



# NATIONWIDE SEASONAL VARIATION IN FOOD IMPACTION IN PATIENTS WITH EOSINOPHILIC ESOPHAGITIS

Bandhul Hans MD<sup>1</sup>, Sheena Mago MD<sup>2</sup>, Shivaraj Patil MBBS<sup>3</sup>, Kamesh Gupta MD<sup>4</sup>, Tavankit Singh MD<sup>2</sup>

<sup>1</sup>Department of Medicine, Allegheny Health Network, <sup>2</sup>Division of Gastroenterology and Hepatology, Allegheny Health Network, <sup>3</sup>Division of Cardiology, Albert Einstein Healthcare Network, <sup>4</sup>Division of Gastroenterology and Hepatology, Baystate Health

## Introduction

Eosinophilic esophagitis (EoE) is associated with dysphagia, food impaction. Studies have shown a seasonal variation with increased incidence in summer months. This study was conducted to assess potential seasonal variation in US in the incidence of esophageal food impaction amongst patients with EoE

## Methods

Retrospective cohort study using the HCUP's Nationwide Inpatient Sample (NIS) database from Jan 2017 to Dec 2019 was conducted. All adults hospitalized with food impaction due to EoE were included in this cohort. A comparison of monthly variation in food impaction amongst EoE patients was assessed at a national level and regional level. Statistical analysis was performed using SPSS version 25 software.

## Results

During the study period, a total of 4,744 patients (unweighted) >18 years were admitted with impaction, of which 197 (4.2%) had a diagnosis of EoE. The mean age of the cohort was 44.2 years and 23.9% patients were female. Temporal trends of prevalence at national and regional level for food impaction in EoE patients are shown in Figure 1A and 1B respectively. No statistically significant seasonal association of food impaction amongst EoE patients was noted at a national level (Table 1). Similarly, no statistically significant temporal association of food impaction was noted at a regional level, except in the Midwest region during the months of September-October (Table 1) where a higher incidence of food impaction was noted.

## Discussion

A relation between seasonal variation and the diagnosis of EoE has been shown with peak months varying across regions. Such a seasonal variation is primarily proposed due to role of aeroallergens in adults and foods in children. Data regarding a similar seasonal variation in food bolus impaction in EoE is scarce, with few studies being done in regions outside of US, in Sweden, showing a marked seasonal variation with peak incidence in summer months. The present study was aimed to assess such a seasonal variation across different regions in US. We found no such statistically significant variation at a regional level, except in the Midwest region in months of September-October. Our study was limited due to regional distribution available in NIS data not accounting for intra-regional climatic variation, reliance on ICD coding and not taking into account EoE chronicity and treatment. Further studies exploring the association within a climate region would be needed to prove this association and serve to identify a potential therapeutic strategy.

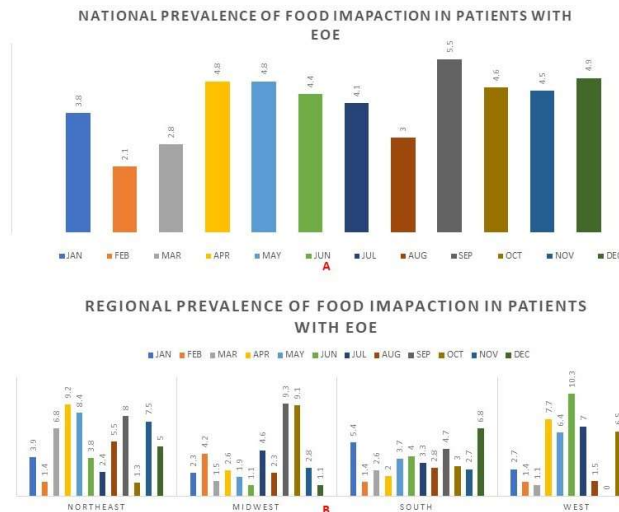


Figure 1: (A) Nationwide seasonal trends of prevalence of food impaction in those with EoE. (B) Regional seasonal trends of prevalence of food impaction in those with EoE

## Contact info



Bandhul Hans  
Twitter- @BandhulH