

# THE EFFICIENCY IN ELETTARIA CARDIMOMUM ESSENTIAL OIL IN MANAGEMENT OF HYPOGALACTERRHEA

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## Abstract

**Acharya Charaka has quoted that the new born should be put to breast from the very first day of birth. In modern science also the importance of colostrum and breast milk for the new born is well established. Today Stanyakshaya (hypogalactia) or stanyanaasha (galactic) is a very common problem, especially with primiparous mothers. The two conditions are together described in Ayurveda samhitas with their causal factors and treatment. A number of galactagogue drugs as well as diet and bhava (psychological factors) have been described in ancient Ayurvedic scripts and have proved of great significance over the ages. The present study aims to go through the literary description of Stanyakshaya/stanyanaasha (galactagogues) and to work upon the probable mode of action of herbal galactagogues described therein, based upon their pharmacological properties and chemical composition. Overall study concludes that hypogalactia), occurring as a result of dhatukshaya or agnimandhyata can be managed effectively and safely by herbal galactagogues. In addition to this, these herbs can be used in healthy lactating mothers also to enhance breast milk production in a safer way and regain body strength especially in puerperium.**

**Keyword: hypogalactia, Herbal Galactagogues, Breast feeding, hypogalactia, puerperium, pregnancy, new born, infant**

## 1.INTRODUCTION

The lactation starts following delivery, the preparation for effective lactation starts during pregnancy. The

physiological basis of lactation is divided into four phases:-

1. Mammogenesis.- Preparation of breasts.
2. Lactogenesis.- Synthesis and secretion from the Breast alveoli.
3. Galactokinesis. - Ejection of milk.
4. alactopoiesis. - Maintenance of lactation.

Lactation describes the secretion of milk from the mammary glands and the time period that a mother lactates to feed her baby. Milk production is essential for optimal feeding of infants, as nutrition at this stage has direct impact on growth, development and health of not only the neonate but also for throughout healthy life. It instills lifetime immunity. According to the Ayurveda classics, stanya is the upadhatu of rasa dhatu. After proper digestion of food by Jaatharagni and dhatvaagni, rasa is formed. In sdhyoprasuta, the sweet essence part of this rasa circulating in the whole body gets collected in the breasts and is termed as stanya<sup>1</sup>.The preparation for lactation starts during pregnancy. The aahar(diet) consumed by Garbhini (pregnant woman) is utilized for three main functions: swasharirposhana (nourishment of woman's own body), stanya(milk) formation and garbhaposhana (foetal nourishment).<sup>2</sup> Pristine and continuous affection for the baby stimulates and maintains lactation<sup>3</sup>.Variation or deprivation of above factors can result in stanyakshaya/stanyanaas

Due to adaptation of western life style and more exposed towards the stress and strain the women are facing many problems.

Among these stanyakshaya is major one, which seems to be very simple condition but pertaining to children's it is a major problem. Stanyakshaya is a common problem noticed in our clinical practice. The cause of

stanyakshaya includes both physical and mental causes as shrama (too much physical and mental work, langhana (fasting), krodha (mental disturbances), shoka, and loss of affection towards the child.

The purpose is to analyze and evaluate complete concept and etiopathogenesis of stanyakshaya and treatment with Elettaria cardamomum essential oil as whole in light of ayurvedic and modern concept.

1. Ideal composition for easy digestion with low osmotic load.
2. Protection against infection and deficiency states.
3. Psychological benefit by establishing healthy mother and child relationship.
4. The antibodies (IgA, IgG, IgM) and humoral factor (lactoferrin) provides immunological defence to the new born.
5. It has laxative action on the baby because of large fat globules.

## 2. AIMS AND OBJECTIVE

1. Study of Stanyakshaya (hypogalactia) or stanyanaasha (galactic)
2. To prove the effect of CARDIMOMUM ESSENTIAL OIL in the management of Stanyakshaya.
3. To get results in the management of Stanyakshaya.

## 3. MATERIALS AND METHODS

Total 90 Patient were selected from OPD and IPD of Strig & Prasuti tantra Department of our institute. Then they will be divided in to 2 group each consisting of 45 patients

## 4. DRUG REVIEW

Latin name- Elettaria cardamomum

Family Zinziberaceae

Sanskrit name- Ela

It is an aromatic fruit and it has two types. 1. Sukshma 2. Sthula (Su. Su. 38-24)

Sukshma Ela is used in drugs and Sthula Ela IS USED IN SPICE. We used Sukshma Ela in our drug.

Properties – Laghu, Snigdha, Sugandhi, Sukshma

taste – Katu (pungent),

It is good appetizer, Vatagna, Pittagna, Kaphagna  
Constitution-

Fixed oil, essential oil, volatile oil of the seed, and considerable amount of terpinyl acetate, aneole, free terpineol, and probably also limonene are present.

The following figures may be taken as covering most pure samples:

Specific gravity – 0.923 to 0.945

Optical rotation- 24°48°

Refractive index- 1.4620 to 1.4675

Acid value- 1 to 4

Ester value- 90 to 150°

Potassium salts, starch, nitrogenous mucilage, yellow colouring matter, ligneous fibre and ash containing manganese.

