

“EFFICACY OF *PHALATRIKADI KWATH* IN THE MANAGEMENT OF INFERTILITY: AN AYURVEDIC AND MODERN REVIEW”

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FUNDING INFORMATION:

Not Applicable

How to cite this article:

Jalpa Gandhi. “Efficacy of *Phalatrikadi Kwath* in the Management of Infertility: An Ayurvedic and Modern Review” International Journal of Ayurveda Gynecology. 2025;2(1):24-28

ABSTRACT:

Introduction: Infertility is a major global health concern, affecting nearly 10–15% of couples. Ayurveda attributes infertility to vitiation of *doshas* and derangement of *shukra dhatu*, along with uterine and systemic factors. *Phalatrikadi Kwath*, a classical Ayurvedic polyherbal decoction, is traditionally prescribed for gynecological disorders, *garbhasthapan*a (maintenance of pregnancy), and enhancement of fertility. Despite its frequent use in clinical practice, comprehensive evidence-based evaluation is limited. **Methods:** A literature search was conducted across Ayurvedic classical texts, PubMed, Scopus, Web of Science, and Google Scholar. Inclusion criteria comprised classical references, experimental pharmacological studies on constituent herbs, and clinical studies (open-label, observational, randomized controlled trials) evaluating *Phalatrikadi Kwath* or its ingredients in infertility and related reproductive disorders. Exclusion criteria included non-scientific reports, unpublished theses, and studies unrelated to fertility outcomes. **Results:** Classical Ayurvedic literature identifies *Phalatrikadi Kwath* as a potent formulation for *yonivyapad* (gynecological disorders), *vandhyatva* (infertility), and *garbhasthapan*a. Modern pharmacological research on its key ingredients (*Haritaki*, *Bibhitaki*, *Amalaki*, *Musta*, *Amruta*, *Guduchi*, *Vasa*, etc.) demonstrates antioxidant, adaptogenic, uterine tonic, and gonadotropic effects, which support ovulation, endometrial receptivity, and sperm quality. Limited but promising clinical studies report improved conception rates, hormonal balance, and reduced oxidative stress with formulations containing these herbs. **Discussion:** Integrating Ayurvedic principles with biomedical perspectives, *Phalatrikadi Kwath* shows potential as a supportive therapy in infertility management. However, gaps remain regarding standardized dosage, pharmacokinetics, long-term safety, and large-scale randomized trials. **Conclusion:** *Phalatrikadi Kwath* holds promise in infertility management by synergistically correcting systemic imbalances and enhancing reproductive potential. Further well-designed clinical research is essential to establish its efficacy and integrate it into evidence-based infertility care.

KEYWORDS: Ayurveda, Fertility, Infertility, *Phalatrikadi Kwath*, Reproductive Health

INTRODUCTION

Infertility is defined as the inability to conceive after 12 months of regular unprotected intercourse.

^[1] Globally, it affects 48–50 million couples, with nearly equal contributions from male and female factors. Conventional therapies such as ovulation induction, hormonal treatment, assisted reproductive techniques (ART), and surgical interventions are effective but often costly, invasive, and associated with side effects. This has led to an increasing demand for safe and holistic alternatives, including Ayurveda.^[2-3]

Ayurveda emphasizes *Beeja* (ovum and sperm), *Kshetra* (uterus), *Ambu* (nutritional fluids), and *Rutu* (fertile period) as essential for conception. Imbalances in *doshas* and impairment of *shukra dhatu* are major causes of infertility.^[4-6] Among several formulations, *Phalatrikadi Kwath* is a time-tested decoction, frequently used in *Striroga* (gynecological disorders) and *vandhyatva*. Its formulation combines fruits (*Haritaki*, *Bibhitaki*, *Amalaki*) with herbs like *Musta*, *Amruta*, *Guduchi*, and *Vasa*, which possess *rasayana*, *garbhasthapana*, and fertility-enhancing actions.^[7-8]

The present review aims to evaluate the efficacy of *Phalatrikadi Kwath* in infertility, by synthesizing evidence from Ayurvedic classics and modern clinical research.^[9] The objectives are: (i) to compile classical references on *Phalatrikadi Kwath* and its therapeutic indications, (ii) to analyze pharmacological actions of its ingredients relevant to fertility, and (iii) to critically assess clinical evidence for its use in infertility management.^[10]

MATERIALS AND METHODS

A structured literature search was carried out between January–July 2025 using the following strategy:

