i> (SEED)	Katu, Tikta	Katu	Ushna	Kaphavataghna	Garbhashayuttejak, garbhashayshodhan, Shoolprashaman, Krimighna
13.	Karvi ^[18] (Krishna jeerak)	<i>Carumbulbocastanum</i> (SEED)	Katu	Katu	Ushna	Kaphavataghna	Stanyajanan, vatanuloman, garbhashayshodhan
14.	Saunf ^[19] (mishi)	<i>Foeniculumvulgere</i> (FRUIT)	Madhur, Tikta, Katu	Madhur	Sheeta	Vatapittaghna	Stanyajanan, yonoshoolhar, dipan,pachan, anuloman, balya
15.	Chavya ^[20]	<i>Piper chaba Hunter</i> (FRUIT/ ROOT)	Katu	Katu	Ushna	Kaphavatashamak, Pittavardhaka	Deepanpachan, Krimighna, Shoolprashaman
16.	Agni (Chitrak) ^[21]	<i>Plumbagozeylanica Linn</i> (ROOT)	Katu	Katu	Ushna	Kaphavatashamak, pitta vardhaka	Agnideepan, Garbhashaysankochak, rasayan
17.	Musta ^[22] (Nagarmotha)	<i>Cyperusrotundus</i> (STEM)	Kashaya TiktaKatu	Katu	Sheeta	Kapha-vataghnaPittaghna	Stanyavardhan, stanyashodhan, garbhashaysankochaka, raktaprasadan, shothaghna

The Cow Ghee, Cow milk and Sugar main medium of preparation of Saubhagya Sunthi Pak. Major constituent is dry ginger (Sunthi) while rest of the herbs are added to enhance the efficacy.

The principle of management of puerperium are

- To restore health of mother
- To prevent infection
- To take care of breasts and lactation
- To take care of ailments like after pains, anemia, anorexia etc.^[23]

These pharmacological actions are effect of the bioactive compounds in a substance. The bioactive compounds are defined as components of edibles that influence physiological or cellular activities in the animals or humans that consume them. Bioactive compounds are present in small quantities in food, mainly in fruits, vegetables and whole grains (seed). They provide health benefits beyond the basic nutritional value.^[24]

It will be interesting to list the bioactive compounds found in herbal ingredients of Saubhagya Sunthi Pak and structure a compilation of each bioactive compound. Hence to conclude on the efficacy of Saubhagya Sunthi Pak during puerperium.

Every bioactive compound has some pharmacological action on living body. The published articles in this respect can be referred to countercheck action of Saubhagya Sunthi Pak during puerperium on modern parameters.

Chemical composition of herbal contents in Saubhagya Sunthi Pak are enlisted below.

Table: 2.

Sr. no.	Drug	Chemical Composition
a	Sunthi ^[25]	Gingerol, Shagol, Zingerone
b	Shatpushpa ^[26]	Carvone, Limonene, Dill-apiole, Linoleic acid, Anethole
c	Jirak ^[27]	Thymol, Cumic aldehyde, pentosan
d	Marich ^[28]	Piperin, Piperidine, Chawisin
e	Pippali ^[29]	Piperin, Piperidin
f	Dalchini ^[30]	Tanin, Cinnamaldehyde, Eugenol
g	Ela ^[31]	Terpinene, Terpeneol, Terpinyl acetate, Cineol
h	Tejpatra ^[32]	Lignin, Basserin
i	Yavani ^[33]	Thymol, Stiaroptin, Simon, Tarpen, Volatile oil
j	Karvi ^[34]	Volatile oil
k	Saunf ^[35]	Anethol, Fenchone
l	Chavya ^[36]	Piperine, Pipalartin, beta-sitasterol, Pipernonalin,
m	Chitrak ^[37]	Plumbagin, Chitraneone, Zeylanone
n	Musta ^[38]	Volatile oil

There is ongoing research worldwide to study the effect of bioactive compounds found in herbal medicinal plants. Animal studies or human clinical studies are available as references to determine the exact ingredient causing desired effect in a particular clinical condition.

During sutikawastha anti-inflammatory, anti-oxidant, anti-microbial, appetizer, apoptosis, galactagogue, immunogogue, digestive, anti-spasmodic and wound healing activity is desirable.

The ingredients of saubhagya sunthi Pak are found to be active for these effects in one or more ways.

Table: 3.

