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demonstrates potential for the additional benefit of resolution of PFAS symptoms.

M322

THE IMPACT OF FOOD MATRICES ON EGG ALLERGENICITY

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Introduction: With increasing incidence of food allergy, there is a drive to better understand the dynamics of food allergenicity. Studies have demonstrated the effects of heating altering the conformational epitopes of food protein, but little research exists examining the impact of matrix effect on allergenicity.

Case Description: An 8-month-old female with moderate eczema presented to our clinic for consideration of peanut allergy. Skin testing was negative to peanut but positive to egg (5/20mm) with adequate controls. Egg white immunocap was 1.33 kU/L and family was advised to return for baked egg oral challenge. At 14 months old she returned and successfully tolerated an oral challenge with a cumulative ½ baked muffin. Over the next 10 months she continued to consume ½ baked muffin ≥ 3 times/week. Given tolerance, the patient's mother decided to introduce banana chocolate chip muffins (as she had previously tolerated banana and chocolate individually). With the first two exposures the patient developed urticaria and on the third exposure had urticaria with concerns of difficulty swallowing. She reassuringly improved after epinephrine and subsequently was able to resume regular consumption of standard baked egg muffins.

Discussion: Based on our patient's ability to tolerate baked egg muffins without banana, but significant reaction to baked egg muffins with banana, a potential explanation is that the addition of banana disrupted the egg-wheat matrix, contributing to allergenicity. This case demonstrates the importance of adhering to established recipes for home administration but also the need to investigate food matrix allergenicity.

M323

PROACTIVE MANAGEMENT OF MULTIPLE FOOD ALLERGIES IN AN INFANT WITH ATOPIC DERMATITIS

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Introduction: Oral food challenge (OFC) is the gold standard for diagnosing food allergy. Early introduction of peanuts has been shown to significantly decrease the development of peanut allergy in high-risk infants compared with avoidance. Dietary modification based on presumed food allergy from skin prick test (SPT) or serum specific IgE testing can negatively impact a child's growth, nutrition, and quality of life. Accurate and early diagnosis of food allergy is therefore of paramount importance.

Case Description: A 5-month-old female with multiple food allergies and moderate persistent atopic dermatitis (AD) presented for evaluation to the pediatric allergy office after a recent family relocation. Prior evaluation revealed elevated serum IgE levels to peanut, egg, and multiple tree nuts. Her present diet included strict avoidance. Repeat SPT and serologic testing with components were performed, following which she underwent several supervised OFCs. She passed peanut (6 months), and almond (10 months), but reacted mildly to baked egg. She is currently scheduled for additional OFCs with the goal of continuing the safe introduction of new foods into her diet.

Discussion: This case highlights a proactive approach to diet expansion through supervised OFC in an infant with persistent AD and multiple food IgE-sensitivities. Our patient safely introduced new foods into her diet including peanut and almond by 10 months of age. A collaborative approach with motivated caretakers is vital for proactively addressing potential allergies and introducing new foods during infancy.

NEW! COVID-19

M400

MANAGING A CASE OF REPORTED LOCAL LIDOCAINE ALLERGY IN A PREGNANT WOMAN DURING COVID-19 PANDEMIC

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Introduction: We report how we diagnosed and managed a case of reported local anesthetic allergy in a high-risk pregnant woman during the COVID-19 pandemic via telemedicine.

Case Description: We were consulted by the obstetrician for lidocaine allergy in advance of a spinal block for an elective cesarean section in a 23-year-old woman at 34 weeks of gestation. The patient had a past medical history of ulcerative colitis and a surgical history of having a colectomy and ostomy. The patient reported a previous episode of localized hives and swelling shortly after undergoing a dental procedure that was thought to be secondary to her receiving a lidocaine injection. She denied cardiopulmonary and gastrointestinal symptoms, anxiety or delayed reactions. Therefore IgE-mediated hypersensitivity was possible. Due to the COVID-19 pandemic, we conducted the initial assessment and the subsequent planning with multiple providers involved in the case through a Telehealth route. At 38 weeks of gestation, in a pre-delivery room with fetal monitoring, the patient passed both skin prick and intradermal testing for lidocaine (10mg/ml), preservative free lidocaine (10 mg/ml) and preservative free bupivacaine (2.5 mg/ml). Subsequently, she passed a subcutaneous skin challenge with 1 ml of preservative free lidocaine (10 mg/ml). A few hours later, she delivered a baby uneventfully by cesarean section under spinal block using local preservative free lidocaine.

Discussion: We report the management of reported lidocaine allergy on a pregnant patient during COVID-19 pandemic via both telemedicine and pre-delivery on-site skin testing. We successfully removed the label of lidocaine allergy immediately before her delivery.

M401

CHALLENGING CASES OF ASTHMATICS WITH COVID19 INFECTION

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Introduction: We report 3 challenging cases of asthmatics, with COVID19, that elucidate the heterogeneity of presentation and disease progression.

Case Description: Our first case is a 66-year-old African American female managed on omalizumab, fluticasone furoate-vilanterol, montelukast, and tiotropium for moderate persistent asthma and allergic rhinitis. She developed a fever of 102°F, nonproductive cough, dyspnea, headache, and diarrhea. Azithromycin initially improved her symptoms, but her cough and dyspnea relapsed, requiring hospital admission. While inpatient, she was found to be COVID positive. Management included IV hydration, hypokalemia management, and oxygenation via nasal cannula. She was discharged after 9 days with all symptoms resolved save for mild to moderate dyspnea.

Second, we have a 47-year-old Hispanic female with allergic rhinitis and moderate persistent asthma managed on omalizumab, budesonide-formoterol, tiotropium, fluticasone, and montelukast. She experienced a persistent cough, dyspnea, anosmia, ageusia, and an ongoing temperature $> 100.4^\circ \text{F}$. She tested positive for COVID 19 and was started on prednisone 60 mg along with azithromycin. Her dyspnea persisted so hydroxychloroquine was added to her regimen and her dyspnea resolved within 6 weeks.

Our final case is a 69-year Caucasian COVID19 positive female with mild persistent asthma and allergic rhinitis managed with montelukast. She developed diarrhea, ear pain, anosmia, ageusia, weight loss, productive cough, and an average temperature of 101.9°F . She started azithromycin with symptom resolution by 14 days.

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