

## Amlapitta (Gastro esophageal reflux disease)

# Gastro-Oesophageal Reflux Disease (GERD)

(Integrated write-up merging established gastro-enterology guidelines with relevant Āyurvedic concepts - mainly Ūrdhvaga Amlapitta & Pariṇāma-sūla)

## 1. Disease Description

- GERD is a chronic, relapsing condition in which gastric contents reflux into the oesophagus and/or supra-oesophageal tract, producing troublesome symptoms and/or mucosal damage (Montreal definition, 2006).
- Cardinal symptoms: retro-sternal heart-burn, acid regurgitation, sour brash; may be accompanied by chest pain, dysphagia or extra-oesophageal manifestations (cough, laryngitis, asthma, dental erosion).

## 2. Classification / Types

Modern Sub-type	Key Features	Approx. prevalence among GERD
1. NERD (Non-Erosive Reflux Disease)	Reflux symptoms with normal endoscopy; abnormal pH/impedance	60-70 %
2. Erosive Oesophagitis (EE)	Endoscopic breaks in mucosa, graded LA-A→D	25-30 %
3. Barrett's Oesophagus (BE)	Intestinal metaplasia ± dysplasia	5-10 % of symptomatic males
4. Extra-oesophageal Syndromes	Chronic cough, laryngitis, asthma, dental caries attributed to reflux	up to 30 % ENT clinics
5. Refractory / PPI-non-responsive GERD	Persistent symptoms despite ≥8 weeks bid PPI	10-15 % gastro OPD

## 3. Causes & Risk Factors

1. **Transient LES Relaxations (TLESRs)** - primary pathophysiological event.
2. **LES Pressure Reduction** - foods (chocolate, peppermint), drugs (CCB, nitrates), hormones (progesterone).
3. **Hiatal Hernia** - loss of diaphragmatic pinch.
4. **Delayed Gastric Emptying** - diabetes, gastroparesis.
5. **Increased Intra-abdominal Pressure** - obesity, pregnancy, ascites.
6. **Lifestyle** - smoking, alcohol, supine posture soon after meal.
7. **Others** - Connective tissue disorders (scleroderma), post-oesophagectomy, congenital (tracheo-oesophageal fistula repair).

## 4. Etiopathogenesis (Modern)

Aggressive Factors	Defensive Factors
• Acid + Pepsin • Duodenogastric bile / trypsin	• Intact LES tone • Peristaltic clearance • Salivary bicarbonate

↓ overcomes defence ↓

Chemical injury of squamous epithelium → inflammation → erosions → ulcer → fibrosis/stricture or columnar metaplasia (Barrett's).

Key molecular events: Acid activates TRPV-1 receptors (heart-burn), bile acids generate ROS, cytokines (IL-8) perpetuate inflammation.

## 5. Differential Diagnosis

Symptom Complex	Consider...	Distinguishing Points
Heart-burn & chest pain	Cardiac ischaemia	Exertional? ECG changes? Troponin.
Dyspepsia	Peptic ulcer, functional dyspepsia	Epigastric vs retro-sternal; endoscopy.
Odynophagia	Infective/caustic oesophagitis, pill injury	Severe pain on swallowing.
Food impaction	Eosinophilic oesophagitis, stricture	Allergy history, high eosinophils.
Chronic cough	Asthma, PND, ACE inhibitor	Spirometry, medication review.

## 6. Diagnostic Approach

- Clinical (Empiric)** - Typical symptoms <60 yrs without alarms → 8 wk trial PPI.
- Upper GI Endoscopy (EGD)** - Indicated if: • Alarm features (dysphagia, bleed, wt-loss, >60 yrs) • Failure of empiric therapy • Screening for Barrett's in at-risk males (>50 yrs, chronic symptoms, obesity).
- Physiologic Tests** a. 24-h pH or pH-impedance monitoring (off PPI) - gold standard for atypical or pre-op cases. b. High-resolution manometry - rules out motility disorders before antireflux surgery.
- Barium swallow** - Large hiatal hernia, strictures.
- Oesophageal biopsies** - Eosinophilic oesophagitis, Barrett's (Prague M-C classification).

