**RAJIV GANDHI UNIVERSITY OF HEALTH SCIENCES BENGALURU, KARNATAKA**



COMPLETED PROFORMA FOR REGISTRATION OF SUBJECT

FOR DISSERTATION IN M.S (AYURVEDA)

**TITLE**

**A COMPARATIVE CLINICAL STUDY TO EVALUATE THE EFFECT OF *MUSTA CHURNA* AND *SHATAVARI CHURNA* IN THE MANAGEMENT OF STANYA KSHAYA W.S.R TO LACTATION FAILURE**

**BY**

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**NAME OF THE INSTITUTE**

**SDM TRUST’S**

**AYURVEDIC MEDICAL COLLEGE,**

**DANIGOND POST GRADUATION CENTRE,**

**PADMA AYURVEDIC HOSPITAL AND RESEARCH CENTRE,**

**DR. SIDDHANT NAGAR, TERDAL – 587315**

**2022-2023**

**FROM,**

**DR. SREELEKHA SETHI**

1ST YEAR P.G. SCHOLAR

DEPARTMENT OF PRASUTI TANTRA EVUM STREE ROGA

SDM Trust’s Ayurvedic Medical College

Danigond Post-graduation Centre,

Padma Ayurvedic Hospital & Research Centre, Terdal.

**TO,**

**THE REGISTRAR**

RAJIV GANDHI UNIVERSITY OF HEALTH SCIENCES,

BENGALURU, KARNATAKA.

**THROUGH,**

**THE PRINCIPAL AND**

**H.O.D OF DEPARTMENT OF PTSR**.

SDM Trust’s Ayurvedic Medical College,

Danigond Post-Graduation Centre,

Padma Ayurvedic Hospital and Research Centre, Terdal.

**Subject: Submission of Completed Proforma for Registration of the Synopsis of Dissertation work in M.S (Ayu).**

Respected Sir,

I request you to kindly register the below mentioned subject in my name for the submission of the dissertation to the Rajiv Gandhi University of health sciences, Bengaluru for partial fulfilment M.S (Ayurveda) in *Prasuti Tantra Evum Stree Roga.*

**TITLE:**

**A COMPARATIVE CLINICAL STUDY TO EVALUATE THE EFFECT OF *MUSTA CHURNA* AND *SHATAVARI CHURNA* IN THE MANAGEMENT OF *STANYA KSHAYA* W.S.R TO LACTATION FAILURE.**

Herewith I am enclosing the completed proforma for the registration of the subject for dissertation in M.S (Ayu) *Prasuti Tantra Evum Stree Roga.*

Thanking you,

Place: Terdal Yours faithfully,

Date: (Dr. Sreelekha Sethi)

**RAJIV GANDHI UNIVERSITY OF HEALTH SCIENCES BENGALURU, KARNATAKA**

**ANNEXURE - II**

**PROFORMA FOR REGISTRATION OF SUBJECT FOR DISSERTATION**

|  |  |  |
| --- | --- | --- |
| **1.NAME OF THE CANDIDATE AND ADDRESS** | : | DR. SREELEKHA SETHI  SDM TRUST’S AYURVEDIC MEDICAL COLLEGE,  DANIGOND POST-GRADUATION CENTRE, PADMA AYURVEDIC HOSPITAL AND RESEARCH CENTRE, TERDAL 587315, KARNATAKA |
| **PERMANENT ADDRESS** | : | DR. SREELEKHA SETHI  D/O SREEDHAR SETHI  A/P: MALIPADA, JHARSUGUDA  DT: JHARSUGUDA 768201  STATE: ODISHA |
| **2. NAME OF THE INSTITUTION** | : | SDM TRUST’S AYURVEDIC MEDICAL COLLEGE,  DANIGOND POST-GRADUATION CENTRE, PADMA AYURVEDIC HOSPITAL AND RESEARCH CENTRE, TERDAL 587315, KARNATAKA |
| **3. COURSE OF THE STUDY AND SUBJECT** | : | M.S(AYURVEDA), PRASUTI TANTRA EVUM STREE ROGA |
| **4. DATE OF THE ADDMISSION OF COURSE** | : | 1/04/ 2023 |
| **5. TITLE OF THE DISSERTATION** | : |  |
| **A COMPARATIVE CLINICAL STUDY TO EVALUATE THE EFFECT OF *MUSTA CHURNA* AND *SHATAVARI CHURNA* IN THE MANAGEMENT OF *STANYA KSHAYA* W.S.R TO LACTATION FAILURE.** | | |

**6. BRIEF REVIEW OF THE INTENDED WORK**

**6.1. NEED FOR THE STUDY**

The pivotal component and source of nutrition in every being’s life is *Stanya.* It is addressed as *Jeevana1* due to the qualities such as *Pushtikara, Vruddhikara, Bala Vardhana.* During pregnancy period the *Rasa-Dhatu* has three major functions in female body i.e. *Swasharira pushti*, *Garbha pushti and Stanya pushti2*.

