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### A critical review of Garbhini Ksheerapakas mentioned in Ayurvedic texts of Kerala

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### ABSTRACT

Pregnancy is an important phase in a woman's life. Health of the pregnant woman has a major role in reducing adverse pregnancy outcomes. Sahasrayoga and Arogyakalpadruma are two important Ayurveda texts of Kerala origin which has references on ante natal care. Both these texts advocates the intake of Ksheerapakas of various drugs, throughout the pregnancy period. It is also a traditional practice to use these medications during antenatal period in many parts of Kerala. This paper aims to review the drugs used for *Ksheerapaka* and to assess their possible benefits in pregnancy.

Key words: Ksheerapaka, Garbhini, Garbhinicharya, Ksheerakashaya, Pregnancy, Ante Natal Care.

### INTRODUCTION

Ayurveda, the science of life has given much importance to woman's health, as she is the root of the progeny. The care of the pregnant and the new born are well explained in various Samhitas. Regimen to be followed during ante natal and post natal period for the optimal health of mother and child is highlighted. Ante natal care is the care of women during pregnancy period. The aim of ante natal care is to reduce the risk of still births and pregnancy complications and to have a positive pregnancy experience. Masanumasika Pathya or month wise dietary regimen and Garbhopaghatakara Bhavas (diet and activities harmful to the fetus) are

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elaborated in all major texts. Ksheerapakas (otherwise called *Ksheerakashayas*) of various drugs for ante natal period are exclusively told in Ayurvedic text books from Kerala such as Sahasrayoga and Arogyarakshakalpadruma. And these are traditionally practiced in many parts of Kerala. In this paper, the Ksheerakashayas used in pregnancy is being reviewed with respect to the drugs used and their possible mode of action.

### **MATERIALS AND METHODS**

A thorough search regarding Garbhiniksheera Kashayas in the Ayurvedic textbooks and research papers were done.

### **Ksheerapakas**

Ksheera (milk) is always considered congenial for pregnant woman. Milk provides nourishment and stability to the fetus. The Madhura Rasa and Vipaka of milk helps to reduce the *Tikshnaushnatva* of the drugs used and thereby making it affable in pregnancy. It also makes the drug more palatable. Charakacharya advocates usage of non medicated milk in desired quantity (considering her digestive power) from the period of conception itself.<sup>[1]</sup> The intake of Ksheera Kashayas helps in meeting the nutritional demands of the pregnant lady. It is also

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helpful in relieving the minor ailments that appear, as the pregnancy progresses. The drug effect is prolonged because of the colloidal form of fat present in milk. Digestion of colloidal fat takes longer time.<sup>[2]</sup> *Ksheera* is having the property of *Garbaposhana* (nourishment of *Garbha*) and it helps in *Garbhadana* (conception). It is *Jeevaniya, Rasayana, Vrshya, Balya, Stanyakara* and *Sramahara*.<sup>[3]</sup> Milk contains high quality protein, lactose, fatty acids and a wide range of micro nutrients. In the treatment of *Upasushka* and *Upavishtaka* (intrauterine growth retardation), *Ksheera* and *Ghrita* are indicated.<sup>[4]</sup>

The drugs mentioned for monthwise use as per *Sahasrayoga* is given below.<sup>[5]</sup>

- First month Bala (Sida Cordifolia)
- Second month Lakshmana (Ipomoea sepiaria)
- Third month Bruhathi (Solanum indicum)
- Fourth month Amsumathi (Desmodium gangeticum)
- Fifth month Amrutha (Tinospora cordifolia)
- Sixth month Nidigdhika (Solanum xanthocarpum)
- Seventh month Yavakam (Hordeum vulgare)
- Eighth month Morada (Chonemorpha macrophylla)
- Ninth month Satavari (Asparagus racemosus)

In *Arogyakalpadruma*,a pediatric text written by *Kaikulangararama Warrier* the drugs mentioned are almost same. The difference can be summarized as follows.<sup>[6]</sup>

- In second month, either Lakshmana or Pushkaramoola can be used.
- In third month, either Brihati or Ksheeri Vriksha Twak can be used.
- In ninth month Satavari, Jeeraka, Bala and Nagara should be used.

