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.

Discussion: In our experience, COVID19 infected asthmatics, with comorbid allergic rhinitis, all recovered between 14-42 days without developing pneumonia or acute respiratory distress syndrome.

M402

FACIAL CONTACT DERMATITIS DUE TO MASKS IN THE COVID-19 ERA

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Introduction: During the COVID-19 pandemic, the medical community has quickly sought methods to reduce rates of transmission. Chief among those is usage of both surgical and non-surgical masks. Patients with atopy may be at risk for adverse reactions to use of such masks.

Case Description: This is a 60-year-old Black man with adult-onset atopic dermatitis (AD) with contact dermatitis (patch testing positive to textile dye mix, carba mix, and thiuram mix), and chronic allergic rhinitis. His AD was well controlled with daily emollient use alone until April 2020, when he presented to our hospital emergency room three times with complaints of a facial rash. He was discharged with prednisone. At follow up telehealth visit in Allergy clinic, he reported the symptoms were ongoing for 2 weeks and involved the infraorbital skin and back of his neck. Patient denied new exposures to known allergens. Further questioning revealed he began wearing a mask for COVID-19 precautions shortly before the rash began. Rash distribution correlated with the elastic-containing components of a non-surgical mask. We tapered prednisone to avoid rebound dermatitis and advised him to use topical steroid and topical tacrolimus until rash resolved. He was instructed to use cotton based, dye-free masks without elastic. At telephone visit 1 week later, he endorsed continued improvement.

Discussion: Common allergens implicated in contact dermatitis, including carbamates and thiurams, are found in masks, elastic bands, and other components of face coverings. It is important to identify those with underlying conditions that may result in certain types of face masks being contraindicated.

M403

COVID-19 IN A PATIENT WITH HYPER-EOSINOPHILIC SYNDROME TREATED WITH MEPOLIZUMAB

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Introduction: Eosinophils constitute a small portion of circulating and tissue dwelling leukocytes, with its role in immunoregulation and antiviral activity still being elucidated. Diseases exist with eosinopenia and eosinophilia with varying susceptibility and outcomes related to certain viral infections. We present a case of a patient with GATA2 Haploinsufficiency and Hyper-Eosinophilic Syndrome on Mepolizumab who contracted the COVID19.

Case Description: Patient is a 22-year-old African American female with GATA2 haploinsufficiency, Hyper-Eosinophilic syndrome, hypercoagulability, Myelodysplasia who has a stable disease on Mepolizumab; an anti-IL 5 Humanized mAb (on GSK's Nucala expanded access program since 2013). Patient presented to Emergency Department on 07/03/2020 with complaints of headache, nausea, and diffuse body aches without vomiting, diarrhea or fevers. A non-contrast CT head and Chest X-ray were negative for acute pathology, but SARS-COV2-PCR testing was positive. Absolute eosinophil count was 100 cells/microL on presentation. Patient was discharged home in stable condition. Telephone follow up 2 weeks later was done and patient reported complete resolution of symptoms without any complications or hospitalization.

Discussion: COVID-19 infection has multiple risk factors for complications, but anti-Eosinophilic therapy does not seem to be one. GATA2 deficiency, associated with invasive viral infections due NK cell deficit [(1)], does not appear to increase risk for COVID19 related complications. Patients treated with Mepolizumab, which decreases pulmonary eosinophils, does not put them at higher risk of viral infections [(2,3)]. This case report, hopefully, adds to the evidence that anti-Eosinophilic biologic drugs can be safely used in patients during COVID-19 pandemic.

M404

PERSISTENT POSITIVITY OF SARS-COV-2 NASOPHARYNGEAL PCR TEST IN A CHILD WITH ASTHMA

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Introduction: There is debate regarding a child's ability to transmit SARS-CoV-2 to others. There is no evidence-based guideline regarding the management of children with persistently positive SARS-CoV-2 PCR testing following recovery from clinical illness.

Case Description: A 9-year-old Hispanic male with mild persistent asthma on low dose fluticasone and montelukast developed cough and headache. Two days later a nasopharyngeal PCR test was positive for SARS-CoV-2. He recovered uneventfully at home. Two months later he was scheduled for routine follow-up of his asthma with spirometry. As part of institutional protocol, he had repeat SARS-CoV-2 nasopharyngeal PCR and serology testing, both of which were positive. He reported no symptoms of COVID-19. As a result of his positive PCR test, his appointments were canceled.

Discussion: A recent study suggested that children are at low risk of transmitting the SARS-CoV-2 virus. This determination was made largely through contact tracing that determined that children were rarely the index case when multiple family members were infected. Despite this, a German study demonstrated that viral loads from nasopharyngeal swabs are as high in children as they are in adults. We presented the case of a child who had a mild case of COVID-19 and recovered but had persistent PCR positivity despite being asymptomatic. The clinical significance of this is unclear. More investigation is needed to determine the risk of spread from

the pediatric population. Elucidating this could allow children easier access to follow-up medical care and the ability to return to school following illness.

M405

COVID-19 ASSOCIATED EOSINOPHILIC LICHEN PLANUS

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Introduction: Previous reports associate lichen planus (LP) eruptions with viral infection. Possible surge of LP is reported with COVID-19. We present the first case of COVID-19 associated LP in the presence of eosinophilia.

Case Description: A 24-year old female with a history of atopic eczema and mild intermittent asthma since childhood presented with an itchy rash on her hands and toes. The rash had commenced a few months prior and was associated with concurrent flu-like symptoms. She was not tested for COVID-19. Elimination of potential allergens did not result in symptom resolution. Physical exam revealed a macular, dusky, asymmetric and mostly pruritic rash. Laboratory data revealed new onset of peripheral eosinophilia and lack of coagulopathy. COVID antibodies were positive. A clotrimazole-betamethasone regimen proved ineffective. Subsequent biopsy showed LP with eosinophils. Topical steroids resolved the pruritus, and the lesions are healing.

