

Stanya Kshaya: A review on Ayurvedic Concept of Lactational Deficiency

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ABSTRACT

Breast milk is considered the nectar of life for a child, offering numerous benefits to both mother and child. Ayurvedic classics have long extolled the virtues of breast milk, recommending exclusive breastfeeding for the first six months and continued breastfeeding up to one year or more. This recommendation is echoed by the World Health Organization (WHO), which suggests exclusive breastfeeding for the first six months, followed by nutritionally adequate complementary foods while continuing breastfeeding up to two years or beyond. Human milk is uniquely superior for infant feeding due to its species-specific composition. While an initial decrease in milk secretion (*Stanya pravrutti*) is normal during the first 2-3 days postpartum, persistent difficulty in establishing breastfeeding due to reduced milk secretion or lactational insufficiency later after establishment of breast-feeding leads to nutritional deficiencies thereby leading to growth spurts and developmental delays. These reduction in breast feeding is considered as *Stanya Kshaya* in Ayurveda. Prompt attention and treatment are crucial, as breast milk is essential for infant nutrition. Ayurveda recommend natural remedies and lifestyle modifications to help improve breast milk production and address *Stanya Kshaya*. This review article provides an overview of *Stanya Kshaya*, along with its causes, and treatment modalities, as described in the ancient Ayurvedic texts.

Keywords: *Stanya Kshaya*, *Stanya nasha*, lactational insufficiency, breastfeeding.

Introduction

The adoption of a Western lifestyle and increased exposure to stress have led to various health issues in women, particularly with regards to lactation. *Stanya Kshaya*, or lactational deficiency, is a significant concern that may seem straight forward but has major implications for children's health. In Asian and tropical countries like India, the prevalences of lactational deficiency is estimated to be around 30-40%.⁽¹⁾

Breastfeeding offers numerous benefits, including promoting a strong physical and emotional bond between mother and child, leading to better parent-child adjustment⁽²⁾. Breast milk is clean, uncontaminated, and contains anti-infective factors that protect babies from infections⁽²⁾. Furthermore, breastfeeding enhances cognitive development and intelligence. Studies have shown that breastfed infants exhibit higher intelligence, social, and psychomotor capabilities⁽³⁾. Any lactational insufficiency during this period can have significant consequences, including growth spurts and developmental delays, as infants rely exclusively on breast milk for nutrition⁽⁴⁾. *Stanya Kshaya* is one such condition marked by insufficient lactation, resulting from reduced or absence of breast milk production. *Stanya Kshaya* has emerged as a prevalent issue in modern life, largely attributed to stress, busy schedules, and the adoption of Western cultural practices. Lactation is a psychosomatic process influenced by lifestyle factors⁽⁵⁾. As the ideal form of infant nutrition, *Stanya* (breastfeeding) plays a vital role in promoting lifelong health and well-being

Stanya Paryaya

Dugdha, Kshira, Payas, Stanya, Balajivana⁽¹⁾.

Stanya Formation

According to the ancient Indian Ayurvedic texts, the nutrients from the food consumed by a pregnant woman (*Shadrasayukta ahara*) serves three functions. They are-

1. *Matrupusti* (mother's own nutritional needs)
2. *Garbhapusti* (growth and development of the fetus)
3. *Stanapusti* (nourishment and enhancing breast milk production)⁽⁶⁾

As described by Sushruta, *Stanya* is considered the essence (*Rasa* or *Prasada bhaga*) of the nutrients absorbed from food (*Ahara Rasa*) and is believed to be a byproduct (*Upadhatu*) of the *Rasa dhatu*. Additionally, Acharya Kashyapa noted that *Stanya* is produced from the *Rakta dhatu* (blood tissue) during pregnancy.

After digestion of food the *rasa* is formed. Sweet essence, a part of this *rasa*, circulating through entire body by the action of *vyana vata* reaches breasts and is termed as *stanya*. Or in other words the *Stanya* is formed from *Rasa* ⁽⁷⁾. According to Charaka *Rasadhatu* nourishes, *Stanya*. Sarangadhara considers *Stanya* as *Updhatu* of *Rasa Dhatu*. Harita explains that what-so-ever is ingested by the woman; same travel through *Kshiravahisira* and getting mixed with *pitta* reaches *Jathara*. There it gets digested by *Agni*, reaches the *Siras* of breast and is ultimately discharged. The secretion having association of *Agni* and *Soma* is known as milk. The blood due to action of *Pitta* gets suppurated and becomes white. In young girls due to less strength of *Dhatu* and in *Vandhya* women due to filling-up of a milk-carrying channel by *Vayu*, the milk is not formed ⁽¹⁾.