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Table 1: Rasapanchaka of drugs used for preparingKsheerapakas during 9 months of pregnancy as perSahasrayoga<sup>[7]</sup>

| Name<br>of the<br>drug | Rasa                          | Guna                      | Veerya | Vipaka  | Dosha<br>Samana      |
|------------------------|-------------------------------|---------------------------|--------|---------|----------------------|
| Bala                   | Madhura<br>, Tiktha           | Lagh<br>u,<br>Snigd<br>ha | Sita   | Madhura | Vathapith<br>asamana |
| Laksma<br>na           | Madhura                       | Guru,<br>Rook<br>sha      | Sita   | Madhura | Vathapith<br>asamana |
| Bruhati                | Katu,<br>Tiktha               | Lagh<br>u<br>Rook<br>sha  | Ushna  | Katu    | KV<br>Samana         |
| Amsum<br>ati           | Madhura<br>Tiktha             | Guru                      | Ushna  | Madhura | VPK<br>Samana        |
| Amruta                 | Tiktha<br>Kashaya             | Lagh<br>u                 | Ushna  | Madhura | VPK<br>Samana        |
| Nidigdhi<br>ka         | Katu<br>Tiktha                | Lagh<br>u<br>Rook<br>sha  | Ushna  | Katu    | KV<br>Samana         |
| Yavaka                 | Madhura<br>Kashaya            | Ruks<br>ha<br>Mrid<br>u   | Sita   | Katu    | VPK<br>Samana        |
| Morada                 | Thiktha<br>Kashaya<br>Madhura | Rook<br>sha<br>guru       | Ushna  | Madhura | VPK<br>Samana        |
| Satavari               | Madhura<br>Tiktha             | Guru<br>Snigd<br>ha       | Sita   | Madhura | VP<br>Samana         |

*Bala* is a drug included in *Madhura Skandha*. The part used is root. The chemical constituents ephedrine, saponine, choline, pseudo ephedrine, betaphenethylamine, vasicine, hypaphorine, ecdysterone and related indole alkaloids are present.<sup>[8]</sup> It is included in the *Garbhasthapana Gana* of *Charakacharya*. The drug with *Garbhasthapana* action nullifies the effect of *Garbopaghatakara Bhavas* and helps in in the *'Sthapana*' of *Garba*.<sup>[9]</sup> It Is

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Sodhahara, Mootrala and Rakthapitta Samana. And hence will be beneficial in the prevention of pregnancy induced hypertension. Medeiros et.al. studied, the oral consumption of S.cordifolia by rats actually caused a decrease in both heart rate and blood pressure.<sup>[10]</sup>

Lakshmana is told in the context of *Pumsavana* by various Acharyas. All *Pumsavana* drugs have got *Garbhasthapana* action because of *Vata-Pitta Samana* and *Brihmana* properties. The part used is tuber. Nasal instillation of *Lakshmana Swarasa* in women for the purpose of *Pumsavana* is explained in *Ashtanga Samgraha* and *Kasyapa Samhita*.<sup>[11]</sup> Wearing of *Lakshmana* root around the neck and internal administration along with milk helps in conception.<sup>[12]</sup>

*Bruhathi* root is one among the *Dasamoolas*. It is *Vathakaphahara, Sothahara* and *Vamihara*. It is also used in gastric and abdominal problems. Leaves and roots contains the alkaloids solanine, solanidine and solasodinde. The decoction may aid in reducing the gastric discomfort and emesis gravidarum prevailing in the third month of pregnancy.

