Gastroesophageal Reflex Disease (GERD) Complications in Adults With Autism

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INTRODUCTION: Gastroesophageal reflux disease (GERD) has been shown to be associated with various psychiatric or neurocognitive disorders such as anxiety and depression. Those with autism spectrum disorder (ASD) are prone to gastrointestinal (GI) diseases, but most research has been done on children. Research in adults with ASD and GI disorders is greatly lacking. Our aim was to determine the effect of autism on GERD by comparing autistic adults with GERD to patients with GERD but without autism.

METHODS: Data extrapolated from IBM Explorys Cohort Discovery program was used for this study. Each cohort of adults with GERD with and without ASD included adults aged 18 and above. Complications of GERD studied included Barrett’s esophagus, erosive esophagitis, esophageal strictures, extraesophageal manifestations such as chronic cough and asthma, esophageal ulcers, esophageal adenocarcinoma, and hiatal hernia). GERD treatment that was evaluated included proton pump inhibitors (PPIs), H2 blockers, both PPIs and H2 blockers, and anti-reflux surgery.

RESULTS: In this study, there was an association between ASD and GERD with an odds ratio of 2.02 (CI 1.97 to 2.07, P-value < 0.0001). The two complications of GERD shown to occur much more often in those with ASD were erosive esophagitis and esophageal ulcers. In the cohort with ASD, 8.84% developed erosive esophagitis versus 5.91% in those without GERD (P-value < 0.0001). In addition, 1.52% of those with ASD developed esophageal ulcer vs 0.72% without ASD (P-value < 0.0001).

Interestingly, most patients with ASD were diagnosed with asthma for the first time within five years of having GERD (23.63% vs 5.55% without ASD, P-value < 0.0001). Patients without ASD were much more likely to have hiatal hernia 0.55% vs 0.15% (P-value < 0.0001). (Patient’s without ASD were also more likely to be on one only PPI or both PPI and H2 blocker (P-value 0.003 and 0.02 respectively). Those with ASD were much more likely to be on only an H2 blocker (P-value < 0.0001).

CONCLUSION: This study shows that it is not uncommon for adults with ASD to suffer from GERD as do many adults without ASD. However, ASD patients are more likely to have GERD complications including erosive esophagitis or ulcers. Extraesophageal complication of asthma is much more likely to occur in those with ASD and GERD. Patients with ASD and GERD are likely to be treated less aggressively than those without ASD.

Figure 1. Compounded budesonide suspension sources in Michigan.

Table 1. Table 1: Proportions of demographic data and GERD complications between GERD only and GERD + ASD cohorts.
for these varied budesonide suspensions, an FDA-approved topical corticosteroid for EoE would be welcome. However, if such a medication is cost prohibitive, then compounded budesonide may still be a more affordable treatment option.

**S0365**

Analysis of Nationwide Eosinophilic Esophagitis Admission Characteristics in 2016 – A NIS Database Cross-Sectional Study

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**INTRODUCTION:** Eosinophilic esophagitis remains one of the most frequent causes of dysphagia. In recent years increase in the prevalence as well as incidence has been witnessed. The increasing number of cases of EoE has resulted in more research efforts to understand the disease, which is not just associated with morbidity, but also significant mortality however given the poor recognition in the past, the epidemiology of the disease remains unclear. We aim to explore the epidemiological trends of nationwide admission due to Eosinophilic Esophagitis.

**METHODS:** We reviewed the National Inpatient Sample Database for Emergency Department (ED) Visits and all hospitalizations with a principal discharge diagnosis of EoE (ICD9 code 530.13) for the year 2016. The year 2016 was chosen because of the recent availability in the National Inpatient Sample database. The admission rate, ED admissions, length of stay and charges were analyzed among different gender and age groups.

**RESULTS:** For the year 2016, the total number of discharges with a principal diagnosis of Eosinophilic Esophagitis was 690 (0.2 rates of discharge per 100,000). Analyses of this admission showed that the mean age of the patients was 27.89 years however when stratified according to age groups, 43.65% of patients were in the 1-17-year-old group, 30.95% were 18–44 years old, and 15.87% in the 45-64 years old. 65.08% (410) of the patients were male, and 62.70% of all the patients were admitted through the emergency department. The mean length of hospital stay of the patient population was significantly longer (4.6 days) for the age group 1-17 years, in comparison to other age groups (2.9 days), and in females vs. males (4.1 days vs. 3.6 days) (P < 0.05). The mean charges for these admissions was $31,271.

**CONCLUSION:** The study highlights the epidemiological trends and associated burden of EOE on the healthcare system in the US. It further reiterates the fact the EOE has been more prevalent in males, and younger patient populations, however, given higher LOS for females, and age groups between 1 and 17 and 45 indicates severer disease among these gender and age groups.

**S0366**

Assessment of Emergency Department Visits, Hospital Admission Trends, and Financial Burden of Eosinophilic Esophagitis: A National Inpatient Sample Database Study

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**INTRODUCTION:** In the last two decades, Eosinophilic esophagitis (EoE) has emerged as a dominant cause of dysphagia in adults. The incidence and prevalence of EoE is rising and the prevalence in adults is currently estimated between 40 to 90 cases per 100,000 people. Clinico-pathological guidelines relating to EoE were first published in 2007 which led to increased recognition of the disease as well as diagnosis. We assessed the impact of these changes on the total number of hospital admissions trends and healthcare expenditure by reviewing the nationwide EoE related admissions in the United States over the past eight years.

**METHODS:** We reviewed the National Inpatient Sample Database for Emergency Department (ED) Visits and all hospitalizations with a principal discharge diagnosis of EoE (ICD9 code 530.13) between the years 2008–2015. The year 2008 as a start point due to the first consensus clinicopathological diagnostic guidelines for the diagnosis of EoE by the American Gastroenterological Association being published in 2007. 2015 was decided as an endpoint as data for 2016 and beyond is still not fully available. Trends in discharge rates, costs of hospitalization, and length of stay were analyzed.