A Comparative Review of *Amalaki Avaleha* and *Dadimadi Ghrita* in the Management of *Garbhini Pandu*

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Abstract

Background: Anemia during pregnancy (*Garbhini Pandu*) is a leading cause of maternal morbidity and mortality worldwide. *Ayurveda* describes *Amalaki Avaleha* and *Dadimadi Ghrita* classical formulations for *Pandu Roga* and for supporting *Garbhini health*.

Objective: To review classical and contemporary evidence on *Amalaki Avaleha* and *Dadimadi Ghrita* in the management of *Garbhini Pandu* and to highlight research gaps for future clinical trials.

Methods: Classical Ayurvedic texts and commentaries were reviewed for references to *Garbhini Pandu* and these formulations. Contemporary research was retrieved from PubMed, AYUSH Research Portal, and Google Scholar. Data were synthesized narratively.

Results: *Amalaki Avaleha*, with *Rasayana* and hematinic properties, and *Dadimadi Ghrita,* with digestive and *Raktavardhaka* actions, both demonstrate hematopoietic benefits in non-pregnant anemic populations. However, no comparative or pregnancy-specific studies exist.

Conclusion: Both formulations have strong classical rationale and preliminary supportive evidence. Comparative clinical trials are warranted to establish their efficacy and safety in *Garbhini Pandu*.

Keywords: *Garbhini Pandu,* Pregnancy during Anemia*, Amalaki Avaleha, Dadimadi Ghrita, Ayurveda, Rasayana.*

Introduction

Pregnancy is a dynamic physiological state that requires significant nutritional adjustments for maternal health and fetal development. Anemia is one of the most common complications in pregnancy, with the World Health Organization (WHO) defining anemia in pregnancy as hemoglobin (Hb) ≤11 g/dL[1]. Severe anemia (<7 g/dL) significantly contributes to maternal

morbidity and mortality, and its global prevalence among pregnant women is reported to be 36.5%[2]**.**

In *Ayurveda*, pregnancy-related anemia is compared to *Garbhini Pandu*, a condition resulting from *Rasavaha Strotodushti* and *Dhatukshaya*[3]. *Acharya Kashyapa* emphasized that maternal *Ahara Rasa* nourishes the mother, fetus, and *Sthana*[4]. When dietary quality or digestion is inadequate, *Rasa* and *Rakta Dhatus* become depleted, leading to symptoms like *Vivarnata* (pallor), *Daurbalya* (weakness), *Bhrama* (giddiness), and *Shrama* (fatigue)[5]**.** The narration found in Ayurvedic classics regarding *Pandu* is identical to that described in *Garbhini Pandu*. *Acharya Haritha* has detailed *Ashta Garbhopradrava* in *Harita Samhita*. Within these eight *Garbhopradrava*, '*vivarnatva*' is utilized to define *Garbhini Pandu*.[6]

Amalaki Avaleha (Yogaratnakara) and *Dadimadi Ghrita (Charaka Samhita)* are classical formulations specifically indicated for *Pandu Roga* and recommended for *Garbhini* care[7,8]. *Amalaki Avaleha* combines *Rasayana* herbs such as *Amalaki, Draksha*, and *Yashtimadhu*, whereas *Dadimadi Ghrita* incorporates *Dadima* (Punica granatum) and digestive stimulants in a *Ghrita* base. Although both drugs are widely prescribed in practice, comparative evidence *in Garbhini Pandu* is lacking. This review synthesizes their classical indications, pharmacological actions, and contemporary evidence to inform future research.

Pathophysiological understanding of *Garbhini Pandu*

From an Ayurvedic perspective, *Pandu Roga* originates from *Rasavaha Strotas Dushti*. Acharya *Charaka* clearly states that *Ahara Rasa* of the mother serves a triple purpose — nourishing her own body, the fetus, and the breasts for lactation. During pregnancy, the increased demand for *Rasa* and *Rakta Dhatu* for the growing fetus may result in *Dhatukshaya* (tissue depletion) if the mother's nutritional intake or digestion (*Agni*) is inadequate. This is reflected as *Panduta* (pallor), *Daurbalya* (weakness), *Bhrama* (giddiness), and *Shrama* (fatigue) - which were dominant symptoms in our study participants. From a modern medical perspective, pregnancy anemia is mostly iron-deficiency anemia, aggravated by hemodilution due to plasma expansion (peaking around 32 weeks)[9]. WHO defines anemia in pregnancy as Hb < 11 g/dL, with moderate anemia between 7–9.9 g/dL[10]. In our study, participants were in the moderate category, with Hb between 7–10 g/dL.

