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Traditional practices of postnatal care using medicinal plants in Tirunelveli district, Tamil Nadu, India

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Abstract

In India, traditional medicine practices were followed for centuries. Tirunelveli district were located in south Tamil Nadu has very strong background on traditional practices particularly during postnatal care in which medicinal plants play a major role. The indigenous practices have herbal formulations, traditional dietary practices, external application that are exclusively used during postnatal care to strengthen mother health and spiritual aspects of wellbeing. The results obtained from the study manifested the use of medicinal plants in south Indian traditional medicine practice in postnatal care.

Keywords: traditional practices, herbal formulations, traditional dietary practices, Tirunelveli district

Introduction

Postnatal care is the care provided to women and new born in the first six weeks after birth. The recommendation on postnatal care from World health organisation (WHO) guideline states that postnatal visits must be within 6 to 12 hours after birth, and follow-up visits from 3 to 6 days, at 6 weeks, and then at 6 months [1]. The guideline may help to prevent problems and complications after childbirth include haemorrhage, pain and inflammations, anemia, exhaustion, stress, infections, immunosuppression, failure of breast milk production, psychological and emotional disorders [2, 3].

India contributes one-fifth of the global burden of absolute maternal deaths; however, it has experienced an estimated 4.7% annual decline in maternal mortality ratio (MMR) [4, 5]. The Government of India is making process by introducing several policy measures and interventions to reduce maternal mortality rate [6]. Postnatal care is one of the most important maternal health-care services delivered through facility-based clinical care, outreach or family community care enhance both maternal and infant survival [7].

In India, the diversified system of traditional health practices in postnatal care continues to be widely popular in various cultures. The traditional practices were performed by the traditional health practitioners who are the propagators of these traditions make use of medicinal plants in various practices, treatments and traditional recipes [8]. The traditional knowledge about the use of these plants is often held by midwives and elderly women, who pass it among their family members [9]. Medicinal plants play an important role in prenatal and postnatal care in many rural areas of the world [10]. The plant derived products (ie, leaves, roots, flowers), in any form, used as a preventive or curative treatment [11].

Tirunelveli district located in south eastern portion of Tamil Nadu. Medicinal plants were predominantly used in this region to cure skin diseases, poison bites, wounds and rheumatism [12, 13, 14, 15]. The significance of medicinal plants usage also extends of treating non-communicable diseases, which is a reflection of the richness of knowledge in use of medicinal plants for treating diseases [16]. Traditional health practices for postnatal care were practiced over many years. Women have been identified as the major users of herbal medicinal products in this region, which is transferred orally from one generation to the next through knowledgeable elders and /or ordinary people. Therefore, we undertook this qualitative study to document the in-depth indigenous knowledge about the use of herbal medicinal products and traditional practices followed during postnatal care in Tirunelveli district.

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Materials and Methods

Ethics Approval

The study was approved by the Institutional Ethics Committee of the Government Siddha Medical College affiliated with the Tamil Nadu Dr. M.G.R. Medical University, Chennai, Tamil Nadu, India. (IEC No: GSMC-CH-ME-4/004/2018). To conduct the study in Tirunelveli district, the study got approval from the Department of Public Health (DPH), Chennai and Deputy Director of Health Services (DDHS), Tirunelveli district. Written informed consent was obtained from each participant after explaining the purpose and nature of the study. The information's were collected anonymously from the study participants and the outcomes were delivered only for research purposes.

Study Setting

The study was conducted in selected villages of (Palayamkottai and Nanguneri) of Tirunelveli district, Tamil Nadu. The district is located in the southern part of Tamil Nadu surrounded by Virudhunagar district in the north, Tenkasi district in the west, Kanyakumari District in the south and Tuticorin district in the east. Their culture places highest value on agriculture, Tamil is the major language by the people in the area, respectively.

Study Participants

The target participants were selected based on the convenience sampling method with the help of village health

nurse (VHN) and local village informants. The study population comprised married women who experienced traditional practices during using medicinal plant products during postnatal period. ii) a woman care taker with traditional knowledge pertained to postnatal care, ingredients of herbal formulations, method of preparations, period of consumption and dietary regimen followed during postnatal care. We conducted a questionnaire-based survey along with focus group discussion (FGD; N=4) and each FGD was conducted in selected villages with groups of 10 women.

Results and Discussion

During post-natal care the new mother was treated with special care and attention by the household members. The new mother and new born would be confined in a separate room for a period of time. The household members never go to temples, functions and parties for 16 days as the process of delivery was believed to be associated with impurity. After 16 days cow urine was sprinkled, pujas and prayers were conducted to purify the home. During postnatal period a special care was given to the mother and the new-born. The herbal formulations act has a preventive measure and also cures diseases occurs during this period. The medicinal plants used in traditional practices during post-natal period were listed in (table 1). The plant parts purchased from traditional herbal shop and the formulations prepared by the village women who is taking care of the new mother.

