

Case Report

Eosinophilic esophagitis: not rare, simply under-biopsied-experience from a tertiary centre in South India

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ABSTRACT

Eosinophilic esophagitis (EoE) is considered rare in India, yet this perception likely reflects diagnostic omission rather than true epidemiological rarity. We report two cases of EoE diagnosed within a two-month period at a tertiary gastroenterology centre in Bengaluru, South India, from among ten consecutive patients in whom targeted esophageal biopsies were obtained on clinical suspicion—a diagnostic yield of 20%. The first patient was a 54-year-old woman with longstanding proton pump inhibitor refractory dysphagia, chest pain, and regurgitation, whose prior endoscopy had attributed findings to reflux disease without esophageal biopsy. Repeat evaluation revealed mucosal rings with exudates and a peak intraepithelial eosinophil count of 25 per high-power field. She responded completely to vonoprazan and swallowed budesonide. The second was a 37-year-old man presenting with progressive dysphagia and weight loss, with an endoscopic reference score of 7 and a peak eosinophil count of 30-35 per high-power field, who improved on a six-food elimination diet. These cases highlight that co-existent erosive esophagitis may mask EoE endoscopically, and that a protocol-driven biopsy approach is essential to unmask its true prevalence in India.

Keywords: Eosinophilic, Biopsy, Dysphagia, Esophagitis, Mimicker

INTRODUCTION

Eosinophilic esophagitis (EoE) has transformed over the past three decades from a rarely described entity to a well-characterised, clinically distinct disease with rising global incidence and prevalence.¹ Despite this, published Indian data remain sparse, and EoE continues to carry an undeserved reputation for rarity in the subcontinent. We contend that this reflects a failure of the diagnostic lens—specifically, the near-universal omission of esophageal biopsies in clinically suspicious cases—rather than a true epidemiological gap.

We report two cases of EoE diagnosed within a two-month period at our centre, from among ten consecutive patients in whom esophageal biopsies were taken on clinical/endoscopic suspicion, yielding a diagnostic rate of 20 percentages.

CASE REPORT

Case 1 was a 54-year-old woman who presented with longstanding dysphagia, chest pain, and regurgitation. She had previously been labelled as gastroesophageal reflux disease (GERD) and treated with proton pump inhibitors (PPIs) without sustained benefit. A prior upper gastrointestinal (UGI) endoscopy had documented Los Angeles Grade A erosive esophagitis and a Hill's grade I gastroesophageal flap valve-findings that had been attributed to reflux disease, and critically, in the absence of esophageal biopsies. Her atopic background of intermittent cutaneous allergies was contextualised at our centre, and repeat esophagoscopy revealed transient mucosal rings with mild exudates and salivary stasis, in addition to the previously documented reflux findings (Figure 1). Biopsies taken from the distal and mid-esophagus demonstrated a peak eosinophil count of 25 per high-power field (HPF), confirming EoE (Figure 2). She

was initiated on a six-food elimination diet (6-FED), vonoprazan 20 mg once daily and swallowed budesonide 1 mg (respules in sucralose slurry) twice daily, with complete symptomatic response within two weeks. Repeat biopsies to confirm histological remission are planned at twelve weeks.

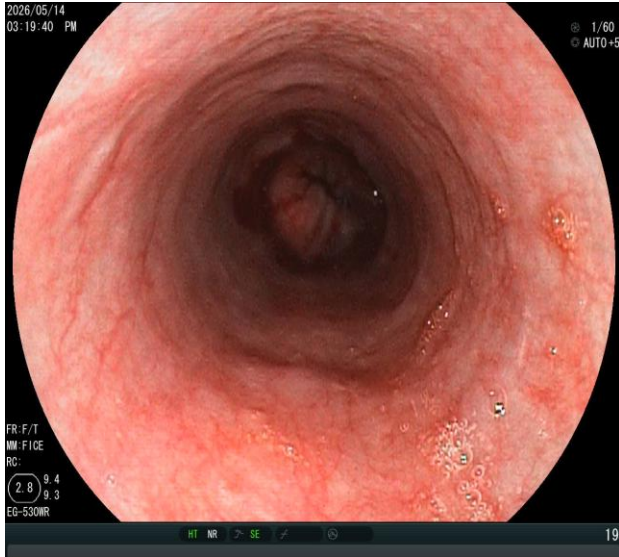


Figure 1: Endoscopic appearance in case 1 showing transient mucosal rings, mild exudates, and salivary stasis in the esophageal lumen. Co-existent Los Angeles grade A erosive esophagitis was noted distally.

