



Review Article

A LITERARY REVIEW OF *TRUNAPANCHAMULA* W.S.R TO ROLE IN *STANYA JANANA*

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ABSTRACT

Breastfeeding is a hormonal, emotional physical and dietary phenomenon certain to be affected by every component. As Milk is a completely unique and whole nutritive supply for the mammal neonate, additionally imparting immune safety and developmental signals, it is the best way to care for new born. Besides creating the overwhelming bonding, it is also the perfect nourishment for them. In Ayurvedic texts, formation of *Stanya* (Breast milk), causes of *Stanya pravriti* (or milk ejection), *Dhatri* (wet-nurse), *Dhatri-pariksha* (examination of wet-nurse), *Stanapan-vidhi* (Breast feeding), *Stanyasampat* (merits of Breasts) etc. are described by different Acharyas Since try should be made to prevent it with right anticipation via multidimensional approach comprising of physical methods, provisions of nutritious lactogenic eating regimen and use of herbal galactagogues cited thoroughly in Ayurvedic literature. Synthetic Galactagogues cited in cutting-edge sciences pose a more chance of detrimental health dangers at the same time as *Ayurveda* manage protocol addresses internal balances and outdoor influences contributing to problem. *Charaka* also described *Stanyajanana Mahakasaya* likewise *Susruta Vagabhatta* described *Gana* in where *Trunapanchamula* is included in that. So, this review gives an integrated overview of the physiology of lactation with particular focus on physiology of milk production and secretion in respect to Ayurvedic and modern concept with special reference to *Trunapanchamula*.

INTRODUCTION

Superiority of Breast milk, as best food for infants is well documented since ages. the relation between Breast milk & growth and development of infants has been described in Ayurvedic manuscript. *Charaka* prescribed *Stanya* specifically for infants as it possesses anti-infective factors in eye disorders. [1] Breast milk is universally counselled because the most well-liked supply of child nutrition, partly thanks to its superior nutrients & additionally being a supply of biologically active molecules like hormones, protein, immunoglobulin etc. The act of Breast feeding provides unique mother infant inter action opportunities that may have important implications for infant's growth and development.

Breast feeding has a very special role in infant feeding and is superior to formula feeding in a number of ways. It is the first natural feeding and nutritionally most important part of infancy. In addition to numerous nutritional advantages, it protects against infections via specific & non-specific immune factors present in it. Some researchers also show that Breast feeding protects the baby against diabetes, malignant lymphoma and Crohn's disease.[2] In Ayurvedic literature, eight types of milks are mentioned, obtained from different mammals and their respective indications in different diseases is also stated. In *Ayurveda* Human Milk is considered as Breast milk (*Stanya*) which is formed from *Rasa Dhatu* i.e., *Updhatu*. It is subsidiary tissue arises from *Dhatu*s. The essential nutrient fraction of '*Rasa Dhatu*', enters from the entire body into the Breasts and it is known as '*Stanya*'. [3]

Formation of *Stanya* (breast milk)

According to *Acharya Charak*, for the *Garbha poshana* the *Ahara* devoured on through *Garvini* performs three functions.

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1. *Matru pusti* - for nourishment of Mother
2. *Garbha pusti* - for development of Foetus
3. *Stanya pusti* - for Breast milk

According to *Charak Rasa dhatu* nourishes, *Stanya*.^[4]

It is accepted by *Sushruta Acharya* also. As per *Sushruta Samhita* after digestion of food, the *rasa* is formed. Sweet essence a part of this *rasa* current through entire body (by the action of *Vyana-vayu*) reaches Breast and is termed as *Stanya* (Breast milk) therefore in keeping with *Sushrut Stanya* is made by *Rasa Dhatu*.^[5]

Stanya is *Updhatu* of *Rasa Dhatu* According to *Sarangadhar*.^[6]

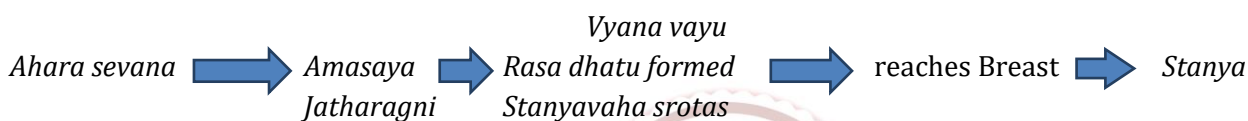
Harita explains that *Ahara* is eaten with the help of exploitation the woman; identical road via *Kshiravaha sira* and obtaining combined with *Pitta* reaches *Jathara*. There it gets digestible by *Agni*, reaches the *Siras* of Breast and is ultimately discharged. The secretion having association of *Agni*

and *Soma* is understood as milk. The blood as a result of movement of *Pitta* receives suppuration and can become white. The milk isn't moulded in younger girls due to a lack of *Dhatu* strength, and in *Vandhya* females due to obstruction of *Srotas* milk is not formed.