Table 1: Medicinal plants used in traditional practices during postnatal care

Botanical name	Family name	Tamil name	Part used
<i>Ferula asafoetida</i>	Umbelliferae	Perungayam	Gum resin
<i>Zingiber officinale</i> Roscoe	Zingiberaceae	Inji	Rhizome
<i>Crateva magna</i>	Capparaceae	Mavilingam	Dried bark
<i>Curcuma longa</i> L.	Zingiberaceae	Manjal	Rhizome
<i>Trachyspermum ammi</i>	Apiaceae	Omam	Fruit
<i>Piper nigrum</i> Beyr.ex Kunth	Piperaceae	Milagu	fruit
<i>Allium sativum</i>	Amaryllidaceae	Poondu	Bulb
<i>Anacyclus pyrethrum</i>	Asteraceae	Akkarakaaram	Root
<i>Alpinia galanga</i> L.	Zingiberaceae	Perarathai	Rhizome
<i>Piper longum</i>	Piperaceae	Arisi thippilli	Fruit, root
<i>Trianthema portulacastrum</i> L.	Aizoaceae	Sharunnai	Leaves
<i>Anethum graveolens</i>	Apiaceae	Sataguppi	Seeds
<i>Solanum torvum</i>	Solanaceae	Sundakkai	fruit
<i>Piper betle</i>	Piperaceae	Vettilai	Leaf
<i>Mangifera indica</i> Linn	Anacardiaceae	Ma.elai	Leaf
<i>Lagenaria siceraria</i>	Cucurbitaceae	Suraikkai	fruit
<i>Lablab purpureus</i>	Fabaceae	Avarai	Legume pod
<i>Moringa oleifera</i>	Moringaceae	Murungai	Drum sticks
<i>Abelmoschus esculentus</i>	Malvaceae	Vendai	fruit

The following herbal formulations were prepared during post-natal period helps to rejuvenate and warming the body, improves contraction of the uterus and encourage proper blood flow, improves digestion and prevents excess of vaginal discharge, increases breast milk secretion.

Formulation 1

Roasted *Ferula asafoetida* mixed with palm jaggery, made in to small balls. Each ball given to the mother after third day of delivery for 15 days to improve digestion.

Formulation 2

Decoction of *Zingiber officinale* Roscoe and *Crateva magna* is given for rejuvenating and emmenagogue.

Formulation 3

Equal amount of *Curcuma longa*, *Ferula asafoetida*, *Zingiber officinale* Roscoe, *Trachyspermum ammi*, *Piper nigrum* are moderately roasted and powdered. It is given to the mother for 4 grams a day for 40 days to improve digestion, expel wind, emmenagogue, and prevent constipation.

Formulation 4

The ingredients of *Curcuma longa*, *Allium sativum*, *Ferula asafoetida*, *Zingiber officinale*, *Trachyspermum ammi*, *Piper nigrum* were taken in equal quantities. The ingredients are roasted and powdered. It is given 1 gram per day to increase breast milk secretion.

Formulation 5

The dried rhizome of *Zingiber officinale*, *Piper nigrum*, *Anacyclus pyrethrum*, *Alpinia galanga* and root of *Piper longum* are powdered and mixed with juice of *Zingiber officinale* and palm jaggery. It is given 10ml in alternative days before food for 15 days to expel lochia, increase breast milk secretion, rejuvenating mothers body after delivery and helps digestion.

Traditional food served at post-natal period**Formulation 1****Pathiya kuzhambu**

The ingredients namely, *Zingiber officinale*, *Trianthema portulacastrum*, *Trychispermum ammi*, *Anethum graveolens*, *Allium sativum*, *curcuma longa* and *Piper nigrum* were roasted and powdered and then water is added with vegetables. The final product is a semisolid preparation, given with boiled rice to the new mother as a mid-day meal for 40 days to regain body strength, to encourage contraction of the uterus, to ease abdominal discomfort, wound healing and to increase milk secretion.

Formulation 2**Venthaya kuzhambu**

It is composed of powdered *Trigonella foenum graecum*, *Allium sativum*, *Curcuma longa* and *piper nigrum* all the ingredients are roasted and powdered. Then boiled with water to make semisolid preparation. The formulation is believed to stimulate lactation and strengthen new mother.

Formulation 3

Another combination with ingredients of *Curcuma longa*, *Allium sativum*, *Ferula asafetida*, *Zingiber officinale*, *Trachyspermum ammi* and *Piper nigrum*. The ingredients are lightly roasted and powdered. It is given to stimulate lactation, relieve muscular and joint pain, as well as helpful in abdominal discomfort.

