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.

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Oral Abstracts

Adverse Drug Reactions, Insect Reactions, Anaphylaxis

A001

MRNA COVID-19 VACCINE ADVERSE EVENTS FOLLOWING IMMUNIZATION: SHOULD YOU RECOMMEND THE SECOND DOSE?

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Introduction: Adverse Events Following Immunization (AEFI) can lead to vaccine hesitancy and unnecessary susceptibility to disease. AEFI have come to the forefront after two coronavirus 2019 vaccines were granted emergency use authorization by the US Food and Drug Administration.[1,2] Various AEFI have been reported since widespread distribution of the vaccine.[3,4] Physicians play an important role in evaluating patients with AEFI to prevent unnecessary avoidance of the vaccination.[5] We describe the evaluation and outcome of patients referred to an Allergy Clinic for AEFI to the mRNA COVID-19 vaccines.
Methods: A retrospective review of patients referred to the Walter Reed National Military Medical Center Allergy Clinic for AEFI following receipt of either mRNA COVID-19 vaccine from December 2020 to June 2021. Cases were identified through a search of the medical record for adverse COVID-19 vaccine reactions.
Results: 25 patients were evaluated. 23/25 experienced adverse symptoms following the first dose of the mRNA COVID-19 vaccine. 14/25 with possible hypersensitivity reaction. 6/14 underwent skin testing with no positive results. With directed testing or other assessments, 15 underwent vaccine challenge with only mild expected post-vaccination symptoms. Only 2 patients were advised against receiving the second dose and 6 patients declined the second dose.
Conclusions: With the appropriate specialty evaluation, the majority of patients with AEFI tolerated vaccine challenge. This study provides an approach on how to evaluate and manage AEFI during a pandemic, demonstrate the limitations of current testing, and provide insight on how to counsel patients considering future doses.

Areobiology, Allergens, Allergens Extracts

A005

PATCH TESTING RESULTS IN ADULT PATIENTS WITH DERMATITIS DURING THE COVID-19 PANDEMIC

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Introduction: Allergic contact dermatitis (ACD) related to facial masks has become an emerging issue during the COVID-19 pandemic. Increased exposure to contact allergens may lead to new sensitization. Glutaraldehyde and formaldehyde have been detected in N95 and surgical masks.
Methods: We conducted an IRB-approved, retrospective review of patients with dermatitis evaluated with NACD panel patch testing (PT) before and during the COVID-19 pandemic. Data gathered included clinical characteristics, atopic dermatitis (AD) history, and positive PT allergens. Results with $p<0.05$ were considered statistically significant.
Results: A total of 99 patients (median age: 49-years, 91% women, 21% health care workers (HCW)) had dermatitis evaluated with PT (pre-COVID n=65, COVID-pandemic n=34). Clinical characteristics including age/sex, HCW status, dermatitis location/duration, and AD history were comparable among the groups. Positive PT to glutaraldehyde and fragrance mix (FM) were detected at higher rates overall in the COVID-pandemic cohort compared to the pre-COVID group (18% v. 3%, p=0.019 and 32% v. 9%, p=0.004), respectively. The incidence of facial dermatitis was 54% (pre-COVID) and 68% (COVID-pandemic). Rates of positive PT among patients with facial dermatitis (COVID-pandemic n=23 and pre-COVID n=35) respectively, included: FM (39% v. 11%), formaldehyde (22% v. 6%), glutaraldehyde (17% v. 6%), textile dye mix (TDM) (13% v. 0%). There were no differences in positive PT allergens in HCWs (n=21) in the pre-COVID and COVID-pandemic groups.
Conclusion: Glutaraldehyde and FM represent potentially relevant contact allergens in patients with ACD during the COVID-19 pandemic. Other allergens of interest include TDM and formaldehyde. Additional investigation is required to confirm these findings.

Allergy Diagnostics and Immunotherapy

A010

MASS CYTOMETRY ANALYSIS REVEALS DAMPENING OF TH2 PHENOTYPE AMONG PEANUT-REACTIVE CD4+ T CELLS FOLLOWING PEANUT-OIT

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Introduction: Oral Immunotherapy (OIT) is a promising intervention to treat food allergies. OIT induces desensitization, defined as lack of clinical reactivity to previously offending food allergen, while under active therapy. We sought to understand the immune mechanism of desensitization among study participants successfully desensitized to peanut following peanut OIT.
Methods: PBMCs were isolated from fresh whole blood drawn from our phase 2, peanut OIT study participants (NCT02103270) at baseline (pre-OIT) and week 104 post-OIT, and frozen. Thawed baseline and week 104 PBMCs from active and placebo-treated study participants were stimulated with 200 mg/ml peanut solution for 24 hours and probed with a comprehensive metal-conjugated antibody panel. Data was acquired on Helios mass cytometer and analyzed by manual gating as well as FlowSOM-based unsupervised clustering.
Results: Peanut-reactive $CD4^+$ T cells were identified by upregulation of CD69 and CD40L surface expression following *ex vivo* peanut

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