Kashyapa, vagbhata and *Dalhana* settle for the formation of *Stanya* from *Rasa*. However, whereas describing *Rakta gulma* or placenta formation they need mentioned that one a part of *Rakta* or the *Rakta* left over when formation of placenta reaches breast gets coloured by *Kapha* & forms *Stanya*, when delivery it's augmented or shaped from *Rasa*.^[7]

From above point of view by different *Acharyas* it can be concluded that *Stanya uttpatti* is described as follows.

1. From *Rasa* and *Ahara rasa*
2. From *Rakta*
3. From *Raja*



Causes of *Stanya Pravriti* or Milk Ejection

Sushruta says that as semen is ejaculated by thought sight or touch of the woman or coitus with her, similarly milk is also ejected by thought, sight or touch of the child & also with his physical contact (sucking). After delivery on third or fourth day, the *Dhamanis* or *Shiras* situated in cardiac region get dilated & initiate milk ejection.^[8]

Harita says that due to force used during bearing down efforts by the parturient woman, her *Srotas* get cleared leading to sudden milk ejection, however, this milk is thick due to It may be assumed that formation of adequate amount and quality of Breast milk is decided by the Standard of *Aahar Rasa* that depends upon each adequate food and their correct metabolism too.

This may well be potential reason for considering Breast milk (*Stanya*) as subsidiary tissue (*Updhatu*) of *Rasa Dhatu* (plasma of blood). The quantity of daily production of Breast milk (*Stanya*) has been estimated as 2 *Anjali*.^[9]

According to Modern Aspects

When the baby suckles the Breast, sensory impulses are transmitted through somatic nerves from the nipples to the spinal cord and then to the hypothalamus, these causing oxytocin secretion at the same time that they cause prolactin secretion. Oxytocin is then carried in the blood to the Breasts where it causes the myoepithelial cells that surrounded the outer walls of the alveoli to contract these by expressing the milk from the alveoli into the ducts. Thus within 30 seconds to a minute, after a baby begins to suckle the Breast milk begins to flow.^[10]

A conditioned reflex is built during suckling

Impulses ascending from the nipple and areola



The hypothalamus's paraventricular and supraoptic nuclei



The posterior pituitary squirts oxytocin, which induces the myoepithelial cells of the alveoli and milk ducts to contract. (Milk ejection or milk let down reflex)



Milk is forced down into the ampulla of lactiferous ducts, where from it can be expressed by the mother or sucked by the baby

According to Ayurvedic Concept

According to *Ayurveda*, the nutritional component of food (*Aahar Rasa*), which is generated after normal digestion, is circulated throughout the body by *Vyana Vata* (a type of *Vata Dosha*) and eventually reaches the Breast, where it is resurrected as Breast milk (*Stanya*).^[11]

Stanya Janana W.S.R Trunapanchamula^[12]

Drugs	Botanical name	Rasa	Guna	Vipaka	Veerya	Specific terminologies in Ayurveda
<i>Kusha</i>	<i>Desmostachya bipinata</i>	<i>Madhura, Kasaya</i>	<i>Laghu, Snigdha</i>	<i>Madhura</i>	<i>Sheeta</i>	<i>Stanyajanan Kseerjanana</i>
<i>Kasha</i>	<i>Saccharum spontaneum</i>	<i>Madhura, Kasaya</i>	<i>Laghu, Snigdha</i>	<i>Madhura</i>	<i>Sheeta</i>	<i>Stanyajanan Kseerjanana</i>
<i>Darbha</i>	<i>Imperata cylindrical</i>	<i>Madhura, Kasaya</i>	<i>Laghu, Snigdha</i>	<i>Madhura</i>	<i>Sheeta</i>	<i>Stanyajanan Kseerjanana</i>
<i>Ikhu</i>	<i>Saccharum officinarum</i>	<i>Madhura</i>	<i>Guru, Snigdha</i>	<i>Madhura</i>	<i>Sheeta</i>	<i>Stanyajanan</i>
<i>Nala</i>	<i>Arundo donax</i>	<i>Madhura, Kasaya, Tikta</i>	<i>Laghu, Snigdha</i>	<i>Madhura</i>	<i>Sheeta</i>	<i>Stanyajanan</i>

