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studies was confirmation of sensitization to house dust mites and contact allergy. Patients with a SCORAD index greater than/equal to 15 points were included. The primary endpoint of efficacy was a significant reduction in the SCORAD index between the active and placebo groups by more than 12 points after 6 months of treatment. Contact allergy was confirmed by skin patch tests. Specific IgE to Der p1 and Der p 2 were determined by ELISA.

Results: 71 patients completed the study, with 36 patients in the active group and 35 in the placebo group. Patients in both groups received standard treatment. Patients in the active group received subcutaneous allergen-specific immunotherapy with house dust mite extracts. In the active group, a decrease in the SCORAD index by 12 points was recorded in 30 of 36 patients, which significantly differed (chi squared 5.71, $p < 0.017$) from the placebo group, where the decrease in the index occurred in 19 of 35 patients. The number of exacerbations of contact allergy in the active group was significantly less ($p < 0.05$) compared with the placebo group.

Conclusion: This pilot study confirmed that allergen-specific immunotherapy may be effective in the overlap syndrome of atopic and contact dermatitis.

Other: Adverse Vaccine Reaction, Vaccines, Graded Immunization

A025

SPLIT-DOSING OF COVID-19 VACCINES IS SAFE AND PROVIDES NON-INFERIOR ANTIBODY RESPONSIVENESS TO CONVENTIONAL VACCINE DOSING

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Introduction: Vaccination has proven efficacy against COVID-19, yet allergic or adverse reactions have resulted in vaccine hesitancy nationwide. Graded or split dosing of vaccines is a relatively common allergy practice that is understudied for efficacy, particularly for COVID-19. We aimed to compare antibody responsiveness and safety of split versus conventional dosing of COVID-19 vaccines.

Methods: A total of 30 adult subjects received conventional/full (N=15) or 2-step split (N=15) dosing of a COVID-19 vaccine. Pre- and 6-week post-serum antibody levels were determined by multiplex, microsphere-based IgG quantitative assays for SARS-CoV-2 antigens including Receptor Binding Domain (RBD), Spike protein 1 (S1), and nucleocapsid (natural infection marker). The majority received Pfizer booster (73%). Any adverse reactions were recorded.

Results: Post-vaccine RBD and S1 (but not nucleocapsid) antibody expression as measured by mean fluorescent intensity increased in conventional ($p=0.0006$ and $p=0.0054$, respectively) and split ($p < 0.0001$ and $p=0.0002$) dosed subjects. Findings persisted after removal of 3 subjects with evidence of new natural infection as determined by nucleocapsid antibody positive conversion. There was no difference in mean fold-change (post/pre) antibody expression for RBD (conventional: +5.3 vs. split: +26.7, $p=0.22$) and S1 (+11.7 vs. +27.3, $p=0.26$). Split dosing was overall well-tolerated with minimal adverse reactions.

Conclusion: Split dosing is safe and non-inferior in efficacy as evidenced by antibody responsiveness when compared to conventional dosing of the COVID-19 vaccines. This approach could be applied to persons with vaccine hesitancy of various reasons including allergic disease(s) to provide immunization against this pandemic and be modeled in future pandemic scenarios.

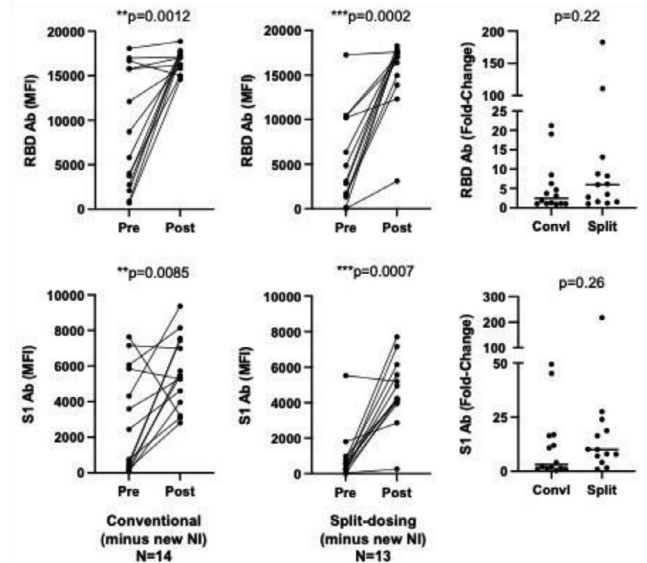


Figure 1. Split vaccine dosing-induced increase in receptor binding domain (RBD) and spike protein 1 (S1) antibody (Ab) expression is not inferior to conventional (Conv) vaccine dosing after removal of 3 subjects with new natural immunity/infection (NI) conversion. Pre- and 6-week post-vaccine RBD and S1 antibody expression as measured by mean fluorescent intensity (MFI) increased in conventional- and split-dosed subjects (Wilcoxon matched-pairs signed ranked test). Scatter dot plot depicts RBD (B), and S1 (D) antibody fold-change (post/pre-MFI level) differences (Mann-Whitney U test).

Other: Eosinophil Related Conditions/Eosinophilia/Hypereosinophilia

Clemens von Pirquet Award – 2nd Place A026

UNRECOGNIZED PARASITIC INFECTION AS A CAUSE OF PERSISTENT EOSINOPHILIA IN AN INNER-CITY ALLERGY CLINIC POPULATION

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Introduction: Persistent peripheral blood eosinophilia (absolute eosinophil count (AEC) > 500 cells/mL) is frequently a manifestation of a serious medical problem. Nevertheless, previous studies have shown that patients with persistent eosinophilia are often not adequately evaluated for possible underlying causes.

Methods: Patients from an inner-city Allergy clinic from 2020-2022 with AEC > 500 cells/mL at least on 2 occasions and no established cause were evaluated.

Results: A total of 82 patients were enrolled. Patients were predominantly female (72%), with mean age of 50 years (range 15-97), of Hispanic (42%) and African-American (32.5%) race. Hypereosinophilia (AEC > 1500 cells/mL) was found in 17% (14/82) patients, with the highest AEC of 40,000 cells/mL. Co-morbid conditions included allergic rhinitis [(80.4% (66/82)), asthma [(53.6% (44/82)), nasal polyposis [(12% (10/82)), and eczema [(8.5% (7/82)]. Overall, 30% (24/75) of the study population tested positive