In Ayurveda different types of *Stanya* *Vikara* are mentioned such as *Stanya Kshaya, Stanya Vruddhi* and *Stanya Dushti*. The less formation of breast milk is known as “*Stanya Kshaya”* which can be co-related to “Lactation Failure” explained in modern science.

Only 44% infants are breastfed according to WHO3. About 64% are exclusively breastfed in India of which Karnataka accounts for about 61% as per the data of NFHS-5 4,5. *Stanya Kshaya* is the common problem noticed in about 40% patients in our clinical practice6. Lack of self-confidence, mental anxiety and physical stress in working women, incorrect breast-feeding practices, insufficient secretion due to lack of sleep are the main causes of lactation failure.

*Stanya Sampata* and *Stana Sampata* are elaborately explained in the classics. The causes of *Stanya Kshaya* are multi-factorial in nature explained by various *Acharya* such as *Ati* *Shrama, Langhana, Ruksha Annapana, Krodha, Shoka* and *Avatsalya*. Main factors involved in *Stanya Kshaya* are *Vata-Pitta dosha* aggravation leading to *Stanya Kshaya.*

*Ayurveda* advocates a large number of drugs and formulations*. Musta Churna* is explained in *Chakradatta* whereas *Shatavari Churna* is explained in *Sushruta Samhita*. Both of them are S*tanya Janana* in nature. Hence, an attempt is made to seethe probable mode of action and the effect of *Musta Churna* in the management of *Stanya Kshaya.*

**6.2. REVIEW OF LITERATURE:**

**1. DISEASE REVIEW:**

* *Nidana* of *Stanya Kshaya* is mentioned in *Sushruta Samhita Sharira sthana7, Ashtanga Hrudaya Uttartantra8, Ashtanga Sangraha Uttartantra9, Kashyapa Samhita Sutra Sthana10, Bhavaprakasha Purvakhanda11.*
* *Lakshana* of *Stanya Kshaya* is mentioned in *Sushruta Samhita Sutra Sthana12, Bhavaprakasha Purvakhanda13.*
* *Chikitsa* of *Stanya Kshaya* is mentioned in *Charaka Samhita Sharira Sthana14, Sushruta Samhita’s Sutra Sthana15, Sharira Sthana16, Chikitsa Sthana17, Ashtanga Hrudaya Uttartantra18, Kashyapa Samhita in Sutra Sthana19 and Siddhi Sthana20, Bhavaprakasha Purvakhanda21, Yogratnakara in Kshiradosha22, Harita Samhita Trutiya Sthana23.*

DESCRIPTION OF LACTATION FAILURE24 (INADEQUATE MILK SUPPLY):

* This is caused due to infrequent suckling, endogenous suppression of prolactin. Pain, anxiety and insecurity.

**2. DRUG REVIEW25:**

* The trial formulation*Musta* ***C****hurna26*explained in ***C****hakradatta* in *Stree Roga Chikitsa Prakarana.*

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| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **SL. NO** | **Drug** | ***Latin Name***  ***Family*** | ***Rasa*** | ***Guna*** | ***Veerya*** | ***Vipaka*** | ***Part***  ***Used*** | ***Doshaghnata & Karma*** |
| 01 | *Musta* | *Cyperus rotundus linn.*  *(Family- Cyperaceae)* | *Tikta,*  *Katu,*  *Kashaya* | *Laghu,*  *Ruksha* | *Sheeta* | *Katu* | *Kanda*  (Rhizome) | *Kaphapittashamaka,*  *Stanyajanana*  *Stanyashodhana* |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **SL. NO** | **Drug** | ***Latin Name***  ***Family*** | ***Rasa*** | ***Guna*** | ***Veerya*** | ***Vipaka*** | ***Part***  ***Used*** | ***Doshaghnata & Karma*** |
| 01 | *Shatavari* | *Asparagus racemosus*  *(Family- Liliaceae)* | *Madhura Tikta* | *Guru,*  *Snigdha* | *Sheeta* | *Madhura* | *Kanda*  (Rhizome) | *Vatapittashamaka*  *Stanyajanana* |