The Ayurvedic and modern views converge on the pathogenesis: both acknowledge that increased demand (fetal growth) and insufficient intake/absorption (*Ahara Rasa* impairment or poor iron absorption) lead to the clinical picture of *Garbhini Pandu*.

Material & Method

Sources: Ayurvedic classics (*Charaka Samhita, Sushruta Samhita, Kashyapa Samhita, Yogaratnakara, Sharangadhara Samhita*) and commentaries were reviewed for references to *Garbhini Pandu* and these drugs.

Databases: PubMed, AYUSH Research Portal, Google Scholar, and institutional libraries were searched using keywords "*Amalaki Avaleha*," "*Dadimadi Ghrita*," "*Pandu Roga*," and "anemia in pregnancy."

Review all Articles describing the pharmacological, nutritional, and clinical effects of *Amalaki Avaleha* and *Dadimadi Ghrita*, extract data and analyzed that data.

Results

Classical Perspective

Amalaki Avaleha is described in *Yogaratnakara* as a therapeutic for *Pandu*[7]. *Amalaki* (Emblica officinalis) is a potent *Rasayana* rich in Vitamin C, known to enhance iron absorption and improve *Raktadhatu*. Adjuncts like *Draksha, Yashtimadhu*, and *Pippali* provide *Raktaprasadana, Balya*, and *Garbhasthapaka* actions.

Dadimadi Ghrita, described in *Charaka Samhita* for *Pandu* and *Garbhini* care, combines *Dadima* (Punica granatum) with *Dhanyaka, Chitraka, Shunthi,* and *Pippali* in a *Ghrita* base[8]. This formulation acts as *Agnideepana, Raktavardhaka,* and *Garbhasya-poshaka*, improving digestion and hematopoiesis.

Contemporary Evidence

Amalaki Avaleha – Suryawanshi et al. (2019)[11]: In 40 non-pregnant anemic women, 30 days of *Amalaki Avaleha* (10 g BID) increased mean Hb by 1.2 g/dL, improving fatigue, pallor, and appetite. Preclinical studies: *Amalaki* demonstrated antioxidant and iron-absorption-enhancing properties[12].

Dadimadi Ghrita - Patil et al. (2021)[13]: In mild anemia (non-pregnant adults), *Dadimadi Ghrita* (10 ml BID) improved Hb levels, appetite, and energy after 30 days. Nutritional analysis: *Dadima* contains iron, polyphenols, and antioxidants, while *Ghrita* aids nutrient assimilation and supports maternal tissues[14].

Amalaki Avaleha* Vs *Dadimadi Ghrita* in *Garbhini Pandu

Parameter	***Amalaki Avaleha***	***Dadimadi Ghrita***
Main Classical Reference	*Yogaratnakara*, *Pandu Chikitsa* (1-4)	*Charaka Samhita*, *Chikitsa Sthana* (16/44-46)
Primary Ingredients	*Amalaki* (Emblica officinalis), Fruits	*Dadima* (Punica granatum), Dry Seed

