

धनुषतशंगा

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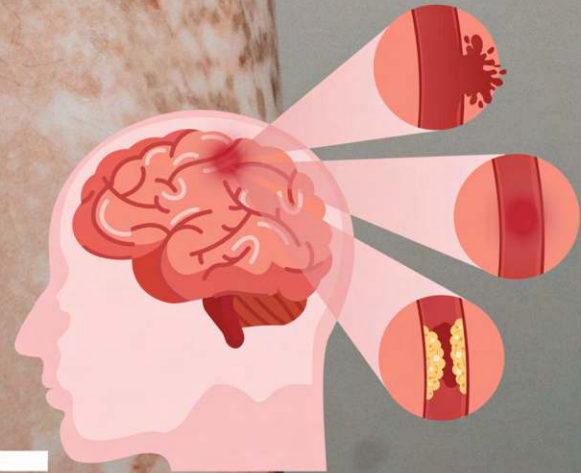
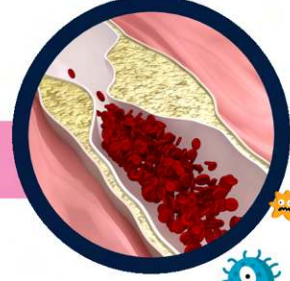
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**Disorders Due to Depletion
of Dhatus, Blood Impurities,
Skin Related Diseases**

(धातु क्षयजन्य, रक्तदुष्टि, त्वचा संबंधी विकार)



Betel Leaf for Gastritis Relief

Traditional Wisdom with Preliminary Clinical Observations

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Introduction

Gastritis is one of the most leading and prominent cause of dyspepsia, epigastric pain, and reflux symptoms. While antacids are preliminary choice for most of these problems, however there is exponential inclination in traditional yet non orthodox remedies that are helpful in protecting the gastric mucosa and regulate acid and enzyme secretion without long-term side and adverse effects. Piper betle (betel leaf, Tambul, Nagavalli), extensively used as an Ayurvedic drug, is traditionally chewed after meals to aid digestion and relieve gastritis related symptoms after meal. Modern phytochemical and pharmacological research now provides evidences to boast support for this practice.

Phytochemistry and Pharmacological Insights

Betel leaves contain several bioactive constituents with antioxidant, anti-inflammatory, and gastroprotective properties:

Compound	Reported Actions Relevant to Gastritis
Eugenol	Antioxidant, COX inhibition, analgesic effect [1]
Hydroxychavicol	Free-radical scavenger, antimicrobial [2]
Chavibetol	Gastroprotective, enhances mucosal defenses [3]
Allylpyrocatechol	Anti-ulcer activity in experimental models [4]
Flavonoids & phenols	Reduce oxidative stress, modulate cytokines [5]

Experimental studies suggest Piper betle extracts may, reduce gastric acid secretion and ulcer formation [6], protect against ethanol and NSAID-induced gastric injury [7], suppress inflammatory mediators such as TNF- α , IL-6, and COX-2 [8], modulate NF- κ B signaling and enhance mucosal prostaglandins [9]

Network pharmacology analyses also indicate multi-target activity on pathways related to oxidative stress, mucosal repair, and acid regulation [10].

1. Clinical Observations in Two Patients

Case 1 – Chronic Gastritis (58-year-old female)

A 58-year-old woman presented with persistent epigastric pain, acid reflux, and a burning sensation behind the sternum. On her own endoscopic evaluation, only mild gastric erosions were visible, and testing ruled out *Helicobacter pylori* infection. Based on traditional advice, she was started on two fresh betel leaves to be chewed after each meal for one week. Initially, she consumed the leaves before meals, which led to a transient increase in blood pressure. This was promptly corrected by shifting the timing to after meals, which she tolerated well.

Her diet was modified from the first day, avoiding sour, spicy, or high-salt foods. Because of household duties, she could not perform yoga daily, but she attempted simple post-meal asanas when possible. Symptom relief began within the first two days – pain intensity and reflux episodes reduced markedly. By the end of the first week, her digestion felt smoother, bloating had disappeared, and reflux symptoms were minimal. After two weeks, she reported being completely free of discomfort. Follow-up at three months confirmed she remained asymptomatic, even after occasional dietary indulgences.

Case 2 – Acute Gastritis (28-year-old female)

A 28-year-old woman developed sudden stomach burning, nausea, and mild headache after eating at a fast-food outlet. She chewed one fresh betel leaf immediately and reported relief of pain and nausea within approximately 15 minutes. To maintain this benefit, she continued chewing one leaf after each meal for seven days. Her diet was corrected from the next day, and she initiated a structured yoga and pranayama routine after the first week.