Cause of *Stanya pravrtti* or milk ejection

Acharya Sushruta explains 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 and also with his physical contact (suckling). For proper flow of milk uninterrupted affection for the child is mainly responsible ⁽⁸⁾.

Both Charaka Samhita and Ashtanga Sangraha explains that, after delivery on third or fourth day the *Dhamanis* or *Sirās* situated in cardiac region get dilated and initiate milk ejection ⁽⁹⁾ ⁽¹⁰⁾.

Hārīta says that due to force used during bearing-down efforts by the parturient woman, her *Srotasas* get cleared leading to sudden milk ejection, however, this milk is thick due to dominance of *Kapha*. ⁽¹¹⁾

Stanyapramana

Acharya Vagbada explains *Pramana* of *Stanya* as two *Anjali* ⁽¹²⁾

Stanya Sampath

Acharya Charaka explains that milk which is normal in colour, smell, taste and touch, and when milked in a pot filled with water mixes evenly, is known as pure milk. This milk provides nourishment and good health to the child. ⁽¹³⁾

Sushruta further elaborates that the pure milk *Sheeta*, clean or free from impurities, whitish yellow or white just like the colour of conch-shell, sweet in taste and free from discolouration, when put in water, it mixes evenly, neither produces froth nor streaks, neither floats nor settles down. This type of milk provides good health, growth and development of body as well as strength to the child. ⁽¹⁴⁾, ⁽¹⁵⁾

Both the Astanga Sangraha and Astanga Hridaya explains in similar lines and highlights that *Shuddha stanya* is that which is not vitiated by any *Doshas*. ⁽¹⁶⁾

Kasyapa without mentioning any physical characters says that the pure milk is that which provides unobstructed, easy and good growth of strength, different body parts, longevity as well as good health to the child and does not cause any pain or trouble to the child and wet-nurse ⁽¹⁷⁾.

Stanya Kshaya

In Ayurveda, "*Stanya Kshaya*," also known as "*Stanya Nasha*," refers to a condition of decreased breast milk or lactation insufficiency. During the first 2-3 days postpartum, a temporary decrease in milk secretion (*Stanya pravrutti*) is normal ⁽¹⁸⁾. However, if this reduction persists, or occurs later after establishment of proper breast feeding it can be considered as *Stanya Kshaya*.

Stanyakshaya Hetu

Acharya Sushruta explains that *Krodha* (Anger), *Shoka*, *Avatsalya* (absence of affection for the child) etc leads to *Stanya kshaya*. ⁽¹⁹⁾ Ashtanga Sangraha also adds *Ruksha anna pana* as one of the cause for *Stanya kshaya*. ⁽²⁰⁾ Other causes of *Stanya Kshaya* includes *Bhaya* (fear), *Aayasa* (exhaustion/stress) *Karshana/Upavasa* (fasting), *Ativayayama* (excessive exercise,) excessive use of purifying measures and getting conceived again. ⁽²¹⁾

Stanya kshaya lakshana

As explained by Acharya Sushruta *Stanya Kshaya* give rise to *Stanayormlanata* (Laxity/wasting of breasts), along with decrease in quantity or absence of milk secretion ⁽²²⁾.

Stanya Kshaya Chikitsa (Management)

Acharya Sushruta explains that *Sleshmavardhaka ahara* (Food that increased *Sleshma dosha*) should be advised to the mother suffering from *Stanya Kshaya* as a general line of management. ⁽²³⁾

Charaka Samhita mentions *Stanyajanana* group of drugs (helps in milk production) which include roots of drugs *Virāṇa*, *Śāli*, *Saṣṭika*, *Iksuvālikā*, *Darbha*, *Kuśa*, *Kāśa Gundrā*, *Itkaṭa* and *Katrina* are ten *Stanyajanana* drugs. These may be used in the form of decoction. ⁽²⁴⁾

Charaka Samhita also mentions the following to be adopted for increasing the quantity of milk

- i) All types of alcoholic beverages/wines except *Sidhu* (Fermented liquor prepared from sugarcane juice).
- ii) Vegetables, grains and meat obtained from domestic marshy and aquatic regions.