* The control formulation *Shatavari Churna27* explainedin *Sushruta Samhita* in *Garbhini Prakarana Sharira.*

**6.2.1 PREVIOUS RESEARCH WORK:**

* A comparative clinical study of effect of *Karpasabeeja* *Churna* and *Shatavari Churna* in the management of *Stanya Kshaya*. Dr. Rajni Kanojiya- Rajiv Gandhi Ayurvedic Medical College, Ron, RGUHS. 2017
* A Clinico-comparative study to evaluate the efficacy of Y*ashtimadhu Choorna* and *Shatavari Choorna* in the management of *Stanya**Kshaya*. Dr. Shashikala H P Shri Jagadguru Gurusiddeshwar Co-operative Hospital and Research Institute (Shri J G C H Society), Ghataprabha, RGUHS. 2017
* An open label double arm comparative clinical study to evaluate the efficacy of *Shatavari Churna* and *Musali Churna* in *Stanya* *Kshaya*. Dr. Vidyavati Ranganata. Shri Kalabyreshwaraswamy Ayurvedic Medical College Hospital & Research Centre, Bangalore, RGUHS. 2018
* A clinical study to evaluate the efficacy of *Maricha* and *Pippalimool Sidhha Ksheerpaka* in *Stanya Kshaya.* Dr. Pallavi Suresh Bhangare*.* Rajiv Gandhi Ayurvedic Medical College, Ron, RGUHS. 2019

**6.2.2 HYPOTHESIS:**

**NULL HYPOTHESIS:**

**H0**- *Musta Churna* is not effective in the management of *Stanya Kshaya* w.s.r to Lactation Failure.

**ALTERNATIVE HYPOTHESIS:**

**H1**-*Musta Churna* is effective in the management of *Stanya Kshaya* w.s.r to Lactation Failure.

**H2**-*Musta Churna* is more effective than *Shatavari Churna* in the management of *Stanya Kshaya* w.s.r to Lactation Failure.

**H3**-*Musta Churna* is less effective than *Shatavari Churna* in the management of *Stanya Kshaya* w.s.r to Lactation Failure.

**H4**-*Musta Churna* and *Shatavari Churna* are equally effective in the management of *Stanya Kshaya* w.s.r to Lactation Failure.

**6.3 AIMS AND OBJECTIVES:**

* To evaluate the effect of *Musta Churna* in the management of *Stanya Kshaya* w.s.r to Lactation Failure.
* To compare the effect of *Musta Churna* and *Shatavari Churna* in the management of *Stanya Kshaya* w.s.r to Lactation Failure.

**7. MATERIALS AND METHODS:**

**7.1. SOURCE OF DATA:**

**(A). LITERARY SOURCE:**

Literary aspect of the study will be collected from *Ayurvedic* classics, modern textbooks, updated with recent medical journals, e-journals, websites and library of SDMTAC, Terdal

**(B).SAMPLE SOURCE:**

Subject will be incidentally selected from the OPD/IPD and Medical camps conducted by SDM Trust’s Padma Ayurvedic Hospital and Research Centre, Terdal 587315, Karnataka.

**(C). DRUG SOURCE:**

Raw drugs will be collected from herbal garden or local market and its proper Identification and Authentication will be done in *Dravyaguna* Department. *Musta Churna and Shatavari Churna* will be prepared by classical reference in department of *Rasashastra* and *Bhaishajya Kalpana* SDMT’s AMC, Terdal.

**7.2. METHODS OF COLLECTION OF DATA:**

40 Female patients irrespective of parity, caste, religion and socioeconomic status with classical signs and symptoms of *Stanya Kshaya* will be selected from OPD/IPD of SDMT’s Ayurvedic Medical College and Padma Hospital, Terdal.

**METHODOLOGY:**

Enrolment of the subject, for the trial is based on Inclusion Criteria. Consent will be taken, then screening of the subject is done and the data will be recorded in a specially prepared case report form (CRF) with a complete history, examination and necessary assessment before treatment and at the time of every follow up.

**7.2.1 RESEARCH/STUDY DESIGN:**

* A Randomized controlled clinical trial.
* 40 Female Patients who fulfil the inclusion criteria of *Stanya Kshaya* will be selected randomly by software generated chart and placed under 2 groups ‘A’ and ‘B’ respectively.