Ayurvedic Pathophysiological Understanding of Mode of Action

Classical excerpts on galactagogue action are authentic evidences (*Aptopadesha*) which could be explained in light of Ayurvedic pharmacological and patho-physiological principles to understand the mode of action. *Ayurvedic* texts quoted the utilization of the *Kapha vardhaka* medication, *Madhura, Kashaya anurasa, Sheeta* and *Laghu guna* for increasing the Breast milk. As *Kapha Dosha* is that the key issue for the rise in Breast milk, explication of the *Kapha* increasing factors/pharmacological principles viz. *Rasa* (Taste), *Guna* (Bio-physical property), *Virya* (Active principle/potency), and *Vipaka* (Product of bio transformation/Drug-Receptor complex) of medicative plants indicated for agent action that can be accommodating within the study of mode of action of those medication. A solicitous interpretation is that varied attributes dominating the pharmacodynamic profile viz. *Snigdha* and *Guru Guna, Madhura rasa* and *Vipaka, Sheeta Virya* are the factors having *Kapha vardhaka* action (increases *Kapha dosha*).

Ayurveda principles indicate that the medication possessing physical qualities and medical specialty attributes the same as body components or tissues are to blame for growth, development or augmentation of several elements of the body (*Sarvada sarva bhavanam samanyamvridhhi karanam, Samanyam ekatvakaram, Tulyarthata samanyam*).^[13]

Chemical Composition of *Saccharum spontaneum* (*Ikshu*)

The dried grass yields reducing sugars along with glucose, xylose, galactose and rhamnose.

The root of *Saccharum spontaneum* is boiled in cow milk and given in a dose of 50 60 ml to lactating women to improve the quantity of Breast milk.^[14]

Chemical Composition of *Desmotichiyum bipinata* (*Kusha*)

The root of the plant contains Cylindrin, Arundroine and Feninole isoarborinole.

To improve the amount of Breast milk in lactating women.^[15]

Chemical Composition of *Arundo donax* (*Nala*)

Due to its high fibre and low protein content, *Arundo donax* foliage is poorly digested. The reported digestibility values were about 47 to 52% for DM digestibility and about 54-56% for OM digestibility. A commercial bolus manufactured from a combination of many powdery plants together with *Arundo donax* improved milk yield in farm cows, that was attributed to the presence of parts reportable to be galactagogues.^[16]

Chemical Composition of *Imperata cylindrical* (*Darbha*)

Nutrient compounds, including crude fibre, carbohydrates, sugars, fatty acids, and trace components, have been found in *I. cylindrical*, demonstrating the plant's low-calorie and health-promoting qualities. Carbohydrates and sugars provide energy and flavour to plants, and their presence indicates *Imperata cylindrical's* potential as a functional food.^[17]

DISCUSSION

Acharya Sushruta has quoted that *Ahara rasa yoni* i.e., type of Diet plays an important and critical role in formation of Breast milk. Diet and Breast milk are closely intertwined. As per *Ayurveda*, the food substances which are composed of five primordial elements, is of four types, contain six *Rasas*, possess either two or eight types of potencies hen eaten, when food is correctly digested and metabolised under the

effect of *Jatharagni*, an exquisite healthy essence of food called as *Rasa* is generated. This *rasa* nourishes the very first *Dhatu*, known as *Rasa dhatu*, and *Stanya* is a result of this *Dhatu*, hence *Stanya* is also nourished by *Ahara*. Ancient authors mention a variety of agent foods and drinks in classical texts. The usage of *Kapha Vardhak* articles has been recommended by *Acharya Sushruta*. Foods and beverages that are predominantly watery, sweet, bitter, or salty should be used.

Charaka Maharshi in *Nidana Sthana Gulma Nidana adhyaya*, in the context of *Shonita Gulma Laxana* told that that *Stanya* exist only due to '*Avarodha of raja*'.

Anatomically we will find 2 *Urdhwagami dhamani* and 4 *Adhogami dhamani* for *Shukra vahana* in males. In that 2 *Urdhwagami dhamanis* are homologous with *Stanyavaha dhamani* in female, whereas 4 *Adhogami dhamanis* are homologous with *Artava vahi dhamani* in female. So, there is same one channel for transportation of both *Stree shukra* and *Artava* in female, hence obstruction of *Artava* causes *Vimarga gamana* of that which reaches *Stana* ultimately as *Stana* is the *mula sthana* of *Shukra*. There by the action of *Pitta* converts it physically into *Stanya*, this can be correlated with role of reproductive hormones such as estrogen, progesterone, prolactin, oxytocin, etc. in the formation of *Stanya*.

CONCLUSION

Charaka described *Stanyajanana mahakasya* in which he described 10 drugs out of which *Darbha*, *Kasha*, *Kusha* is common in *Trunapanchamula*. *Acharya Sushruta* mentioned *Nala* and *Ikshu* is *Stanya jannana*. Keeping these aspects in mind, this study has been undertaken. It is an attempt to verify the claim that *Trunapanchamula* are Galactagogue.

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