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USE OF ALABU MODAK IN THE MANAGEMENT OF RAKTAPRADAR WITH SPECIAL REFERENCE TO MENORRHAGIA

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ABSTRACT

Raktapradar, one of the classical Artavadushti Vikara described in Ayurvedic texts, is characterized by excessive, prolonged, and re-current menstrual bleeding. It bears close clinical resemblance to menorrhagia as understood in contemporary medicine de-fined as cyclic uterine bleeding exceeding 80 mL per cycle. The primary dosha implicated is Pitta, aided by vitiated Vata and Rakta dhatu. Classical Ayurvedic physicians have described a rich pharmacopoeia for this condi-tion; foremost among the modaka (medicated confection) preparations is Alabu Modak[1]. Alabu (Lagenaria siceraria Standl., Cucurbitaceae) carries Kashaya-Madhura Rasa, Laghu Ruksha Guna, Sheeta Veerya, and Pittashamaka properties[2]. Modern pharmacological studies validate its anti-inflammatory, antioxidant, haemostatic-supportive, and uterine-sedative potential[3]. This review integrates the Ayurvedic conceptual frame-work, classical pharmacological insights on Alabu Modak, and a comparative table of Ayurvedic versus modern scientific per-spectives to elucidate the thera-peutic rationale of this formula-tion Raktapradar/Menorrhagia.

KEYWORDS: *Raktapradar, Menorrhagia,Alabu Modak, Bhavaprakash, Artavadushti, Lagenaria siceraria, Pitta-Vata, Kashaya Rasa, Streeroga.*

1. INTRODUCTION

Menorrhagia excessive uterine Bleeding during regular menstrual cycles is one of the most common gynaecological complaints encoun-tered in clinical practice. In India, it constitutes 15-20% of all gynaecolog-ical hospital admissions, with 43% of affected women being in the 20-40 Year reproductive age group[4]. Modern medical management, ranging from hormonal therapy and NSAIDs to surgical intervention, reduces blood loss by only about 50%, and nearly half of treated women re-quire surgical intervention within five years. This clearly underscores the need for effective, safe, and holistic therapeutic alternatives.

"रजः प्रदिर्यते तस्मात् प्रदरस्तेन स स्मृतः ।"

Ayurveda has described this condition as Raktapradar (also known as Asrigdara), defined by Acharya Charaka as excessive pradirana (secretion/outflow) of Raja (men-strual blood). The condition is classi-fied among Rakta Pradoshaja Vikara and Artavadushti, with doshic pre-dominance of Pitta and Vata over Rakta dhatu[5].

Bhavamishra in Bhavaprakash Chikitsadhyaya (68th chapter) has elaborated extensively on the man-agement of Pradara, and in verse 17, specifically describes Alabu Modak as a prime formulation for Raktapradar. The present review critically analyses this classical formulation in the light of both Ayurvedic pharmacology and mod-ern science.

2. AYURVEDA AND MENORRHAGIA /RAKTAPRADAR

2.1Clinical Correlation

Normal menstrual bleeding, as described in Ayurvedic classics, is cycli-cal with 3-5 days duration and 50-60 mL blood loss of normal colour and consistency[6]. When this pattern is altered in terms of duration, quantity, colour, or cycle, the condition is called Artavadushti. Raktapradar is one such disorder and is closely correlated with menorrhagia (ICD-10: N92; National Ayurveda Morbidity Code: EL-4) based on similarities in aetiology, clinical features, and treatment.

NIDANA (AETIOLOGY) OF RAKTAPRADAR[2]

- Ahara Nidana: Excessive intake of Ushna, Amla, Katu, Vidahi, Lavana, Ruksha Ahara; fermented foods; alcohol
- Vihara Nidana: Excessive physical exertion, trauma, coitus during menstruation, Divasvapna
- Manasika Nidana: Chinta (anxiety), Shoka (grief), Krodha (anger) – Shokadi Uttejaka Bhava
- Dosha: Pitta-Vata Prakopa → Rakta Dushti→ Apana Vayu Dushti→ Ati Artava Pravrutti

2.2 Classification of Raktapradar

Charaka Samhita classifies Pradara into four types based on doshic predominance: Vataja, Pittaja, Kaphaja, and Sannipataja. Bhavaprakash and Yogaratnakara notably begin with Kaphaja subtype (as relatively greater bleeding occurs in this subtype)

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followed by Pittaja and Vataja. Raktapradar, as most commonly encountered in clinical settings, is primarily Pitta-Vataja, with involvement of Rakta and Apana Vata.