Content – (strongly dependent on storage condition)

Total essential oil in fruit- 8%

In the oil

Alpha terpineol 45%

Myrcene – 27%

Limonene 8%

Menthone – 6%

Beta phellandrene 3%

1,8- cineol 2%

Sabinene 2%

Heptanes 2%

Elettaria cardamomum oil was prepared by Rasashastra department pharmacy of S.S.T. Ayurved collage, Sangamner.

## 5. ROUTE OF ADMINISTRATION: Orally

**Doses:** 2.5 ml

**Time:** BD

**Duration:** 90 days

**Anupan:** cow milk

## 6. PATIENT SELECTION CRITERIA

### 6.1. Inclusion criteria

1. Age group of patient in between 18-35 years.
2. Patient from 5th day of delivery.
3. Breast feeding frequency less than 4-5 times /day & quantity less than 300ml/day

4. Patients with previous history of lactational deficiency.
5. Patient either of primigravida or multigravida were selected.

### **6.2. Exclusion criteria**

1. Patient with congenital anomalies, breast atrophy, ca breast, mastitis, shock, previous Menstrual disorder were excluded from study.
2. Patient having h/o alcoholism, infection & systemic disease.
3. Known patient of hypopituitarism.
4. We also excluded the women whose babies have cleft palate, cleft lip & babies suffered from acute & chronic debility illness, babies on bottle feed were also excluded.

### **6.3. Withdrawal criteria**

Patient who failed to report follow up or irregular medication & withdrawal of patient were Withdrawn on ethical ground.

## **7. CRITERIA FOR ASSESSMENT**

### **7.1. Objective Criteria**

1. Weight of the baby (Every 15 days interval).
2. Milk production was evaluated by manual pressure on nipple and observations were recorded on 4 point scale. (No milk, Drop by drop, Forceful.)
3. Breast engorgement was rated on 4 point scale. (Mild, Moderate, Severe, Very severe)
4. CBC & Serum Prolactin if necessary.

### **7.2. Subjective Criteria**

1. Breast appearance-Stana Mlanata i.e; Laxity/hanging appearance.
2. Stana shushkatwa i.e; less in size/wrinkled appearance.
3. Breast milk ejection-Stanya alpata, Stanya asambhav.
4. Breast feeding frequency-Normal 8-12 times/day, if reduced then noted.

5. Pertaining to baby- Hunger, Cry, Sleep, Urine output, Stool.
6. Residual milk in breast after each feeding.

### **7.3. Subjective parameter in mother**

Following grades will be made according to severity of symptom

Gradation before treatment

### **7.4. Subjective parameter in baby:**

Gradation before treatment

**Malaparikshana (inspection of feces):-** normal 0, constipation 1, liquid stool 2.

**Nidra (sleep) :-**Prakrut 0,Alpa (khandit) 1,Adhikya2.

**Rodan (cry):-** Prakrut0, Intermittently 1, Always rodan 2.

### **7.5. Sign and symptoms in mother**

**Stana (breasts) :-** mlanta (shagging) 0, Prakrut (normal) 1 , Alpa Adhik (slight edema 2.

**Stanya Praman:-** Prakrut 0,Alpa 1,Adhik 2.

**Pidanasahatva (pain):\_** No- 0, Alpa 1 , Adhik 2.

### **7.8. Investigations**

CBC, PRL LEVEL

## **8. RESULT AND OBSERVATION**

This clinical study carried out on 90 clinically diagnosed patients of Stanyakshaya. These patients were treated with Elettaria cardamomum essential oil 125 mg BD with milk. Study carried out for 90 days.

## **9. STATISTICAL ANALYSIS**

Statistically evaluation has been analyzed by ' Z test '.

Trail group:-

Parameter	Mean BT	Mean AT	% of Improvement	SD	SEM	t	P	Remarks
Stana Mlanata	1.8	0.2	86.34	0.5	0.12	20.15	<0.001	Highly significant
Stanya Ejection	1.26	2.53	88.88	0.51	0.13	19.46	<0.001	Highly significant
Breast Feeding	1.26	2.06	94.24	0.59	0.15	14.77	<0.001	Highly significant
Weight of the Baby	2.46	2.8	38.21	0.1	0.12	3.4	<0.005	Significant
Breast Engorgement	1.26	2.53	82.3	0.51	0.13	13.98	<0.001	Highly significant

TABLE 1

## 10. DISCUSSION

Science is a systematic enterprise that builds and organizes knowledge in the form of testable explanations and predictions about the universe. The probable signs, symptoms and samprapti of Stanyakshaya have been mentioned in earlier topics. Here in this topic the results observed in the study are discussed. The patients, coming to hospital were with varied socioeconomic background ranging from working woman to housewives and illiterate women. Thus the sample population was easy to obtain with good variety to represent actual population. The patients were sorted out in a general health camp irrespective of occupation, religion and Prakruti. Study was conducted as mentioned in materials and methods, statistical analysis was performed daily.

## 11. CONCLUSION

1. Stanya kshaya is the common problem seen in our clinical practice
2. Breast milk is the greatest gift a mother can give her baby. Significant and long term health benefits are connected with breast feeding for the individual mother, baby and society. Breast feeding is ideal way to feed

babies. Elettaria cardamomum essential oil with milk is effective in management of Stanyakshaya.

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