Discussion: Following reports associating LP with viral infection, a lichenoid eruption in tandem with COVID-19 symptoms and a subsequent positive antibody test promotes a possible association between LP and COVID-19. Eosinophils are rare in LP with exception of hypertrophic LP which favors the lower extremities. While COVID-19 often presents with eosinopenia, our patient's eosinophilia merits further investigation. This is particularly true in the context of preclinical studies arguing that eosinophils have antiviral functions. A possible association between LP and COVID-19 would also be an important addition to diagnostic differentials, especially among multiple reports of painful yet non-pruritic chilblain eruptions in the same location.

M406

SELF-LIMITED COVID-19 INFECTION IN ARTEMIS HYPOMORPHIC SCID: ARE B CELLS DISPENSABLE?

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Introduction: Severe acute respiratory syndrome coronavirus 2 (SARS-CoV2), the etiologic agent of coronavirus disease 2019 (COVID-19), causes variable clinical manifestations, ranging from asymptomatic disease to immune dysregulation and multi-organ failure. The immunologic features of COVID-19 are incompletely understood. From reports of resolved COVID-19 infection in patients with primary antibody deficiency, it has been postulated that B cells may be dispensable for immunologic clearance.

Case Description: A 14-month-old female patient with compound heterozygous mutation (maternal deletion and paternal missense mutation) in *DCLRE1C* (Artemis) presented on day 2 of illness with rhinorrhea, congestion, cough, and transient fever. She was PCR-positive for SARS-CoV2. Prior immunophenotyping showed normal NK cell numbers, near-absent B cells ($CD19^+$ 42), T cell lymphopenia ($CD3^+$ 743), declining phytohemagglutinin mitogen testing (last 37% of control), and polyclonal T-cell repertoire, consistent with the diagnosis of hypomorphic severe combined immunodeficiency (SCID). Admission workup demonstrated lymphopenia (ALC 720); normal CRP; elevations in IFN-gamma (40.5), IL-8 (19.7), and TNF-alpha (5.8); and minimal Burr cells with no schistocytes on peripheral blood smear. She was discharged after 36 hours of observation.

Discussion: Given this patient's unclear clinical trajectory at presentation, the decision was made to admit for further evaluation. Remarkably, despite T cell dysfunction and near-absence of B cells, she improved without medical intervention. This outcome lends credence to the notion that B cells may be dispensable for clinical resolution of COVID-19 infection. Further elucidation of immune responses to SARS-CoV2 will benefit from continued surveillance of clinical outcomes in patients with defined immunologic deficits.

M407

COMPLICATIONS OF CORONAVIRUS IN A PATIENT WITH CVID

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Introduction: 29-year-old with common variable immunodeficiency, lymphangiomatosis, portal hypertension status post TIPS procedure was lost to follow up. He was off gamma globulin and prophylactic antibiotics for fourteen months prior to presentation secondary to insurance issues. Early February 2020 patient presented with abdominal distension and hemoptysis. He denied fever, shortness of breath or additional respiratory symptoms. Initial CT of chest showed basilar cavitary infiltrate. Coronavirus PCR testing was positive, presumed SARS-CoV2. Immunoglobulin G level was 467.

Case Description: He was started on empiric broad spectrum antibiotics, antifungals and immunoglobulin replacement. He developed fever, worsening respiratory symptoms, and lower lobe infiltrates soon after admission. Bronchoscopy was performed, and culture was positive for Aspergillus. Blood culture was positive for Streptococcus Agalactiae. Paracentesis, TIPS check with balloon dilation, and splenic artery aneurysm coiling were performed. He developed thrombosis of greater saphenous vein and was started on anticoagulation. He required oxygen supplementation, but not intubation. Patient gradually improved and was discharged after seventeen days hospitalization. He was continued on antibiotic, antifungal, and anticoagulation at discharge. Outpatient follow up was arranged with Immunology, subcutaneous immunoglobulin was resumed, and he continues to clinically improve to baseline three months after discharge.

Discussion: The knowledge of SARS-CoV2 infections in patients with underlying Immunodeficiency is rapidly evolving. Immunodeficiency has been speculated to protect against cytokine storm and hyper inflammation from COVID-19. Markers of cytokine storm were not measured during our patient's admission. However, despite coinfections and additional sequelae, our patient had no evidence of ARDS or requirement for prolonged respiratory support.

M408

AN UNUSUAL MISSED DIAGNOSIS OF MULTIFACETED CLINICAL CASE OF CORONAVIRUS DISEASE 2019 MIMICKING UNCONTROLLED ASTHMA

S. Nsouli*, *Danville, CA.*

Introduction: A patient with progressive shortness of breath, dry cough, tightness of the chest, mimic uncontrolled asthma. A diagnosis of coronavirus disease 2019 (COVID-19) infection might be delayed if a chest CT scan is not done (after abnormality of chest X-ray), despite a negative nasopharyngeal swab test reverse transcription, polymerase chain reaction (RT-PCR) assay.

Case Description: A 68-year old female presented to us with progressive shortness of breath worsening over 12 days, a dry cough, and tightness of the chest. Her primary care diagnosed her with severe persistent asthma and prescribed an inhaled bronchodilator, corticosteroid, anticholinergic and montelukast with a course of oral corticosteroid. The patient came to our clinic due to the worsening of symptoms despite the step-up therapy for asthma. Physical examination revealed decreased airflow and bilateral rales in both lungs, blood pressure: 137/78, temperature 38.9 C, heart