- iii) Eatables and drinkables which are predominantly liquid and possessing sweet, sour or saline taste.
- iv) Drugs which have milky latex.
- v) Regular intake of milk.
- vi) Not to toil or work hard, rest and have good sleep.
- vii) Intake of decoction prepared with drugs *Virāṇa*, *Saṣṭika*, *Śāli*, *Ikṣuvālikā*, *Darbha*, *Kuśa*, *Kāśa*, *Gundrā*, and *Itkaṇamula*.⁽²⁵⁾

Kasyapa Samhita explains that *Nadika* cooked with jaggery and mixed with drugs *Hingu* and *Jati* to improve breast milk secretion. He explains that milk, meat soups and alcoholic preparations are good for increasing breast milk secretions (*Ksbeeram mamsarasas madhyam Ksbeeravardhanamuttamam*)⁽²⁶⁾.

Other preparations/ remedies mentioned by Kashyapa Samhita are as follows

- Usage of *Ahara* with *Madhura rasa*
- Use of wines except *Sidhu*
- Vegetables except *Siddhartaka*
- Meat soups of animals except hog and buffalo
- Milk treated with *Vājīkaraṇa* drugs.
- Use of *Ghṛta* and oil.
- Use of *Asthāpana basti* (evacuative enema).
- Use of *Laśuna* and *Palāṇḍu*.
- Milk should methodically be cooked with the decoction of stem bark of *Vaṭa* etc. latex-yielding trees and *Kṣīrikā*. This milk mixed with *Sauwarcala* and *Vida Lavana*, jaggery and *Ghṛta* should be taken with cooked *Sāli* rice. With the use of this preparation even the women whose breasts are totally dry, start milk formation.
- Milk methodically cooked with the decoction of roots *Of Śāli*, *Śaṣṭika*, *Darbha*, *Kuśa*, *Gundrā*, *Itkaṇa*, *Sārivā*, *Vīraṇa*, *Iksu*, *Kuśa* and *Kāśa* is a good prescription for the woman who is basically unable to produce milk⁽²⁷⁾.
- Barley, wheat, *Śāli*, *Saṣṭika*, meat-soup, wine, *Kāñji* (fermented sour drink), pestled *Tila*, *Laśuna*, fish, *Kaśeruka*, *Śrigāṭaka*, *Bisa*, *Vidārīkanda*, *Madhuka*, *Śatāwari*, *Nalikā*, *Alabī*, *Kālaśāka* and *Nārikela* etc.⁽²⁸⁾

Yogaratanakara explains that Powdered drugs like *Pippali*, *Pippalimula*, *Cavya*, *Sunthi*, *Yawānikā*, both *Jīrakas*, both *Haridrās*, *Vida* and *Sauwarcala* salts should be cooked with *Kāñji* and given to the woman according to her digestive power. This preparation known as *Vajrakāñjika* cures *Āmavāta*, is *Vṛṣya* (aphrodisiac), suppresses *Kapha* and *Vāta*, increases appetite, cures *Makkalla Śūla* and increases quantity of milk.⁽²⁹⁾

Bhavaprakasha explains drugs *Karpasi*, *Gundra*, *Vidarikanda*, *Shatavari*, *Kadamba*, *Nyagrodha*, *Udumbara*, *Ashwatha*, *Parisha* and *Plaksha* as *Stanyajanana*⁽³⁰⁾

Discussion

Stanya is the *Updhatu* of *Rasa dhatu*. It is considered as a nectar for the infant as Exclusive breastfeeding for six months and continued breast feeding till 2 years enhances the baby's growth and development. Human milk is species-specific and all substitute feeding preparations differ markedly from it, making human milk uniquely superior for infant feeding⁽³¹⁾. An initial decrease in milk secretion (*Stanya pravrutti*) is a common physiological phenomenon during the first 2-3 days postpartum. However, if a mother experiences persistent difficulty in establishing breastfeeding due to reduced milk secretion, it is considered as *Stanya Kshaya*. *Stanya Kshaya* requires prompt attention and treatment, as breast milk is essential for the infant's nutritional needs. Timely intervention can help address this issue and ensure a healthy nutritional status for the baby.

