ISSN:3139-0935(Online)

Intemed: International Journal of Research in Integrated Medical Sciences (IJ-RIMS)

journal homepage: www.intemed.in
Vol.:2 | Issue: 4| April-2026

Article History: Received: 22-04-2026 Accepted: 27-04-2026 Published:30-04-2026

Review Article

Comprehensive Pharmacological Analysis of *Dhatri Lauha* in *Pandu* Chikitsa

Dr. Nikhil Gurav[1]*, Dr. Vandana Wadhavane[2], Dr. Nikhil Kailas Jaiswal[3], Dr. Parinita Vivek kumar Mourya[4]

1. Associate Professor, Department of Kayachikitsa (Internal Medicine), Matoshri Asarabai Darade Ayurved College, Babhulgaon, Yeola.
   Email Id: dr.nikhilgurav10@gmail.com
2. Assistant Professor, Department of Kayachikitsa (Internal Medicine), Matoshri Asarabai Darade Ayurved College, Babhulgaon, Yeola.
   Email Id: ambulancechaser18101996@gmail.com
3. Department of Kayachikitsa (Internal Medicine), Matoshri Asarabai Darade Ayurved College, Babhulgaon, Yeola.
   Email Id: aumnikhilam@gmail.com
4. Department of Kayachikitsa (Internal Medicine), Matoshri Asarabai Darade Ayurved College, Babhulgaon, Yeola.
   Email Id: pari0987m@gmail.com

ABSTRACT

Iron-deficiency anemia (IDA) continues to be a major public health challenge in India, primarily due to inadequate dietary intake, chronic blood loss, and poor tolerance to conventional oral iron supplements, which often results in low patient compliance. In parallel, peptic ulcer disease has shown an increasing prevalence owing to faulty dietary habits, stress, and lifestyle-related factors, significantly impairing quality of life. In Ayurvedic literature, conditions such as *Panduroga* (anemia), *Annadrava Shoola* (gastric ulcer), and *Parinama Shoola* (duodenal ulcer) closely resemble iron-deficiency anemia and peptic ulcer disease respectively. *Dhatri Lauha*, a classical herbo-mineral formulation described in *Bhaishajya Ratnavali*, has been traditionally employed in the management of

these disorders; however, systematic scientific evaluation and standardization remain limited. The present study aims to evaluate the clinical safety, therapeutic efficacy, and quality control parameters of *Dhatri Lauha* in patients suffering from iron-deficiency anemia and peptic ulcer-related conditions. Clinical findings demonstrated significant improvement in hemoglobin levels, iron indices, and gastrointestinal symptoms without the occurrence of serious adverse events. Furthermore, physicochemical analysis and X-ray diffraction were utilized to establish analytical fingerprinting and quality benchmarks. The study supports the potential of *Dhatri Lauha* as a safe, effective, and economical Ayurvedic intervention with scope for integration into national health programs.

Keywords : *Dhatri Lauha*, *Panduroga*, Iron-Deficiency Anemia, *Annadrava Shoola*, *Parinama Shoola*, Peptic Ulcer, Ayurveda, Hemoglobin, Quality Control, X-ray Diffraction

1. Introduction

Anemia, particularly iron-deficiency anemia, is the most prevalent nutritional disorder worldwide and poses a serious public health burden in India, affecting approximately 57.2% of women aged 15-49 years. Conventional iron supplementation, although effective, is frequently associated with gastrointestinal side effects such as nausea, epigastric discomfort, and constipation, leading to poor adherence and suboptimal outcomes. Simultaneously, peptic ulcer disease remains a common gastrointestinal disorder, affecting nearly 40% of adults at some stage in life, with contributing factors including improper dietary habits, psychological stress, and *Helicobacter pylori* infection.

In Ayurveda, peptic ulcer disease can be correlated with *Annadrava Shoola* and *Parinama Shoola*, conditions arising primarily from aggravated *Pitta Dosha* and impaired digestive function. *Dhatri Lauha* is a classical Ayurvedic formulation indicated in *Panduroga*, *Amlapitta*

(hyperacidity), and *Shoola*-related disorders, owing to its hematinic, digestive, and gastroprotective properties. Despite its extensive traditional usage, scientific evidence regarding its safety, efficacy, mechanism of action, and quality control parameters is insufficient. Therefore, the present study was undertaken to systematically evaluate *Dhatri Lauha* using clinical assessment and modern analytical techniques, thereby strengthening its scientific credibility and therapeutic relevance

AIM

To evaluate the clinical safety, efficacy, and quality control parameters of *Dhatri Lauha* in iron-deficiency anemia and peptic ulcer-related conditions.

OBJECTIVES

Primary Objectives

- To assess the effect of *Dhatri Lauha* on hemoglobin levels in patients with iron-deficiency anemia.
- To evaluate its therapeutic efficacy in *Annadrava Shoola* and *Parinama Shoola*.

Secondary Objectives

- To study changes in hematological parameters such as MCV, MCHC, serum iron, and ferritin.
- To assess improvement in peptic ulcer symptoms and *H. pylori* status.
- To monitor safety and adverse drug reactions.
- To establish physicochemical and analytical quality control parameters.