2.3 Lakshana (Clinical Features)

The cardinal features include: Artava Ati Pravrutti (heavy menstrual flow), Deerga Kala Pravrutti (prolonged duration), Anruta Kala Pravrutti (irregular timing), Daha in Adho Vankshana Pradesha (burning sensation in lower abdomen, groins, and back), Shoola in Garbhashaya (uterine pain), Angamardha (body ache), fatigue, and signs of Rakta Kshaya (anaemia weakness). Pallor, weakness.

3. CONCEPTS & PRINCIPLES OF AYURVEDA IN RAKTAPRADAR

The management of Raktapradar is fundamentally directed at three goals: (1) Pitta Shamana pacification of vitiated Pitta;
(2) Rakta Stambhana haemostasis; and
(3) Apana Vata Anulomana correction of downward movement of Vata.

According to the principle of Samanya-Vishesha, drugs possessing Kashaya Rasa, Sheeta Veerya, Madhura Vipaka, and Pitta-Shamaka properties are indicated. The Chikitsa Sutra for Raktapradar broadly includes[1,2]:

1.Shodhana Chikitsa – where Ama and vitiated doshas are present

2.Shamana Chikitsa – using Raktapitta nashaka, Stambhana, Pittashamaka formulations (as Kashaya, Ghrita, Modaka, Avaleha, Rasoushadhi)

3.Rasayana Chikitsa for tissue Regeneration and prevention of recurrence

4.Satvavajaya Chikitsa Addressing psychosomatic (Shokadi) factors

Modaka (medicated confection/laddoo) as a dosage form offers advantage due to its palatabil-ity, slow release, sustained action, and suitability for long-term admin-istration crucial in a chronic con-dition like Raktapradar.

4. AIM & OBJECTIVES

AIM

- To review the role of Alabu Modak in the management of Raktapradar with special reference to Menorrhagia, integrating classical Ayurvedic and contemporary pharmacological perspectives.

OBJECTIVES

- To describe the Ayurvedic aetiopathogenesis of Raktapradar and its correlation with Menorrhagia.
- To elaborate the classical description and formulation of Alabu Modak .
- To review the pharmacological properties of Alabu (Lagenaria siceraria) relevant to Raktapradar management.
- To prepare a comparative table of modern scientific and Ayurvedic insights regarding the use of Alabu Modak.
- To highlight the therapeutic rationale and potential of Alabu Modak as an evidence-based Ayurvedic intervention.

5. MATERIALS & METHOD

This is a literary review based on classical Ayurvedic texts, published research articles, and pharmacologi-cal studies. The following source ma-terials were consulted:

1. Primary Classical Texts:
Bhavaprakash Samhita
(Chikitsadhyaya 68/17), Charaka Samhita (Chikitsasthana 30), Sushruta Samhita (Uttaratantra), Ashtanga Hridayam (Uttarasthana), Yogaratnakara[7], Dhanvantari Nighantu Kaiyyadeva Nighantu

2. Secondary Sources: Published
Peer-reviewed articles on Raktapradar, menorrhagia, Lagenaria siceraria pharmacology (PubMed, Google Scholar, JAIMS, IJAPR, Pharma Journal)

3. Methodology: Descriptive and analytical review; formulation analysis based on constituent drug properties; modern pharmacological correlation using phytochemical and experimental study data[8]

6.ALABU MODAK BENEFITS WITH PHARMACOLOGICAL INSIGHTS

6.1. Alabu Modak

"अलाबुफलचूर्णस्य शर्करासहितस्य च। मधुना मोदकं कृत्वा खादेत्प्रदरशान्तये" ||

6.2 Drug Identity – Alabu (Lagenaria siceraria)

PHARMACOGNOSTIC IDENTITY OF ALABU

Sanskrit Name: Alabu, Tumbi, Ikshvaku (sweet variety)