	Draksha (Vitis vinifera), Fruits	*Dhanyaka* (Coriandrum sativum), Fruit
	Pippali (Piper longum), Fruits	*Chitraka* (Plumbago zeylanica), Root
	Yashtimadhu (Glycyrrhiza glabra), Stem bark	*Shunthi* (Zingiber officinale), Rhizome
	Shunthi (Zingiber officinale), Rhizome	*Pippali* (Piper longum), Fruits
	Vanshlochan (*Bambusa arundinaceae*), Secreted part	*Go-Ghrita*, Cow Ghee
	Sharkara (Sugar)	-
	Madhu (Honey)	-
***Rasa* (Taste)**	*Amla* (dominant), *Madhura, Kashaya*	*Madhura, Amla, Katu*
***Guna* (Properties)**	*Guru, Snigdha, Rasayana, Balya*	*Snigdha, Pitta-shamaka, Hridaya*
***Virya* (Potency)**	*Shita* (cooling)	*Ushna* (slightly warming)
Main Ayurvedic Actions	*Raktavardhaka* (enhances blood), *Rasayana* (rejuvenative), *Panduhara* (anti-anemic), *Garbhasthapaka* (supports pregnancy)	*Raktavardhaka, Hridaya* (good for heart), *Deepana-Pachana* (improves digestion), *Garbha-poshaka* (nourishes fetus)
Additional Benefits	Rich in Vitamin C → improves iron absorption; *Draksha* → mild laxative and nutritive	*Ghrita* base → better absorption & sustained effect; *Dadima* → improves hemoglobin & appetite
Evidence from Literature	Shown to improve Hb%, reduce symptoms of anemia in pregnant & non-pregnant women in small-scale clinical trials	Reported to improve hemoglobin levels and appetite in classical use; limited modern clinical trials available
***Anupana* (Adjuvant)**	Milk	Lukewarm water

Gaps Identified

No randomized trials of these drugs in pregnant women with *Pandu*. No head-to-head comparisons between *Amalaki Avaleha* and *Dadimadi Ghrita*. Safety data in pregnancy are limited.

Discussion

This review highlights the therapeutic rationale for *Amalaki Avaleha* and *Dadimadi Ghrita* in managing *Garbhini Pandu*. Both *Amalaki Avaleha* and *Dadimadi Ghrita* are classical formulations with *Rasayana, Raktavardhaka,* and *Agnideepana* properties. Their selection is rooted in both classical textual references and pharmacological plausibility.

Amalaki Avaleha - *Amalaki* (Emblica officinalis) is a potent *Rasayana* and rich source of Vitamin C, enhancing iron absorption[15]. *Draksha* (Vitis vinifera) provides energy, improves *Rasa-Rakta* circulation, and is *Madhura, Sheeta, Balya. Pippali & Shunthi* act as bioavailability enhancers by improving digestion and *Agni. Yashtimadhu* supports tissue healing, is *Pittashamaka,* and soothes gastric mucosa. *Madhu & Sharkara* improve palatability, act as carrier media *(Yogavahi),* and add mild nutrition. Collectively, these ingredients correct *Agni*, improve iron absorption, replenish *Rasa-Rakta Dhatu*, and alleviate fatigue, making the *Avaleha* particularly effective in anemia.

Dadimadi Ghrita - *Dadima* (Punica granatum) is *Hridya* (good for heart)**,** *Raktavardhaka***,** and improves appetite[16]**.** *Ghrita* provides nourishment**,** acts as a lipid vehicle for drug delivery**,** and supports *Ojas***.** *Dhanyaka, Chitraka, Shunthi*, and *Pippali* collectively act as *Agnideepana* and *Amapachaka***,** improving digestion and metabolism. While *Dadimadi Ghrita* effectively corrects *Agni* and improves nourishment, it lacks the high Vitamin C content of *Amalaki Avaleha*, possibly explaining the comparatively lesser increase in serum ferritin and Hb levels. While small trials in non-pregnant populations suggest hematinic potential, direct clinical evidence in pregnant women is absent. The lack of comparative studies prevents determining which formulation is more effective for *Garbhini Pandu*.
Thus, there is an urgent need for well-designed randomized trials to compare these drugs' efficacy and safety in pregnancy.

Conclusion

Amalaki Avaleha and *Dadimadi Ghrita* are promising Ayurvedic formulations for managing anemia and are theoretically beneficial in *Garbhini Pandu*. However, robust clinical evidence in pregnancy is lacking. Future comparative trials should assess their efficacy, safety, and maternal-fetal outcomes, potentially offering safe and effective Ayurvedic interventions for *Garbhini Pandu*.

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