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Title: *IgE Screening in Asthma Exacerbation*

INTRODUCTION: Allergic Bronchopulmonary Aspergillosis (ABPA) is an inflammation of the lungs caused by a hypersensitivity to *Aspergillus* that occurs mostly in people with asthma or cystic fibrosis. ABPA, when undiagnosed can lead to more severe asthma, is estimated to affect up to 6% of patients with asthma. During asthma exacerbation, ABPA and other allergens are not routinely screened for.

OBJECTIVE: To determine if patients are screened for ABPA (and other allergic diseases) and of those with an elevated IgE, are they receiving further evaluation.

METHODS: A list of patients admitted to SSM Cardinal Glennon Children's Hospital for asthma exacerbation between January 1, 2016 and December 31, 2017 was generated. The inclusion criteria is any patient admitted to Cardinal Glennon Children's Hospital for an asthma exacerbation between January 1, 2016 and December 31, 2017, and the exclusion criteria is anyone with a history of cystic fibrosis, anyone who was not admitted to Cardinal Glennon Children's Hospital, or anyone not admitted for an asthma exacerbation. The eligible patient's medical record were reviewed for patient demographics, ICS therapy level on discharge, discharge prednisone regimen, IgE level, peripheral blood eosinophil count, positive *Aspergillus* test (IgE or IgG), presence of chest infiltrates or central bronchiectasis, and follow up given if needed.

RESULTS: Of the 526 patients identified, 74 patients were included in the analysis. Sixty-five patients had an *Aspergillus* specific IgE completed with a median value of 0.25 kU/L (IQR <0.1-10.35, range <0.1-75.2). There were 29 patients (36%) on high ICS, 24 patients (30%) on medium ICS, 25 patients (31%) on low ICS, and two patients (3%) was discharged without an ICS. The average discharge prednisone regimen was 5.5 days (SD: +/- 2.6 days, range: 0-18 days). The primary physician's department during the admission was categorized as hospitalist (5 patients, 6%), pulmonary (23 patients, 29%), and allergy and immunology (52 patients, 65%). 59 patients (74%) were discharged with a referral to SSM Cardinal Glennon Children's Hospital outpatient allergy and immunology clinic, and 33 patients (41%) had documented follow ups with the clinic.

CONCLUSION: ABPA (and other allergic diseases) are not routinely screened for during admissions for asthma exacerbations. Poor follow-up contributed to lack of further evaluation. Further research is needed to determine if other institutions have shown the same result.