**STUDY DURATION:**

* Total study duration: - 45 days
* Duration of drug intervention: 30 days.
* Number of visits: - 0th day, 15th day, 30th day, 45th day.
* Post Medication follow up: - 45th day.

|  |  |  |  |
| --- | --- | --- | --- |
| 0th day (BT) | 15th day (DT) | 30th day (DT) | 45th day (AT) |
| 1)Screening  2)Enrolment  3) Drug Administration | 1)Assessment  2)Drug administration | 1)Assessment | 1)Follow up  2)Assessment |

Note: BT- Before Treatment, DT- During Treatment, AT- After Treatment

**7.2.2 INTERVENTIONS:**

GROUP ‘A’: Patient under this group will be given *Musta Churna*

1. *Musta Churna*

|  |  |
| --- | --- |
| *Aushadha Pramana* | 6g*28* (3g BD) |
| *Aushadha Sevana Kala* | *Pragbhakta29*  (starting from 5th day after the delivery) |
| *Anupana* | *Godugdha*(50ml ) |
| *Aushadha Yojana Kala* | 30 days |
| *Aushadha Yojana Vidhi* | Oral |

GROUP ‘B’: Patient under this group will be given *Shatavari Churna*.

2) *Shatavari Churna*

|  |  |
| --- | --- |
| *Aushadha Pramana* | 6g*28* (3g BD) |
| *Aushadha Sevana Kala* | *Pragbhakta29*  (starting from 5th day after the delivery) |
| *Anupana* | *Godugdha*(50ml ) |
| *Aushadha Yojana Kala* | 30 days |
| *Aushadha Yojana Vidhi* | Oral |

Note:- Individual sachets of each dose will be prepared and given to patient.

**7.3 DIAGNOSTIC CRITERIA30:**

* The diagnosis is based on *Pratyatma Lakshana* of *Stanya Kshaya.–*

**Mother-**

1. *Stana Mlanata*

* *Stana Shuskatva*
* *Stanya Alpata*
* *Stanya Asambhava*

1. Breast feeding frequency

**Baby-**

1. Sleep of baby
2. Cry for demand
3. Urine frequency

**SELECTION CRITERIA:**

**7.3.1 INCLUSION CRITERIA:**

* + Lactating mothers with classical signs and symptoms of *Stanya Kshaya*
  + Patients with feeding frequency less than 4-5 times/day.
  + Patients from 5th day of delivery to 6 months.
  + Age group of patient is between 21 - 40 years.

**7.3.2 EXCLUSION CRITERIA:**

* + - K/C/O Mastitis, CA Breast, and Cystic breast disease.
    - Patients with Congenital Breast Anomaly.
    - K/C/O Psychiatric illness.
    - Patients with history of alcoholism, smoking.
    - Diagnosed cases of uncontrolled diabetes.
    - Mother having a baby with congenital anomaly like cleft lip, cleft palate.
    - Patient denying consent.

**WITHDRAWAL CRITERIA:**

During the course of treatment if any serious condition or serious adverse effect occurs and patient not following the instructions or patient herself wants to withdraw from the study such patients may be withdrawn from the study.

**7.3.3 ASSESSMENT CRITERIA30:**

OBJECTIVE PARAMETERS:

|  |  |  |
| --- | --- | --- |
| **Sr No** | **Particulars** | **Grading** |
| **(A)** | **MOTHER** |  |
| 1. | Milk Ejection  (Evaluated by manual pressure on nipple and observation recorded on 4 point scale). | * Forceful– 0 * Stream like – 1 * Drop by drop – 2 * No ejection – 3 |
| **(B) BABY** | | |
| 1. | Body Weight | * >175 g weight gain/week – 0 * 100-175 g weight gain/week – 1 * No weight gain – 2 |

SUBJECTIVE PARAMETERS:

|  |  |  |
| --- | --- | --- |
| **Sr. No.** | **Particulars** | **Grading** |
| **(A)** | **MOTHER** |  |
| 1. | ***Stana Mlanata***   1. *Stana Shuskatva* 2. *Stanya Alpata* 3. *Stanya Asambhava* | * If no sign present – 0 * If one sign present –1 * If two signs present –2 * If three signs present -3 |
| 2. | **Breast Feeding Frequency** | * 9-12 feeds/day– 0 * 6-8 feeds/day - 1 * 3-5 feeds/day- 2 * 0-2 feeds/day – 3 |

|  |  |  |  |
| --- | --- | --- | --- |
| **Sr. No.** | | **Particulars** | **Grading** |
| **(B)BABY** | | | |
| 1. | **Sleep of Baby** | | * 3-4 hrs sleep – 0 * 2-3 hrs sleep - 1 * 1-2 hrs sleep – 2 |
| 2. | **Cry For Demand Feed** | | * Demand feeds before every 3-4hrs-0 * Demand feeds before every 2-3hrs-1 * Demand feeds before every 2 hrs - 2 |
| 3. | **Urine Frequency** | | * 6-7 times /day – 0 * 4-5 times/day – 1 * 2-3 times/day- 2 * 1/<1 time/day-3 |