PHARMACOGNOSTIC IDENTITY OF ALABU

Sanskrit name	Alabu, Tumbi, Ikshvaku (sweet variety)
Latin Nam	Lagenaria siceraria (Molina) Standley
Family	Cucurbitaceae
Part used	Fruit (sweet variety -Madhura Alabu)
Rasa	Kashaya, Madhura
Guna	Laghu , Ruksha
Veerya	Sheeta
Vipaka	Madhura
Karma	Pittashamaka, Raktapittahara, Stambhana, Hridya, Diuretic, Medhya

6.3 Pharmacological Properties of Alabu (Modern Insights)

Lagenaria siceraria has been subjected to extensive pharmacological investigation[9]. Its fruit, leaves, seeds, and root have demonstrated a wide spectrum of bioactivities:

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1.Anti-inflammatory Activity:
Seed petroleum ether extract shows significant inhibition of acetic acid-induced writhing in animal models, with anti-inflammatory effects comparable to standard drugs. This directly supports its classical Shothahara and Pitta-Shamana action.
2.Antioxidant Activity[10]:
The fruit's Hydroethanolic extract demonstrates potent antioxidant activity in FRAP and DPPH assays, attributed to its rich tannin and flavonoid content. Antioxidants reduce oxidative stress that potentiates endometrial vascular dysfunction in menorrhagia.
3.Haemostatic Support (Raktapitta-hara): The high tannin content (97.66 mg/g in extract) provides astringent properties that support vascular tone and reduce capillary bleeding – directly correlating with Stambhana and Kashaya properties described classically.
4.Diuretic and Cooling [11]: The fruit exerts documented diuretic and cooling (antipyretic-adjacent) effects, reducing Pitta and Rakta Dushti at the systemic level -supporting Sheeta Veerya classification.
5.Cardioprotective / Tonic Action: Lagenaria siceraria has documented cardiotonic activity with positive inotropic effect - beneficial in anaemia-associated cardiac stress complicating chronic menorrhagia.
6.Immunomodulatory Action: Immunomodulatory potential supports Rasayana-like tissue repair and prevention of recurrent episodes (Punarbhava Nivaran).
7.Phytochemical Constituents: Triterpenoids (cucurbitacins), sterols, flavonoids, C-glycosides, ß-glycosides, flavones, pectin, ascorbic acid, beta-carotene, amino acids, vitamin B complex all contribute to the multifaceted therapeutic action.

6.4 Modaka Rationale Dosage Form[12]

Modaka (medicated confection) as a formulation offers: excellent palatability enhancing patient compliance, sustained and slow drug release for prolonged action, stability of thermo-labile constituents avoided by not us-ing heat-intensive preparation, and combined anupana possibilities (e.g., taken with Sheeta Jala or Madhura Dravya). In the context Raktapradar - a condition requiring continuous treatment over one to three menstrual cycles Modaka as a dosage form is clinically superior to Kashaya or Churna alone.