Amsumathi is a controversial drug. The drugs Prsnaparni and Salaparni are both used practically. Salaparni is Desmodium gangeticum, while prsnaparni is Pseudarthria viscida. Salaparni is included in Madhura Skandha. The important constituents are N, N-dimethyltryptamine, desmodin, gangetinin. hordenine, caudicine etc.

The stem of *Amritha* is the useful part. *Amritha* is Included in *Madhura* and *Tiktha Skandha*. It is included in the *Garbhasthapana Oushadas*. The important constituents are Tinosporin, chasmanthin, cordiol, Beta-sitosterol etc. *Tinospora cordifolia* may provide significant protection against diabetes induced oxidative stress and thus serve as an effective therapeutic supplement.<sup>[13]</sup>

Nidigdhika is Sothahara and Angamarda Prasamana. It is used in infertility treatment (white variety). Major ingredients are Solanocarpine, Solamargine, Carpesterol, Solanine etc. The Sothahara property of the drug will help in reducing the pedal edema and PIH that may appear during the second trimester.

*Yavaka* is *Madhura Kashaya* in taste and *Ushna Veerya*. Important constituents of *Yavaka* are Amilopectin, fructosans, N p methyl tyramine, chrysoeriol etc. Barley is a good source of proteins, fibre, vit-B and E, minerals selenium, magnesium and iron, copper, flavonoids and anthocyanins. It promotes intestinal movements relieving constipation. Magnesium and high fibre content contributes for its blood glucose reducing effect. It is also having diuretic action.<sup>[14]</sup>

Satavari is Madhura Rasa and Madhura Vipaka. It is also recommended in the treatment of threatened abortion. The root extract of Asparagus racemosus is having galactogogue action. Satavari has adaptogenic, anti inflammatory, antibacterial, anti stress and diuretic activity.<sup>[15]</sup>

#### Preparation of Ksheerapaka

The preparation of *Ksheeerapaka* as described by Acharya *Sarngadhara* is as follows. Drug taken with 8 times milk and 32 times water is boiled and reduced to the amount of milk.<sup>[16]</sup> According to *Bhaishajya Ratnavali*, the drug, milk and water ratio is 1:8:8 and the mixture is boiled until the milk part remains. *Vridhavagbhata* advises to prepare the decoction of drug and water and to that decoction, equal quantity of milk is to be added and boiled until milk part remains.<sup>[2]</sup> Practically, 15g drug, cleaned and crushed well is boiled in 150ml milk and 600ml water. Then this is reduced to 150ml and is taken once daily after food.

The drug material used should be in coarse powder form and should be cooked on mild fire throughout the process. As there are no confirmatory tests for the assessment of *Paka*, it is roughly assessed over the quantity of milk taken for the preparation. *Ksheerapakas* are meant for instant use only.<sup>[2]</sup>

There is no specific dosage description for *Ksheerakashayas* in the *Samhitas*, so *Kwatha* dosage 2 *Pala* is taken. *Agnibala* of the lady should also be taken into consideration.

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Usually these *Ksheerapakas* are started in the first trimester itself. When started in mid pregnancy, it is customary to start with *Balaksheerapaka* irrespective of the month of pregnancy for one month and then proceed with the *Ksheerapaka* told in the corresponding month for the next months. Usually the medicine is taken after food in order to avoid gastritis which is a usual ailment in pregnant woman.

### **CONCLUSION**

Administration of *Ksheera Kashayas* helps in *Vathanulomana*, which is needed for the normal expulsion of fetus during delivery. The intake of *Ksheerapakas* also helps to fulfil the increased nutritional requirement during pregnancy. As this is also a traditional practice, a survey study may be helpful to record the benefits of *Ksheerakashaya* in pregnant women. Parameters like birth weight of the baby, type of delivery, duration of first stage of labor, adverse pregnancy outcomes if any, etc. should be taken into consideration. Further, an RCT may also be conducted with a control group who don't use antenatal *Ksheerapakas*, to evaluate the efficacy of *Ksheerapaka* usage in pregnancy.

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