MATERIALS AND METHODS

Fig 01: dhatri lauha preparation

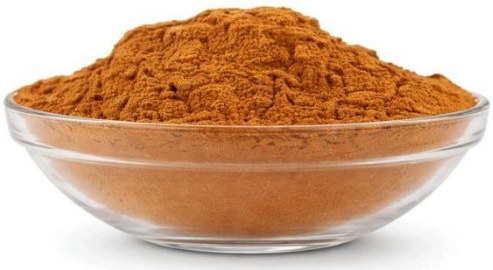

fig. 02: dhatri lauha

Composition

- *Amalaki* (*Emblica officinalis*)
- *Lauha Bhasma* (processed iron) Prepared according to classical *Shodhana* (purification) and *Marana* (incineration) procedures described in Ayurvedic texts.

Physical and Physicochemical Properties

- Fine reddish-brown powder with characteristic odor and taste.
- Low moisture content indicating good shelf stability.
- Qualitative tests confirmed the presence of iron.
- X-ray diffraction analysis generated a distinct fingerprint profile of *Dhatri Lauha*.
- Physicochemical parameters were comparable with marketed standard formulations.

Mechanism of Action

- *Lauha Bhasma* replenishes iron stores and improves iron bioavailability.
- *Amalaki* enhances digestion and absorption through *Deepana* (appetizer) and *Pachana* (digestive) actions.
- Antioxidant properties reduce oxidative stress and support gastric mucosal healing.
- *Pitta-shamaka* (Pitta-pacifying) action helps control bleeding and acidity.
- Supports erythropoiesis and improves overall metabolic function.
- Additional proposed action includes gastroprotective modulation of mucosal defense, improving tolerance compared to conventional iron therapy.

Therapeutic Benefits

- Improves hemoglobin concentration and iron metabolism. ● Effective in the management of *Panduroga*.
- Reduces gastric pain, nausea, vomiting, and hyperacidity.

- Beneficial in *Annadrava Shoola* and *Parinama Shoola*.
- Shows favorable clinical response against *H. pylori*-associated symptoms.
- Well tolerated with minimal adverse effects.

Dose *Dhatri Lauha*: 250-500 mg twice daily or as prescribed.

Anupan **(Vehicle)**

- Honey
- Warm water
- *Ghrita* (clarified butter, as per disease condition)

RESULTS AND DISCUSSION

Results

- Significant improvement in hemoglobin levels was observed in patients with iron-deficiency anemia.
- No patient showed deterioration in hematological status during treatment.
- RBC indices such as MCV and MCHC demonstrated noticeable improvement.
- Serum iron and ferritin levels showed a positive trend, indicating improved absorption and storage.
- The formulation was well tolerated with no serious adverse events.
- Minor adverse effects, if present, were self-limiting.
- Marked reduction in symptoms of *Annadrava Shoola* and *Parinama Shoola* was observed.
- Clinical improvement against *H. pylori*-associated symptoms was noted, though some cases required prolonged therapy.
- Quality control evaluation confirmed consistency and reproducibility of the formulation.
- XRD analysis successfully established an analytical fingerprint profile.

Discussion:

Dhatri Lauha demonstrated significant improvement in hematological and gastrointestinal parameters. The synergistic action of *Amalaki* and *Lauha Bhasma* enhances iron absorption while minimizing gastric irritation. This formulation offers an advantage over conventional iron supplements in terms of tolerability. Integration of classical tests with modern analytical tools strengthens its scientific validity.

CONCLUSION

Dhatri Lauha is a safe, effective, and well-tolerated Ayurvedic formulation for iron-deficiency anemia and peptic ulcer-related disorders. The formulation improves hematological parameters and gastrointestinal symptoms without significant adverse effects. The study supports its potential inclusion in national health initiatives such as Anemia Mukt Bharat. Further large-scale randomized controlled trials are recommended for long-term validation and standardization.

REFERENCES

1. *Charaka Samhita* of Agnivesha, revised by Charaka and supplemented by Dridhbala, with Ayurveda Dipika commentary by Chakrapanidutta; edited by Vaidya Yadavji Trikamaji Acharya. Varanasi: Chaukhambha Surbharati Prakashana; Reprint 2000.
2. *Madhava Nidana*, with Madhukosha commentary; edited by Sudarshan Shastri and Yadunandana Upadhyaya. 26th ed. Varanasi: Chaukhambha Sanskrit Sansthana; 1976.
3. *Sushruta Samhita*, with Ayurveda Tattva Sandipika Hindi commentary by Kaviraja Ambikadutta Shastri. Part II. Varanasi: Chaukhambha Sanskrit Sansthana; 2015.
4. *Yogaratnakara*, with Vidyotini Hindi commentary by Vaidya Lakshmipati Shastri. Varanasi: Chaukhambha Prakashana; Reprint 2008.
5. *Bhavaprakasha*, edited by Pandit Sri Brahma Shankara Mishra. Vol II. Varanasi: Chaukhambha Sanskrit Bhawan; 2012.
6. *Chakradatta*, edited by Priyavrata Sharma. 2nd ed. Varanasi: Chaukhambha Publishers; 1998.

7. *Bhaishajya Ratnavali*, by Kaviraja Ambikadatta Shastri. Varanasi: Chaukhambha Sanskrit Sansthana.
8. *Dravyaguna Vigyana*, Sharma PV. Vol II. Varanasi: Chaukhambha Bharati Academy.
9. The Ayurvedic Formulary of India. Part II. 1st ed. New Delhi: Government of India, Ministry of Health and Family Welfare, Department of AYUSH; 2000. Vol II.
10. Ayurvedic Pharmacopoeia of India. Part II. 1st ed. New Delhi: Government of India, Ministry of Health and Family Welfare, Department of AYUSH; 2008. Vol II.