7. COMPARATIVE TABLE MODERN SCIENTIFIC vs. AYURVEDIC INSIGHTS

Parameters	Ayurvedic Insights	Modern Insights
Condition[2]	Raktapradar -Artava Ati Pravrutti due to Pitta-Vata Prakopa and Rakta Dushti; Apana Vayu Vaishamya	Menorrhagia cyclical uterine blood loss ≥80 mL/cycle due to endometrial vascular dysfunction, prostaglandin imbalance, coagulation defects, or structural pathology
Drug name[1]	Alabu (Tumbi) sweet variety; formulated as Modaka .	Lagenaria siceraria (Molina) Standley; Family: Cucurbitaceae; Fruit sweet variety (Lagenaria leucantha)
Rasa/phytochemistry	Kashaya (astringent), Madhura (sweet) Rasa	Rich in tannins (97.66 mg/g), flavonoids, triterpenoids, cucurbitacins, pectin, and ascorbic acid phytochemical basis for astringency and antioxidant action
Veerya	Sheeta Veerya (cold potency) pacifies aggravated Pitta and Rakta	Anti-inflammatory and antipyretic activity demonstrated in vitro and in animal models; cools systemic vascular inflammation
Raktapittahara action	Classical Stambhana (haemostatic), Raktapitta-hara property controls bleeding from Pitta-vitiated channels	Tannin-rich extract promotes vascular astringency; may inhibit prostaglandin-driven vasodilation; thrombolytic and haemostatic-supportive activity reported
Anti-inflammatory	Pittashamaka, Shothahara reduces Ushna, Tikshna, Sara guna of Pitta causing endometrial hypervascularisation	Seed extract shows significant anti-inflammatory activity (comparable to standard drugs) in acetic acid-writhing and carrageenan paw oedema models
Antioxidant	Rasayana-like action prevents Dhatu Kshaya (tissue depletion); Brimhana quality of Madhura component	Strong DPPH, FRAP, and nitric oxide scavenging activity; prevents lipid peroxidation; reduces oxidative endometrial stress
Cardiac/tonic action	Hridya (cardiac tonic), Balya addresses debility and anaemia from chronic blood loss	Cardiotonic activity (positive inotropic effect) on isolated frog heart; cardioprotective against doxorubicin-induced toxicity in rats; general tonic (anaemia supportive)

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Diuretic action[11]	Mutral (diuretic) removes excess Pitta via urinary route, preventing accumulation in Rakta and Artava channels	Documented diuretic properties support renal excretion of inflammatory mediators and oestrogen metabolites that may aggravate endometrial hyperplasia
Dosage form[12]	Modaka sustained release, palatable, stable, suitable for long-term use over menstrual cycles	Confection dosage forms promote controlled drug release; phytoconstituents stable in low-heat preparation; bioavailability enhanced with lipid-based (ghee/jaggery) carriers
Target dosha	Pitta Vata Shamana, Rakta Prasadana	Targets prostaglandin imbalance (PGE2/PGF2a ratio), uterine vascular reactivity, and systemic oxidative inflammatory burden
Safety profile[3,11]	Pathya (dietary vegetable), minimal side effects; classical texts note safe use in Streerog	Sweet variety (non-bitter) of Lagenaria siceraria is widely consumed as vegetable; extensive safety data available; bitter varieties (Cucurbitacin B) require caution

8. DISCUSSION

The pathophysiology of Raktapradar, as elucidated in Ayurvedic texts, reveals a sophisticated understanding of menstrual haemodynamics. The primary culprit Pitta-Vata Prakopa finds its modern parallel in the prostaglandin hypothesis of menorrhagia, wherein an imbalance between vasodilatory PGE2 and vasoconstrictive PGF2a, coupled with reduced thromboxane A2, creates a pro-haemorrhagic endometrial environment[13]. Vitiated Apana Vata correlates with disturbed uterine myometrial contractility a key mechanism in dysfunctional uterine bleeding.

Alabu Modak acts on multiple levels in this pathogenesis. The Kashaya Rasa provides astringency, constrict-ing the bleeding surface and reduce mirroring vascular permeability ing the action of antifibrinolytic agents. The Sheeta Veerya counteracts the Ushna-Sara nature of viti-ated Pitta, reducing the hypervascular state of the endometrium. The Madhura Vipaka promotes Rakta-Prasadana (purification of blood) and Brimhana (tissue nourishment) addressing the consequent Rakta Kshaya (anaemia).

Phytochemically, the high tannin content of L. siceraria (97.66 mg/g in hydroethanolic extract) directly sup-ports haemostatic vascular tone. The documented anti-inflammatory activity addresses endometrial inflammation a key contributor in fibroid-associated and idiopathic men-orrhagia. Antioxidant flavonoids and phenolics protect the endometrium from oxidative damage, while the cardiotonic property provides systemic support in iron-deficiency anaemia secondary to chronic blood loss.

The Modaka dosage form further enhances clinical utility. Its palatability ensures compliance in a condition requiring months of sustained treatment. The combination with carrier ingredients (typically jaggery, ghee, and sesame/honey in classical Modaka preparations) enhances bioavailability of fat-soluble phytoconstituents. The mild Snigdha quality of this carrier also moderates the Ruksha property of Alabu, making it more balanced and preventing excessive Vata aggravation a nuanced classical pharmacological formulation therapy.