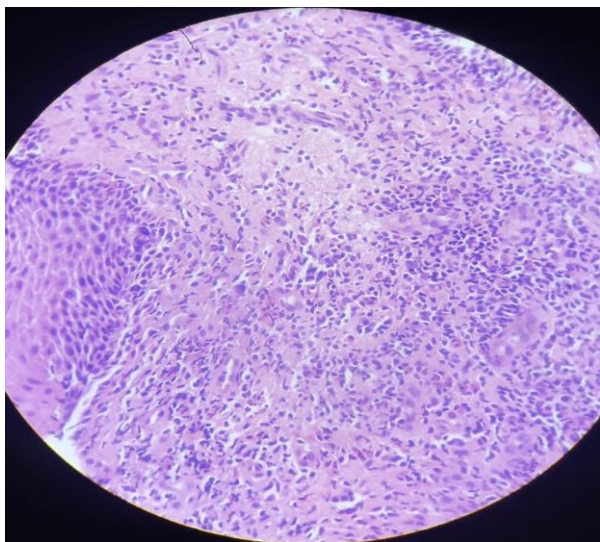


Figure 2: Esophageal biopsy (haematoxylin and eosin, high-power field) from case 1 demonstrating intraepithelial eosinophilic infiltration with a peak count of 25 eosinophils/HPF, consistent with EoE.

Case 2 was a 37-year-old man with a four-to-five-month history of non-progressive dysphagia (solids greater than liquids), heartburn, and unintentional weight loss of 2.5 kg. His background included type 2 diabetes mellitus and

metabolic-associated steatotic liver disease (MASLD). Endoscopy revealed stenosis at the distal esophagus just above the gastroesophageal junction, with an endoscopic reference score (EREFS) of 7, comprising edema (1), rings (3), exudates (1), furrows (1), and stenosis (1) (Figure 3). Biopsies from the distal and mid-esophagus showed intraepithelial eosinophilia with a peak count of 30-35 eos/HPF, consistent with EoE (Figure 4). He was commenced on a 6-FED with concurrent PPI twice daily and has demonstrated early symptomatic improvement; repeat endoscopy and biopsies are planned at twelve weeks.

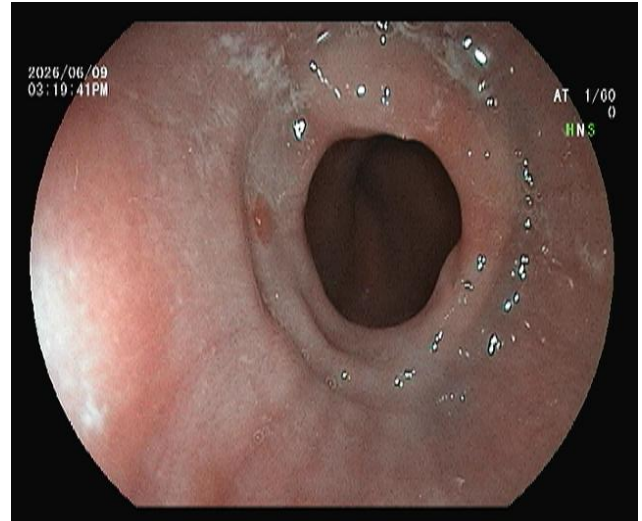


Figure 3: Endoscopic appearance in case 2 showing a mucosal ring at the distal esophagus just above the gastroesophageal junction, with associated edema, exudates, and furrows. EREFS 7 (E1 R3 E×1 F1 S1).

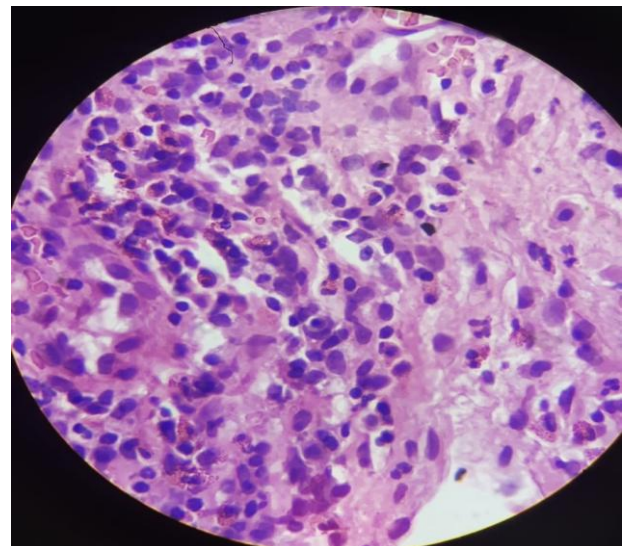


Figure 4: Esophageal biopsy (haematoxylin and eosin, high-power field) from case 2 demonstrating intraepithelial eosinophilic infiltration with degranulation and a peak count of 30-35 eosinophils/HPF, consistent with EoE.

