

Diagnostic delay and misdiagnosis of non-esophageal eosinophilic gastrointestinal diseases

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Introduction

- Diagnosing non-esophageal eosinophilic gastrointestinal diseases (EGIDs) remains challenging despite increasing awareness, and misdiagnosis is possible.
- We aimed to determine whether the length of time preceding EGID diagnosis has decreased over time, and to assess the presence of prior non-EGID diagnoses.

Methods

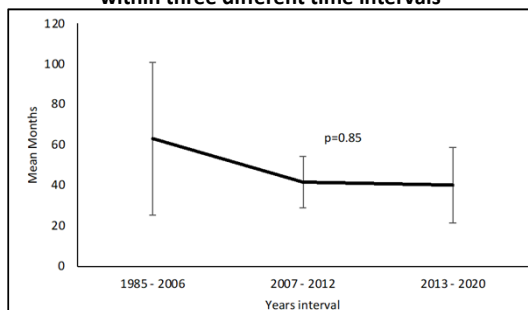
- We conducted a retrospective cohort study utilizing the UNC EGID Clinicopathologic Database over a two-decade time span.
- This database contains demographics, clinical characteristics, and procedural data extracted from electronic medical records.
- EGID subjects were diagnosed with eosinophilic gastritis (EoG) and/or enteritis (EoN) based on clinical presentation and biopsy results.
- We calculated the length of symptoms prior to diagnosis.
- ANCOVA models assessed the relationship between symptom length before diagnosis and year of diagnosis adjusted for covariates.

Results

Table. Demographics of eosinophilic gastrointestinal disease patient population.

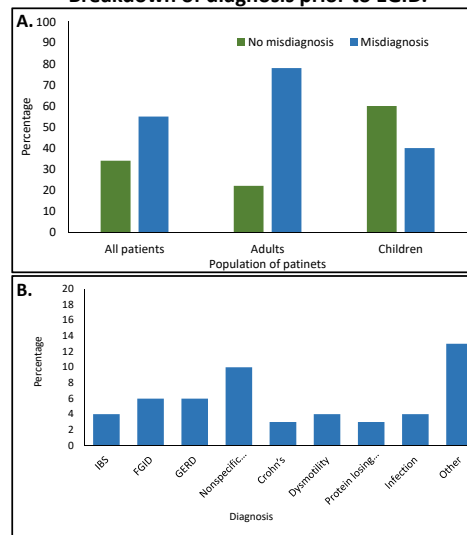
	All patients (n=67)	Adults (n=27)	Children (n=40)
Age at biopsy (mean years ± SD)	23.4 ± 31.6	49.9 ± 36.6	6.1 ± 5.6
Male (n, %)	37 (55)	10 (37)	27 (68)
White (n, %)	48 (72)	24 (89)	24 (60)
Any atopy (n, %)	39 (58)	13 (48)	26 (65)
Symptoms at diagnosis (n, %)			
Abdominal pain	48 (71)	22 (81)	19 (48)
Dysphagia	24 (36)	15 (56)	9 (23)
Vomiting or regurgitation	53 (79)	18 (67)	35 (88)
Length of symptoms before diagnosis (mean months ± SD)	37.1 ± 57.1	60.2 ± 82.5	22.9 ± 25.6

Figure: Trend of the mean time to diagnosis (months) within three different time intervals*



*Time intervals represent year EGID was diagnosed, and each time interval represents 6 diagnosis years, which may be non-consecutive

Figures. A, Percent EGID Misdiagnosed. B, Breakdown of diagnosis prior to EGID.



- Included 67 patients, with 55% male and 72% white.
- Atopy was diagnosed in 48% of adults and 65% of children.
- Length of symptoms prior to diagnosis was 37.1 ± 57.1 months, longer in adult patients compared to children (60.2±82.4 vs 22.9±25.6; p=0.01).
- Alternative diagnoses were common, with 55% carrying a different pre-EGID diagnosis.

- The most frequent included non-specific inflammation (10%), GERD (6%), other functional disorder (6%), IBS (4%), dysmotility (4%), infection (4%), and other (13%).
- Symptom length preceding diagnosis did not significantly associate with year of diagnosis on bivariate (p = 0.58) or multivariate analysis after adjusting for covariates (p = 0.88).
- No association was found for symptomatic period and year of diagnosis when stratified by children (p = 0.26) or adults (p = 0.40).
- Additionally, multivariate linear regression between length of symptoms and year of diagnosis found no association and regression with year as a continuous variable was also not significant.

Conclusions

- Despite increased knowledge regarding EGIDs, a trend towards decreased symptom length prior to diagnosis was not found.
- Numerically, the time of diagnosis decreased somewhat after the year 2006, though this did not reach statistical significance.
- Prior to their EGID diagnosis, approximately 1 in 2 patients received an incorrect diagnosis.
- These data suggest that more efforts should be made to raise awareness of these diseases among medical providers.

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