- **Databases searched:** PubMed, Scopus, Web of Science, AYUSH Research Portal, and Google Scholar.^[11]
- **Keywords used:** “*Phalatrikadi Kwath*,” “Ayurveda and infertility,” “*vandhyatva*,” “Ayurvedic fertility formulations,” “*rasayana* in reproduction.”^[12]
- **Inclusion criteria:**^[13]

- References from classical Ayurvedic texts (*Charaka Samhita*, *Sushruta Samhita*, *Ashtanga Hridaya*, *Kashyapa Samhita*).
- Pharmacological studies on individual ingredients of *Phalatrikadi Kwath*.
- Clinical studies evaluating formulations containing *Phalatrikadi Kwath* or its ingredients in infertility and related disorders.
- Publications in English, Hindi, or Sanskrit.
- **Exclusion criteria:**^[14]
 - Non-peer-reviewed articles, anecdotal reports, conference abstracts without full text.
 - Studies focusing on unrelated therapeutic uses of ingredients.
- **Types of studies reviewed:** Classical textual analysis, preclinical experimental studies, observational clinical studies, and controlled trials.^[15]

OBSERVATION AND RESULTS

1. Classical Ayurvedic Perspective of Infertility (*Vandhyatva*)

Ayurveda describes infertility (*Vandhyatva*) as the inability to conceive despite regular cohabitation. The causative factors are attributed to derangement of *Doshas* (predominantly *Vata*), defects in *Beeja* (ovum/sperm), improper *Rutu* (fertile period), vitiated *Kshetra* (uterus), and deficiency of *Ambu* (nutritional support). *Phalatrikadi kwath* finds a significant mention in Ayurvedic compendia as a *Rasayana* formulation specifically indicated in conditions of female infertility, recurrent pregnancy loss, and gynecological disorders.

2. Composition and Pharmacological Profile of *Phalatrikadi Kwath*

The formulation generally consists of *Haritaki* (*Terminalia chebula*), *Bibhitaki* (*Terminalia bellirica*), *Amalaki* (*Emblica officinalis*), *Lodhra* (*Symplocos racemosa*), *Shatavari* (*Asparagus racemosus*), and other adjunct herbs in decoction form. Each of these herbs contributes synergistically:

- *Amalaki* acts as an antioxidant and supports hormonal balance.
- *Lodhra* strengthens the uterine muscles, reduces excessive bleeding, and enhances implantation.
- *Shatavari* improves ovarian function, promotes folliculogenesis, and acts as a uterine tonic.

- *Haritaki*, *Bibhitaki*, and *Amalaki* (*Triphala*) aid detoxification, improve gut health, and regulate metabolism, indirectly supporting reproductive health.

3. Ayurvedic Mechanism of Action

The drug acts primarily by balancing *Vata* and *Pitta doshas*, improving *Agni* (digestive fire), nourishing *Rasa* and *Shukra dhatus*, and promoting *Artava shuddhi*. Its *Rasayana* property enhances systemic rejuvenation, while *Stanyajanana* and *Garbhasthapaka* effects aid conception and prevent miscarriage.

4. Evidence from Classical Texts

Charaka Samhita and *Bhavaprakasha* describe the role of formulations like *Phalatrikadi kwath* in gynecological disorders, including infertility and recurrent pregnancy loss. These texts highlight its *yonidoshahara* and *garbhasthapaka* actions.

5. Preclinical Evidence

Several experimental studies on the phytoconstituents of *Phalatrikadi kwath* herbs have shown estrogenic, adaptogenic, and antioxidant activities. For example:

- *Shatavari* extracts demonstrated increased follicular growth in animal models.
- *Amalaki* and *Triphala* constituents were found to enhance antioxidant levels and reduce oxidative stress in reproductive tissues.
- *Lodhra* showed significant uterotonic and anti-inflammatory properties, beneficial in endometrial receptivity.

6. Clinical Studies

Modern research has begun to validate the traditional claims:

- A clinical trial on *Phalatrikadi kwath* in women with ovulatory dysfunction showed significant improvement in menstrual regularity and follicular development.
- In cases of unexplained infertility, supplementation with *Phalatrikadi kwath* along with lifestyle modifications improved conception rates compared to control groups.
- Patients with recurrent miscarriage reported better pregnancy maintenance and fewer complications when given this decoction as an adjuvant to standard therapy.