Symptom Improvement over 90 Days

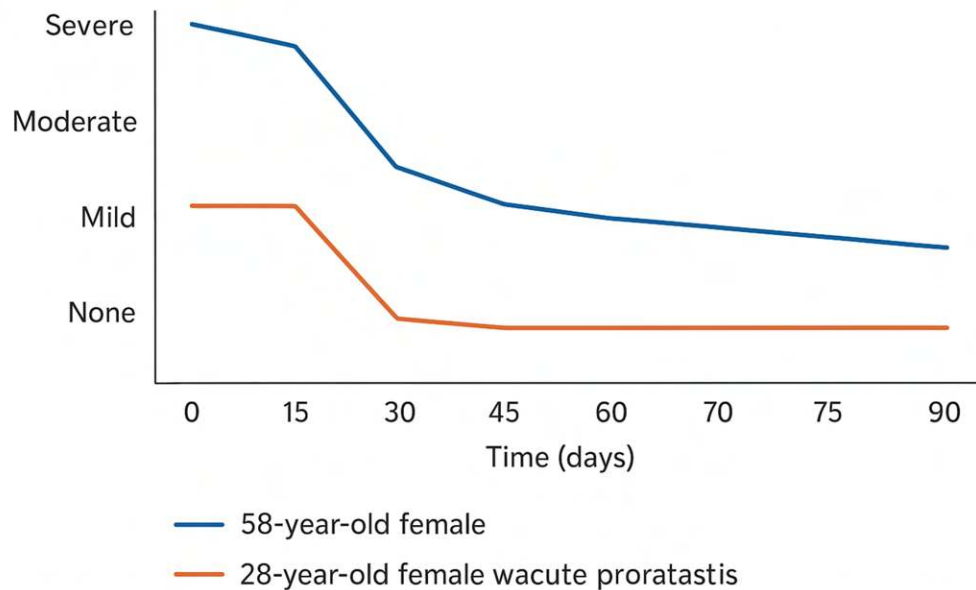


Figure : A dual-patient timeline showing symptom severity decreasing from "severe → moderate → mild → none" over 90 days. Patient 1: gradual decline over 7 days, stable remission by 15 days. Patient 2: abrupt relief within 15 minutes, sustained remission.

Proposed Mechanisms and Clinical Significance

The symptomatic improvement observed in these two patients may reflect the integrated pharmacological profile of Piper betle leaves rather than a single isolated effect. Phytochemical studies have demonstrated that betel leaf contains eugenol, hydroxychavicol, and other phenolic compounds known to exert anti-inflammatory and antioxidant activity. By dampening cyclooxygenase-mediated pathways and neutralizing reactive oxygen species, these constituents may protect the gastric mucosa from ongoing irritation. Experimental evidence also suggests a mild antisecretory influence on gastric acid output, which could reduce the severity of acid-related symptoms, particularly post-prandially.

In addition to these direct gastric effects, the leaf exhibits a broad spectrum of antimicrobial properties that may be relevant in dyspeptic syndromes not associated with *Helicobacter pylori* infection. Traditional use of betel leaf as a digestive stimulant aligns with these findings, as its carminative and motility-modulating actions have long been noted in ethnomedical practice. Together, these mechanisms provide a plausible scientific basis for the rapid and sustained symptom relief seen in the cases described, including the 15-minute resolution of acute discomfort in one patient and the week-long progressive improvement of chronic gastritis symptoms in the other.



Need for Systematic Evaluation

Although these observations are encouraging, they must be interpreted with caution. Anecdotal clinical responses, even when consistent, cannot substitute for structured research. A formal evaluation using validated symptom scales such as the Gastrointestinal Symptom Rating Scale (GSRS), coupled with endoscopic monitoring, would help quantify therapeutic benefit and confirm mucosal healing. Future studies should also clarify whether the timing of administration – before or after meals – alters efficacy or safety, especially in patients with hypertension, as suggested by the transient rise in blood pressure in one subject when the leaves were taken pre-prandially.

Furthermore, the optimal duration of therapy and the extent to which dietary and lifestyle interventions (such as yoga and pranayama) contribute to the overall effect remain undefined. Multi-centre clinical studies with larger sample sizes could also determine whether these benefits extend to individuals with comorbid conditions or those receiving concurrent pharmacotherapy.

Conclusion

The convergence of phytochemical data, experimental models, and these preliminary clinical observations suggests that Piper betel leaf has a gastro-protective potential worthy of systematic investigation. If validated in controlled trials, it could emerge as a safe, low-cost adjunct in the management of gastritis and related dyspeptic syndromes.

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