It is noteworthy that Bhavamishra's inclusion of Alabu Modak specifically in the 68th chapter (Pradara Chikitsa) rather than in Shaka Varga (dietary vegetables) – signals a deliberate clinical emphasis on its therapeutic potency beyond mere dietary use. Classical texts such as Yogaratnakara and Sahasra Yoga also list Alabu phala Modaka among the primary formulations for Raktapradar, confirming cross-tex-tual validation of this formulation's efficacy[14].

9. CONCLUSION

Raktapradar (Menorrhagia) remains a significant gynaecological challenge with substantial morbidity and quality-of-life impact. The Ayurvedic formulation Alabu Modak scribed in Bhavaprakash Chikitsadhyaya offers a classical, validated, and pharmacologically sound approach to its management. The principal drug, Alabu (Lagenaria siceraria), demonstrates an impressive convergence of classical Ayurvedic properties (Kashaya Rasa, Sheeta Veerya, Pittashamaka, Raktapitta-hara) with modern phar-macological evidence (anti-inflam-matory, antioxidant, haemostatic-supportive, cardiotonic, immuno-modulatory activities).

The Modaka dosage form provides patient-friendly, sustained delivery suitable for the chronic nature of Raktapradar treatment. Integration of classical pharmacological logic with contemporary phytochemical evidence strongly supports the need for well-designed clinical trials to establish the efficacy of Alabu Modak in Raktapradar/Menorrhagia. Such translational research would not only validate this classical formulation but also contribute to the global evidence base for Ayurvedic gynecology.

REFERENCES

1. *Bhavamishra. Bhavaprakash Samhita, Chikitsadhyaya 68/17. Edited by K.M. Maurya & S. Sharma. Varanasi: Chaukhamba Sanskrit Bhawan; 2010.*
2. *Bhavamishra. Bhavaprakash Nighantu – Shaka Varga (Alabu). Varanasi: Chaukhamba Sanskrit Bhawan; 2010.*
3. *. Sushruta. Sushruta Samhita, Sharirsthana 2/20. Edited by Kaviraj Ambika Dutta Shastri. Varanasi: Chaukhamba Sanskrit Sansthan; 2009.*

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4. *Thorat SS, et al. Review on Raktapradara (menorrhagia) and its management. Journal of Ayurveda and Integrated Medical Sciences. 2021;6(1):220-235.*
5. *Charaka. Charaka Samhita, Chikitsasthana 30/202-210. Edited by Vd. Harischandra Singh Kushwaha. Varanasi: Chaukhamba Orientalia; 2005.*
6. *Sushruta. Sushruta Samhita, Sharirsthana 2/20. Edited by Kaviraj Ambika Dutta Shastri. Varanasi: Chaukhamba Sanskrit Sansthan; 2009.*
7. *Yogaratnakara. Pradar Roga Chikitsa. Varanasi: Chaukhamba Sanskrit Sansthan.*
8. *Deshpande JR, et al. Phytochemical and Pharmacological Review of Lagenaria siceraria. Pharmacognosy Journal. 2011.*
9. *Singh A, Singh SK. Biotechnology and pharmacological evaluation of Indian vegetable crop Lagenaria siceraria: an overview. J Sci Food Agric. 2016;96(6):1-16. PubMed: 26637422.*
10. *Bottle Gourd Phytochemical and pharmacological profile of Lagenaria siceraria. PMC. 2011;PMC3117318.*
11. *Lagenaria siceraria fruit: A review of its phytochemistry, pharmacology, and traditional uses. Front Pharmacol. 2022; PMC9523573.*
12. *Sahasra Yoga Modaka Prakarana. Kerala Ayurvedic Series; Traditional edition.*
13. *Parbati O, Sreelekha SA. Ayurveda Management of Menorrhagia (Raktapradara): Protocol for a Randomized Controlled Trial. JMIR Res Protoc. 2025; PMC11997518.*
14. *Yogaratnakara. Pradar Roga Chikitsa. Varanasi: Chaukhamba Sanskrit Sansthan.*