7. Comparative Effectiveness

Compared with other formulations like *Dashmool kwath* or *Shatavari ghrta*, *Phalatrikadi kwath* demonstrated broader systemic action due to the presence of *Triphala*, which improves detoxification and metabolic balance, addressing subclinical factors of infertility such as *Agnimandya* (weak digestion) and *Ama* (toxins).

8. Safety Profile

Being a classical polyherbal formulation, *Phalatrikadi kwath* is generally considered safe when administered in appropriate dosage. Reported side effects are minimal and usually limited to mild gastrointestinal discomfort if taken in excess. Its antioxidant-rich profile ensures safety for long-term use in reproductive-age women.

9. Thematic Synthesis of Results

- **Restoration of menstrual rhythm** – Multiple studies confirm its role in correcting irregular cycles.
- **Enhancement of ovarian function** – Herbs like *Shatavari* and *Amalaki* aid folliculogenesis and oocyte quality.
- **Improved endometrial receptivity** – *Lodhra* and *Triphala* support implantation and reduce inflammatory processes.
- **Systemic rejuvenation** – As a *Rasayana*, it enhances overall vitality, indirectly promoting fertility.
- **Pregnancy sustenance** – Clinical evidence indicates its role in reducing miscarriage risk.

DISCUSSION

The management of infertility through *Phalatrikadi kwath* reflects Ayurveda's holistic approach, where reproductive health is seen as an outcome of systemic balance rather than a localized disorder. Modern medicine often focuses on specific pathologies such as anovulation, tubal block, or luteal phase defect, while Ayurveda recognizes the interconnection between digestion, metabolism, and reproductive capacity.^[16]

Comparative analysis reveals that many pharmacological properties attributed to the formulation align with contemporary biomedical findings. For instance, *Shatavari*'s phytoestrogenic activity is consistent with its use in enhancing follicular maturation. Similarly, *Amalaki*'s antioxidant effect supports oocyte quality, and

Lodhra's action on uterine tone correlates with improved implantation outcomes. This demonstrates a strong convergence of traditional wisdom with modern evidence.^[17]

Despite promising results, certain gaps remain. First, most clinical studies are small-scale with limited methodological rigor. Double-blinded, randomized controlled trials (RCTs) are sparse, making it difficult to establish conclusive efficacy. Second, standardization of *Phalatrikadi kwath* is lacking. Variations in preparation, dosage, and adjuvant use can significantly influence outcomes. Third, safety data in pregnant women is still insufficient and requires systematic evaluation.^[18] Future prospects are promising. Integration of *Phalatrikadi kwath* in fertility clinics, particularly for women with functional or unexplained infertility, could provide a low-cost, natural therapeutic option. Pharmacognostic standardization, bioactive compound identification, and translational research linking Ayurveda with reproductive endocrinology are essential steps forward.^[19]

In conclusion, *Phalatrikadi kwath* offers a multidimensional approach to infertility management by addressing hormonal imbalance, improving endometrial receptivity, and enhancing systemic health. Modern validation strengthens its relevance, but further research is necessary for its integration into mainstream infertility treatment.^[20]

CONCLUSION

Infertility remains a growing global concern, with lifestyle, stress, and metabolic disorders contributing significantly to its rising prevalence. Ayurveda, with its holistic philosophy, emphasizes not just the correction of reproductive organ dysfunction but also the rejuvenation of systemic health. Within this framework, *Phalatrikadi kwath* emerges as a promising formulation for the management of infertility.

Classical references highlight its role in regulating menstrual cycles, supporting ovulation, and sustaining pregnancy. Modern studies corroborate these claims, demonstrating its estrogenic, antioxidant, anti-inflammatory, and uterotonic effects. Clinical evidence suggests improvement in ovulatory cycles, enhanced endometrial receptivity, and reduced miscarriage risk.

Its *Rasayana* properties further contribute by strengthening overall vitality and immune resilience, thereby addressing hidden factors like *Ama* (toxins) and stress, which often impair fertility. Importantly, it is generally safe, affordable, and accessible, making it a viable option in both rural and urban healthcare settings. However, large-scale randomized controlled trials, dosage standardization, and long-term safety assessments are required to establish it firmly in evidence-based practice.

In summary, *Phalatrikadi kwath* holds great potential as an integrative, holistic therapy for infertility, bridging the gap between ancient Ayurvedic wisdom and modern reproductive medicine.

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