Single herbal preparation used during post-natal period**1. *Zingiber officinale***

Dried *Zingiber officinale* is used for this preparation. The skin of *Z. officinale* was peeled off, and it was allowed to soak for 6 hours. Finally, it was grounded and heated with low flame with mixture of palm jaggery and gingelly oil. The preparation is given for three days to stimulate lactation, encourage uterine contraction, makes body to feel warm, helps digestion for both mother and new born.

2. *Trychispermum ammi*

It was roasted and soaked for 12 hours. It was grounded and heated with low flame with mixture of palm jaggery and gingelly oil. It is given to improve digestion for both mother and new born.

3. *Allium sativum*

The outer layer was removed and boiled with milk. The final product was mixed with palm jaggery and gingelly oil. The preparation is given to increase milk secretion, to improve blood circulation and reduce vaginal bleeding.

4. *Solanum torvum*

The fruit was soaked alternatively in salt and curd for 1 week and it was dried and powdered. It is given with ghee to prevent constipation during post-natal period.

5. *Piper betle*

The leaves are given to the mother to improve digestion and to stimulate breast milk secretion.

Medicated water for drink

Curcuma longa (rhizome)

Piper nigrum (dried fruit)

The crushed form of above herbals is tied with piece of cotton cloth and dropped into the drinking water for 28 days. It is periodically replaced by fresh herbal ingredients. The medicated water was consumed during postnatal period for 28 days.

Medicated water for bath

Curcuma longa is grained and applied all over the body, gentle massages with gingelly oil applied on the stomach, coarse powder of *C. longa*, *Piper nigrum* in less quantity and leaves and barks of *Mangifera indica* Linn are boiled in water and used for bathing the women after delivery.

Previous studies on *C. longa* have revealed the clinical benefits that it has anti-inflammatory¹⁷, anti-depressant¹⁸, anti-microbial¹⁹ activity. In this study, *C. longa* and *P. nigrum* externally applied to bring uterus to normal, strengthen uterus, and fight against microorganisms. The use of herbs in boiled water believed to expel wind from the body, rejuvenate and refresh the new mother. Further, to increase the breast milk secretion the special formulation was given to the delivered mother. The ingredients are *C. longa*, *Allium sativum*, *Ferula asafoetida*, *Zingiber officinale*, *Trachyspermum ammi*, *Piper nigrum*. Equal quantities of all ingredients are roasted to make powder form. 1teaspoon daily with milk was given to the new mother.

The vegetables used during postnatal period are *Lagenaria siceraria*, *Lablab purpureus*, *Moringa oleifera*, *Abelmoschus esculentus*. The selected vegetables are used throughout the postnatal period (for 40 days). It was believed that the medicinal plants used for the formulations and for the diet patterns are found to be heaty components, it warms the body and prevents cold condition during postnatal period, The warm ingredients help the uterus to expel wind, keeps the body warm, improves digestion, increase milk secretion and act as a laxative.

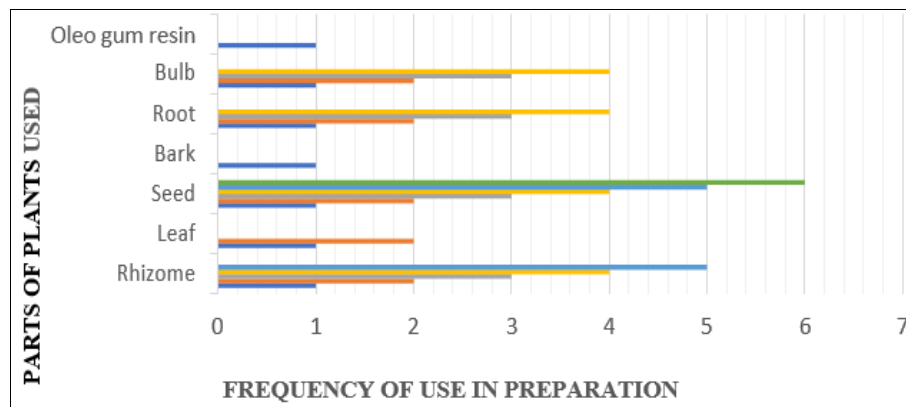
Medicinal plants used for postnatal period in south Indian traditional medicine

Fig 1: Frequency of plant parts used in south Indian postnatal traditional practices

Conclusion

In conclusion, the study has gathered information on traditional practices followed during post-natal period at Tirunelveli district, Tamil Nadu, India. The study has successfully gathered information on the medicinal plants used in the form of single or compound formulations, decoctions, dietary regimen during post-natal care. Similar studies should be undertaken to compile more information on the use of medicinal plants in different regions of Tamil Nadu.

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