## 7. Prognosis & Complications

- Most patients achieve symptomatic control with lifestyle ± PPIs.
- Unaddressed reflux leads to complications: - Peptic stricture (5-10 %) - Barrett's oesophagus (5-15 %); annual risk of adenocarcinoma 0.3 % - Recurrent bleeding ulcers (rare).
- Post-surgical outcome: 85-90 % symptom resolution at 5 yrs.

## 8. Modern Management (Evidence-based)

### 8.1 Lifestyle & Behavioural

- Weight reduction (BMI <25)
- Head-end elevation ≥6 inch, left-lateral sleep
- Avoid meals 3 h before lying; small frequent meals
- Eliminate triggers: coffee, cola, chocolate, peppermint, fatty/fried food, alcohol, smoking.

### 8.2 Pharmacological (Step-up / Step-down)

Class	Example & Dose	Comment
Antacids + Alginates	Al(OH) <sub>3</sub> /Mg(OH) <sub>2</sub> 15 ml prn, Gaviscon 10 ml	Immediate relief

Class	Example & Dose	Comment
H <sub>2</sub> -blockers	Ranitidine 150 mg BD, Famotidine 40 mg HS	Good for night-time symptoms
<b>PPIs</b> (mainstay)	Omeprazole 20 mg OD, Esomeprazole 40 mg OD (30 min pre-breakfast)	8 wk course, then on-demand or maintenance
Potassium-Competitive Acid Blocker (P-CAB)	Vonoprazan 20 mg OD	Rapid, potent (Asia)
Prokinetics	Domperidone 10 mg TID, Metoclopramide 5-10 mg TID	Adjunct in gastroparesis
Mucosal protectants	Sucralfate 1 g QID	Mainly erosive disease

Refractory GERD → confirm compliance, rule out functional heart-burn → consider double-dose PPI, add alginate at night, or switch to P-CAB.

### 8.3 Endoscopic Therapies

- TIF (EsophyX, GERDx), Stretta RF, MUSE - modest benefit, selected cases.

### 8.4 Surgical Options

- Laparoscopic Nissen (360°) or Toupet (270°) fundoplication
- LINX magnetic sphincter augmentation for BMI <35, small hernia.

Post-operative dysphagia/gas-bloat in 10-20 %.

## 9. Āyurvedic Perspective

### 9.1 Classical Correlation

- Ūrdhvaga **Amlapitta** (Mādhava Nidāna 51) - sour eructation, hṛd-daha, avipāka.
- **Pariṇāma-sūla** (A.H. Chikitsā 10) - pain 3-4 h post-meal, relieved by food.
- Patho-physiology: Vidagdha Pācaka-pitta + Udāna-vāta prakopa → ārdita āmaśaya → amla-tikta udgāra & daha → reflux.

### 9.2 Nidāna (Risk Triggers)

- Ati-amlavaṇa, ati-uṣṇa, fried snack habit
- **Viruddhāhāra** - yoghurt + fish, fruit + milk, etc. • Irregular meals, late-night dinner, prolonged empty stomach
- Alcohol, smoking, anger, anxiety → Pitta & Vāta vitiation.

### 9.3 Nidāna-Pāñcaka Summary

Component	Description
Nidāna	See above (āhāra, vihāra, mānasa)
Pūrvārūpa	Mild sour belch, throat heat, anorexia
Rūpa	Heart-burn (hṛd-kaṇṭha-daha), amla-tikta udgāra, nausea, chest discomfort
Upaśaya	Cold milk, ghee ↓; spicy, fried ↑
Samprāpti	Vidagdha-pitta ↔ āma coating ▶ LES irritability (udāna-vāyu ūrdhva-gati) ▶ reflux

### 9.4 Samprāpti-Vighaṭana (Break-up Strategy)

1. **Pitta-sāmana** - śīta, tikta-madhura dravyas, mṛdu virecana.
2. **Vāta-anulomana** - ghr̥ta, kṣīra-basti (milk-enema) in chronic spasm.
3. **Āma-pācana & Agni-dīpana** - but *not* with tikṣṇa-uṣṇa herbs.
4. **Ulcer-healing (ropaṇa)** - yashtimadhu, śatadhauta-ghr̥ta, śatavari-ghr̥ta.