Sr. no.	Desired Clinical effect	Ingredient	Bioactive compound
1	anti-inflammatory	a) Sunthi b) Shatpushpa c) Trisugandhi d) Yawani d) Saunf e) Chitrak	Gingerol and gingerol related compound, ^[39] Shogol ^[44] Zingerone. ^[44,45] Dill-apiole, ^[52] Limonene, ^[53] Linoleic acid ⁵⁴ , Anethole, ^[55] <i>E</i> -cinnamaldehyde and <i>o</i> -methoxycinnamaldehyde, ^[70] Thymol, ^[73] Essential oil, ^[76,77] Zeylanone, ^[83,84]
2	anti-oxidant	a) Sunthi b) Shatpushpa c) Jirak&Carvi d) Trikatu e) Yawani d) Saunf e) Chavya f) Chitrak g) Musta	Gingerol and gingerol related compound, ^[40] Paradol, ^[42] Shogol, ^[44] Zingerone, ^[47,48] Ginger flavonoids, ^[51] Seed essential oil, ^[56] Volatile oil(carvacrol, anethole,estragol, flavonoids) ^[58-62] Piperine and 6-gingerol, ^[67,69] Essential oil, ^[76] Phenolic compounds. ^[79] β -sitosterol. ^[80] chitraneone. ^[85,86] Aqueous extract. ^[87]
3	anti-microbial	a) Sunthi b) Shatpushpa c) Jirak&Carvi d) Trikatu e) Trisugandhi f) Yawani g) Saunf h) Musta	Gingerol and gingerol related compound, ^[41] Paradol, ^[43] Zingerone, ^[49] Zerumbone, ^[50] Seed essential oil, ^[56] Volatile oil (carvacrol, anethole and estragol, flavonoids), ^[58-62] Cuminaldehyde. ^[58] alkaloids, phenols, and essential oils. ^[68] Cinnamaldehyde. ^[71] Thymol, ^[73] Essential oil, ^[74] Essential oil, ^[77] Essential oil, ^[90]
4	appetizer	a) Jirak&Carvi	Volatile oil, ^[63,64]
5	galactagogue	a) Trisugandhi b) Saunf	Cinnamon extract, ^[72] Phyto estrogens, ^[78]

6	immunogogue	a) Shatpushpa b) Jirak&Carvi c) Yawani d) Chavya	Anethole, ^[55] Volatile oil, ^[65] Thymol, ^[73] β -sitosterol, ^[81]
7	digestive	a) Chitrak	Plumbagin, ^[82]
8	anti-spasmodic	a) Shatpushpa b) Jirak&Carvi c) Yawani d) Saunf e) Musta	Seed essential oil, ^[56] Carvone, ^[57] Caraway oil, ^[66] Thymol, ^[73] Essential oil, ^[75] Aqueous extract, ^[88]
10	wound healing	a) Musta	Aqueous extract, ^[89]
12	analgesic	a) Sunthi b) Trikatu d) Saunf	Gingerol and gingerol related compound, ^[39] piperine, gingerol, inoleresin, ^[67] Essential oil, ^[76]

DISCUSSION

The research in pharmacology detects various chemical components in herbs. Bioactive compounds are those components in food that influence physiological or cellular activities in animals or humans that consume them.^[24] Found in a small quantity but can be beneficial for health. This potential is assessed through animal or human trials. Affirmative effects are enlisted in above table:3. Other than the listed effects, some of these bioactive compounds are found to benefit as anti-mutagenic or anti-cancer.

Considering the desired action in woman during puerperium (sutikawastha), priority to prevent infection due to wounds at genital tract, to felicitate lactation, relieve the pain and spasm, to build appetite, digestive power and immunity can be determined.

The antioxidant and immunogague action prevents oxidative stress and build immunity respectively. The anti-inflammatory, analgesic, wound healing properties help in recovering from discomfort. Anti-spasmodic action takes care of after pains. Anti-microbial action is proven on bacteria, fungi and some viruses. The appetizer and digestive action mimics deepan-pachan. Which is vital from Ayurvedic point of view. Galactagogue action aid for a very essential physiological change in post natal life.

CONCLUSION

The modern day changes in lifestyle and reluctant approach towards following the Sutika Paricharya (Ayurvedic regimen during puerperium) may cause some or other short term or lifelong health complications. Ayurveda has advocated some drug combinations which can be used as preventive or curative medicines during sutikawastha. Saubhagya sunthi pak is one such multiherbal combination. Study of bioactive components in herbs of Saubhagya sunthi pak compile an evidence about which chemical compound contribute for which desired activity during sutikawastha.

Without any doubt the claim of efficacy of Saubhagya sunthi pak in woman during puerperium match the

bioactivity of chemicals found in herbal ingredients for most desired action.

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