By analysing the causes of *Stanya kshaya* we can understand that poor nutrition, emotional stress, physical exhaustion, improper mother child bonding, certain medical conditions etc are the major causes for reduced breast milk secretion.

Ayurvedic textbooks reveal that the production and secretion of breast milk in mothers is influenced by emotional connections, such as touch, sight, or thoughts of their child. This concept highlights the significance of maternal affection and mother-child bonding in establishing a healthy breastfeeding routine.

Interestingly, this ancient understanding parallels modern medical knowledge, particularly the roles of prolactin and oxytocin in lactation⁽³²⁾. These hormonal reflexes underscore the importance of emotional connection and bonding in successful breastfeeding.

In *Stanyakshaya* there is *Kshaya* as well as *Dushti* of *Rasa Dhatu*. Administration of *Shleshma Vardhaka Ahara* and *Vihara* is explained as general line of management in *Stanya Kshaya*.

Madhura Rasa Aharas are explained in the classics for increasing the breast milk secretion. *Madhura Rasa* have *Guru*, *Sheeta*, *Snigdha* properties. It acts as *Vata Shamaka* with its *Guru*, *Snigdha Guna*. It is *Saptadhatuvardhaka*, *Balyakara*, *Brihmana* which ultimately results in *Stanyavridhi*.⁽³⁰⁾

Few drugs explained have *Katu Vipaka* and *Ushna Veerya* which might result in *Agni Deepana* (at the level of *Jataragni* and *Dhatvagni*), leads to *Aama Pachana* and results in *Srotoshodana* ultimately helping in *Dhatu Poshana* and *Stanya Vruddhi*.⁽³³⁾

Madhya preparation has been explained in *Stanya Kshaya*, this may be because of their properties like *Deepana*, *Brihmana* (Promotes *Tushti*, *Pushti*) etc⁽³⁴⁾. Most *Madhya* have *Amla Rasa*. *Amla Rasa* has the properties like *Hrudya*, *Brmhana*, *Agnideepana*. *Amla Rasa* also has *Mano Bodhana* (enlightens the mind) and *Indriya Drideekarana* (Strengthens the sense organs) property which might help in improving the nutritional and emotional status of the mother and thereby helping in *Stanya Vrudhi*⁽³⁵⁾. *Sidhu Madhya* is contraindicated by Acharyas which might be because of its *Vata Pitta kara* and *Sleshmahara* properties⁽³⁶⁾. On the contrary modern studies demonstrate that maternal alcohol consumption may slightly reduce milk production⁽³⁷⁾. But it is to be noted that the alcoholic preparations used are prepared as per the classical references by adding drugs with medicinal properties and not the conventionally available alcoholic drinks in market.

Ayurveda has also given significant importance to the nutrition of the child when the mother is suffering from conditions like *Stanya Kshaya* which is evident from the practice of *Lehana*⁽³⁸⁾ and other measures explained like appointing a *Dhatri*⁽³⁹⁾. While explaining the indications of *Lehana* Acharya Kashyapa explains '*Aksheera Janani*' and '*Alpaksheeri*' which is basically the *Stanya Kshaya* as indications for *Lehana* to the child. Administering *Lehana* to these infants helps bridge the nutritional gap, ensuring they receive essential nutrients for optimal growth and development.

Conclusion

Human milk is uniquely tailored to meet the nutritional needs of human infants, rendering it superior to any substitute feeding preparation. While formula feeds may provide necessary nutrients, they cannot replicate the complex composition and benefits of breast milk.

This underscores the importance of addressing lactation disorders like *Stanya Kshaya*, which can compromise infant nutrition. Ayurveda emphasizes the significance of breastfeeding and offers various treatment modalities to enhance breast milk secretion. However, rigorous research is necessary to validate the efficacy and mechanisms of these traditional protocols, ensuring that they can be integrated into modern healthcare practices to support optimal infant nutrition.

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