Table 1: Clinical, endoscopic, and histological features of the two cases.

Features	Case 1	Case 2
Age (in years)/sex	54 years/ female	37 years/ male
Presenting symptoms	Dysphagia, chest pain, regurgitation	Dysphagia, heartburn, weight loss (2.5 kg)
Duration of symptoms	Longstanding (previously labelled GERD)	4–5 months
Atopic background	Skin allergies (intermittent)	None documented
Comorbidities	Nil	Type 2 DM, MASLD
Endoscopic findings	LA Grade A erosive esophagitis, Hill's Grade I GEFV, transient mucosal rings, mild exudates, salivary stasis	Distal mucosal ring at GEJ; EREFS 7 (E1 R3 E×1 F1 S1)
Biopsy sites	Distal + mid esophagus	Distal + mid esophagus
Peak eosinophils/HPF	25	30-35
Histological feature	Intraepithelial eosinophilia	Intraepithelial eosinophilia with degranulation
Treatment initiated	6-FED + Vonoprazan 20 mg OD + swallowed budesonide 1 mg (sucralose slurry) BD	6-FED + PPI BD
Treatment response	Complete symptomatic response at 2 weeks	Early symptomatic improvement
Follow-up plan	Repeat biopsy at 12 weeks	Repeat biopsy at 12 weeks

*DM-diabetes mellitus, EREFS-Endoscopic reference score for eosinophilic esophagitis, GEFV-gastroesophageal flap valve, GEJ-gastroesophageal junction, HPF-high-power field, LA-Los angeles, MASLD-metabolic-associated steatotic liver disease, 6-FED-6 food elimination diet, OD-once daily, BD-twice daily and PPI-proton pump inhibitor

DISCUSSION

These two cases illustrate several critical diagnostic points. First, EoE and GERD can co-exist and overlap endoscopically, as seen in case 1; the presence of reflux-like findings-even proven erosive esophagitis is a well-recognised endoscopic mimicker. It must not deter the endoscopist from sampling the esophagus when the clinical picture is suggestive.² Second, EoE in India presents with the same phenotypic range as described globally: a middle-aged woman with longstanding PPI-refractory reflux symptoms, and a younger man with progressive dysphagia and fibrostenotic endoscopic features.¹ Third, and perhaps most importantly, neither case would have been diagnosed without targeted biopsies taken from two esophageal segments-a step that is conspicuously absent in routine endoscopy practice.

The paucity of reported EoE cases from India is increasingly difficult to attribute to true epidemiological rarity. Nagarajan et al in a prospective study from a tertiary centre in Bengaluru, diagnosed EoE in 17 of 73 patients evaluated with high clinical suspicion, documenting an increasing case volume at their centre over successive years.² Kakadiya et al reporting from western India, described growing case numbers from a dedicated protocol-driven approach at their institution.³ Baruah et al screening patients with reflux symptoms at a north Indian centre, identified EoE in a subset of GERD-labelled patients who underwent esophageal biopsy.⁴ Taken together, these reports-now including ours from a private tertiary centre in South India-suggest a geographically consistent pattern: when endoscopists look, they find.

Current consensus guidelines recommend a minimum of six biopsies obtained from at least two esophageal levels (distal and mid or proximal esophagus) in all patients with dysphagia, food bolus impaction, or PPI-refractory reflux symptoms, with a diagnostic threshold of ≥ 15 eosinophils per HPF.⁵ The adoption of this simple, low-cost protocol across Indian endoscopy units would likely unmask a substantial burden of undiagnosed EoE, enable timely treatment, and prevent the fibrostenotic complications that arise from untreated disease.

CONCLUSION

We believe that EoE is not rare in South Asia-it is under-biopsied, under-recognised, and consequently under-treated. We intend to prospectively enrol all patients presenting to our unit with dysphagia, food bolus impaction, or PPI-refractory symptoms, and systematically sample the esophagus per consensus protocol, to better characterise the true diagnostic yield in a South Indian tertiary endoscopy setting. We encourage colleagues across the country to adopt a similar approach.

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Ethical approval: Not required

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