**7.3.4 STATISTICAL ANALYSIS:**

Data will be collected using case report form (CRF) designed by incorporating all aspects (Ayurveda and modern medicine) for the study. Such collected data will be tabulated and analyzed using SPSS (Statistical package for social science) version 20 by using appropriate statistical test. Demographic data and other relevant information will be analyzed with descriptive statistics, Continuous data will be expressed in mean+/- standard deviation, and nominal and ordinal data will be expressed in percentage. Nominal and ordinal data will be analyzed using non parametric tests like Friedman’s test, Wilcoxon’s signed rank test, Chi-square test. Continuous data will be analyzed using parametric test like repeated measure ANOVA, paired t / unpaired t test, as and when required. The changes (one tailed) with p value < 0.05 will be considered as statistically significant.

**7.4. Does the study needs any investigation or interventions to be conducted on patients or human being or animals? if so please describe briefly.**

Yes, the study requires intervention to be conducted on patients.

No interventions are conducted on animals.

**INVESTIGATIONS:**

* Serum Prolactin

**7.5 ETHICAL CLEARANCE:**

* **Ethical clearance been obtained from your institution case of 7.4?**

-Yes, Ethical clearance obtained from ethical committee, SDM Trust’s Ayurvedic Medical College and Hospital, Terdal.

**8. LIST OF REFERENCES:**

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| --- | --- | --- |
| **SIGNATURE OF THE**  **CANDIDATE** | **:** |  |
| **10. REMARKS OF THE**  **GUIDE** | **:** |  |
| **10.1 NAME AND**  **DESIGNATION**  **OF THE GUIDE** | **:** | **DR. SUKANYA PATILM.S.(AYU)**  PROFESSOR,  PRASUTI TANTRA EVUM STREE ROGA DEPARTMENT,  S.D.M. TRUST’S AYURVEDIC MEDICAL COLLEGE, DANIGOND POST-GRADUATION CENTRE, PADMA AYURVEDIC HOSPITAL AND RESEARCH CENTRE,  TERDAL-587315 |
| **10.2 SIGNATURE** | **:** |  |
| **10.3 NAME AND**  **DESIGNATION**  **OF THE CO-GUIDE** | **:** | **DR. PALLAVI R. KODAGEM.S.(AYU)**  ASST. PROFESSOR,  PRASUTI TANTRA EVUM STREE ROGA DEPARTMENT,  S.D.M. TRUST’S AYURVEDIC MEDICAL COLLEGE, DANIGOND POST-GRADUATION CENTRE, PADMA AYURVEDIC HOSPITAL AND RESEARCH CENTRE,  TERDAL-587315 |
| **10.4 SIGNATURE** | **:** |  |
| **11.1 HEAD OF THE**  **DEPARTMENT** | **:** | **DR. PARSHURAM K RAWALM.S.(AYU)**  PROFESSOR AND HOD  PRASUTI TANTRA EVUM STREE ROGA DEPARTMENT,  S.D.M. TRUST’S AYURVEDIC MEDICAL COLLEGE,DANIGOND POST-GRADUATION CENTRE, PADMA AYURVEDIC HOSPITAL AND RESEARCH CENTRE,  TERDAL-587315 |
| **11.2 SIGNATURE** | **:** |  |
| **12.1 REMARKS OF THE**  **PRINCIPAL** | **:** |  |
| **12.2 PRINCIPAL** | **:** | **DR. PRABHAKAR.B. APARAJ**  **M.D.(AYU) Ph.D (SCHOLAR)**  S.D.M. TRUST’S AYURVEDIC MEDICAL COLLEGE, DANIGOND POST-GRADUATION CENTRE, PADMA AYURVEDIC HOSPITAL AND RESEARCH CENTRE,  TERDAL-587315 |
| **12.3 SIGNATURE** | **:** |  |