Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

symptoms, resolution of his eosinophilia, and decreased frequency of oral corticosteroid use.

M125

SUCCESSFUL USE OF DUPILUMAB FOLLOWING POOR RESPONSE TO MEPOLIZUMAB IN A 16-YEAR-OLD MALE WITH EGPA

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Introduction: Eosinophilic granulomatosis with polyangiitis (EGPA, also known as Churg-Strauss syndrome) is a multi-system autoimmune disease most often diagnosed in adulthood, although patients typically have a history of other inflammatory disorders in childhood; While an exact cause has yet to be fully discovered, there is a clear correlation between EGPA and childhood manifestations of immune system hyperreactivity to include allergies and asthma. Treatments which target specific inflammatory signaling pathways are actively under investigation. Of particular interest is the role of biologic therapy in the treatment of autoimmune disorders such as EGPA.

Case Description: In this case, we present a 16-year-old male with asthma and biopsy-proven EGPA whose respiratory symptoms were minimally responsive to IL-5 inhibition with mepolizumab. He was initiated on dupilumab, a first-in-class monoclonal antibody which binds IL-4Rα and reduces inflammation via modulation of IL-4 and IL-13 signaling. After initiation of treatment, our patient demonstrated a reduction in asthma exacerbation frequency and severity as well as an overall improvement in daily respiratory symptoms.

Discussion: Further studies are needed to elucidate the role of IL-4/IL-13 signaling in the pathophysiology of EGPA. Additionally, the role of biologic therapy targeting those pathways as a treatment modality for EGPA needs to be further explored, particularly in the context of patients in whom conservative medical therapy has failed.

M126

HYPERSENSITIVITY PNEUMONITIS OR EVALI? A CASE OF ACUTE RESPIRATORY FAILURE IN AN ADOLESCENT

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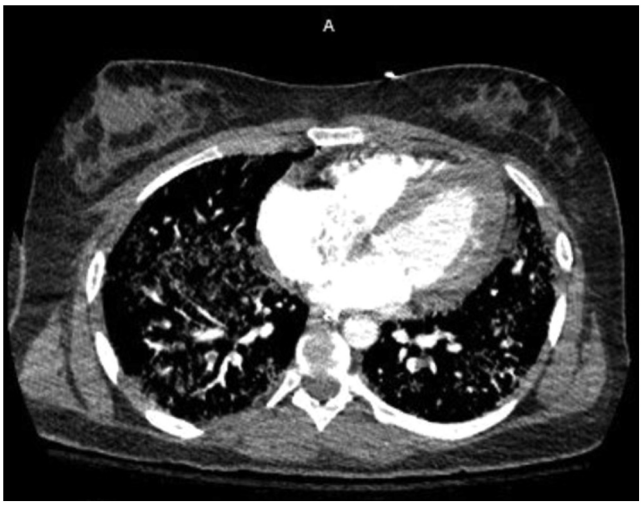
Introduction: Hypersensitivity pneumonitis is an interstitial lung disease caused by lymphocytic response to inhalant exposures such as molds or avian excreta. Given its complexity and variation in presentation, the diagnosis of hypersensitivity pneumonitis requires obtaining a detailed exposure history and thorough workup.

Case Description: A 17-year-old previously healthy female without asthma history developed cough, fever, and shortness of breath. A week later, she was intubated for acute respiratory failure. Her initial imaging revealed pneumomediastinum and pneumopericardium with ground glass opacities. The etiology of her respiratory failure remained unclear. Infectious workup, including multiple COVID tests, was negative. Given that she cares for horses, a hypersensitivity pneumonitis panel was done and revealed elevated aspergillus fumigatus IgG level $>$200 mcg/mL and total IgE of 571 kU/L. BAL showed elevated neutrophil count and lung biopsy was not obtained. She was extubated after a week and subsequently revealed that she vapes marijuana. This introduced e-cigarette and vaping associated lung injury (EVALI) as another etiology for her presentation. She ultimately completed an extended course of steroids and was discharged on supplemental oxygen.

Discussion: Our patient presented with acute respiratory failure and negative infectious workup. Initial social history revealed frequent exposure to horse barns, leading to a diagnosis of hypersensitivity pneumonitis. However, it was subsequently revealed that she vaped, which introduced EVALI as another possibility. While her final diagnosis remains nebulous, this case highlights the importance of maintaining a broad differential during assessment of acute respiratory failure and the critical role that astute history taking plays in the diagnostic process.



M127

A MULTIFACETED APPROACH TO DIAGNOSIS AND MANAGEMENT OF POST COVID-19 ASSOCIATED DYSPNEA IN ADOLESCENTS

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Introduction: A post SARS-CoV-2 (COVID-19) syndrome known as "long COVID" has been described in adult patients characterized by symptoms persisting months after acute infection. Here we describe three cases of adolescents who had dyspnea noted months after COVID-19 infection.

Case Description: Case 1: LK is a 17 year old who developed dyspnea on exertion persisting over a year after recovering from COVID-19. Impulse oscillometry (IOS) was notable for reversibility in small airways with albuterol. She was started on budesonide-formoterol twice daily and albuterol prior to exercise with significant clinical improvement. Case 2: JJ is a 16 year old who presented for dyspnea on exertion that worsened after COVID-19. She completed exercise laryngoscopy which showed exercise induced laryngeal obstruction (EILO). She also had gastroesophageal reflux disease (GERD) which worsened after COVID-19 possibly triggering EILO. Case 3: JD is a 14 year old who presented for a history of dyspnea both at rest and upon exertion. She noted worsening dyspnea continuing months after recovering from COVID-19. Her pulmonary function testing and IOS showed evidence of obstruction and reversibility with albuterol. She was started on fluticasone propionate and salmeterol twice daily.

Discussion: The evaluation of dyspnea in adolescents with "long COVID" requires a multifaceted diagnostic and therapeutic approach. Once they were diagnosed with asthma and EILO it was also discovered that other conditions including GERD and anxiety were likely exacerbating their dyspnea. A multidisciplinary team including gastroenterology, social work, psychiatry, and psychology was able to diagnose and treat these conditions as well.