## 9.5 Doṣaja Cikitsā-Sūtra

Pittaja Amlapitta	→ “Tiktaghṛta-snehapānaṃ, mṛdu-virecana-pūrvam”
Vātānubandha	→ “Snigdha-kṣīra-bastiḥ, Sūtasekhararasa-sevā”
Kaphānubandha	→ “Pañcakola-dīpanam, nāti-sneha, takra-pāna”

## 9.6 Chikitsā-Yojanā

Stage	Intervention	Classical Formulation & Dose
<b>Śodhana</b>	Mṛdu Virecana	Avipattikara Cūrṇa 10 g h.s. × 2-3 nights
<b>Snehapāna</b>	Tikta-Ghṛta	40-60 ml on empty stomach × 5 d
<b>Basti (if Vāta)</b>	Kṣīra-Basti	Milk 300 ml + Ghṛta 50 ml + Yashtimadhu 10 g - 5 sittings
<b>Śamana Yoga</b>	Sūtaśekhara Rasa 125 mg TID with honey + ghee Kāmdudha Rasa (Muktā yukta) 250 mg BID with cool milk Praval-Piṣṭi 250 mg + Guduchi-Sattva 250 mg BID Yashtimadhu Ghṛta / Śatāvārī-Ghṛta 10 ml HS Saṃskṛta Nārikel Lavan 1-2 g BID	Pittaja burning, nausea Acid buffering Ulcer healing Mucosal repair Chronic duodenal reflux
<b>Rasāyana</b>	Vardhamāna-Pippalī with milk-ghṛta regimen × 15 days	Agni stabiliser

## 9.7 Pathya-Apathya

### PATHYA

1. Warm cow-milk with ½ tsp ghee at bedtime.
2. Old rice, barley, bottle-gourd, pumpkin, green gram soup.
3. Pomegranate, sweet grapes, tender coconut water, coriander-fennel infusion.
4. Eat small, timely meals; sit erect 30 min after eating; early dinner.
5. Yoga: Vajrāsana after meals, left-lateral sleeping posture, Śitalī & Bhrāmārī prāṇāyāma.

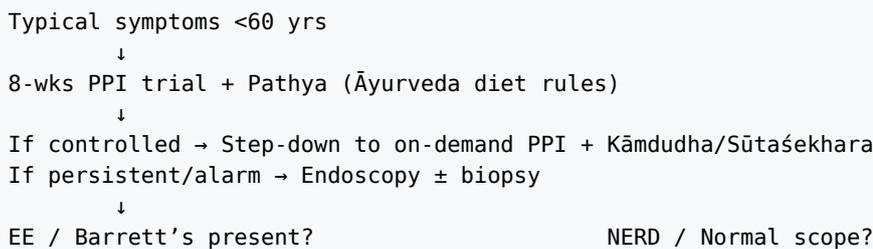
### APATHYA

1. Sour curd at night, tomato ketchup, vinegar, pickles, chilli-garlic sauces.
2. Tea-coffee excess, carbonated drinks, alcohol, smoking.
3. Over-eating/fasting extremes, lying supine immediately after meals.
4. Anger, late-night screen time, irregular sleep.

## 9.8 Prognosis (Āyurveda)

- Recent, purely Pitta-dominant reflux - śighra-sādhya with proper pathya & ghṛta-kalpa.
- Vāta-Pitta chronic >5 yrs or Barrett's change - kṛcchra-sādhya; long-term rasāyana & strict regimen essential.
- Persistent ulcer/bleed = ābādha; mandatorily integrate modern care.

## 10. Integrated Care Flow-Chart





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|--|--|
| -> Continue full-dose PPI 8-12 wks<br>+ Yashtimadhu Ghṛta<br>+ Consider fundoplication<br>+ Rasāyana after healing | -> 24 h pH imped. study<br>-> Functional HB?<br>-> Stress reduction,<br>Vardhamāna-Pippalī |
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## Selected References

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