a history of prior hypersensitivity reactions to PEG containing chemotherapy (PEG-CTX).
Methods: Retrospective chart review from referred Pediatric Oncology patients with a history of prior reactions to PEG-CTX (01/2020-04/2022). Selective skin testing was completed using PEG molecular weigh 3350 and m-RNA Covid-19 vaccines with controls.
Results: Four pediatric patients (≤18 years old) had evidence suggestive of an immediate, hypersensitive reaction to PEG-CTX following treatment for acute lymphoblastic leukemia (ALL). All 4 patients experienced prior reactions to chemotherapy (L-Asparaginase). Symptoms included: hypotension, flushing, urticaria, angioedema, emesis and tachycardia. Due to prior reactions, these high-risk patients were not administered PEG containing Covid-19 vaccines due to safety concerns. Non-PEG containing Covid-19 vaccines were not approved for use in pediatric patients. Allergy skin testing (skin prick and intradermal) was completed in all four patients. One of 4 patients tested positive to both PEG and PEG containing Covid-19 vaccine. The 3 negative patients were administered PEG containing Covid-19 vaccine with monitoring for one hour without symptoms.
Conclusion: Pediatric patients in our study with prior reactions to PEG-CTX tolerated PEG containing Covid-19 vaccines. Further studies are needed in assessing PEG allergy in high-risk patients with a past history of reactions to PEG-CTX.

P011

REVISITING HYPERSENSITIVITY REACTIONS TO THE MRNA COVID-19 VACCINE: TOLERANCE AFTER PREVIOUS HISTORY OF ANAPHYLAXIS

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Introduction: Based on the current evolving knowledge regarding potential mechanisms of immediate reactions to the COVID-19 vaccine, we wanted to study the clinical tolerance of subsequent mRNA vaccination in patients with reported anaphylaxis to either the Moderna® mRNA-1273 or Pfizer-BioNTech® BNT162b2 vaccine.
Methods: We revaluated a subgroup of 6 patients that reported anaphylaxis to the first COVID-19 vaccine (5/6 – level 2 Brighton criteria classification and 1/6 level 4), as part of a large prospective COVID-19 Vaccine study (ARCOV). Among these, PEG skin test was positive for 2/6 patients. Patient had safely received their second dose using a desensitization protocol and were offered a booster dose of the Pfizer-BioNTech COVID-19 vaccine using a two-step blinded placebo-controlled challenge with a 1-hour observation period in a monitored setting.
Results: All 6 patients were females with a history of atopy and anaphylaxis to other agents. One patient was premedicated with prednisone and antihistamine. One patient refused, one tolerated a single dose challenge in the community, 3 tolerated a 2-step challenge and 2 presented mild isolated skin reactions (one patient despite the premedication). These reactions were hives and itchiness and were managed with oral antihistamines. One patient reacted to placebo with pruritis, sensation of throat closure, and dizziness but following reassurance safely completed the open challenge.
Conclusion: Our results underline the safety of the mRNA COVID-19 booster vaccine in a monitored setting for patients with a previous history of anaphylaxis. Large scale studies are required to better understand the underlying mechanisms of the COVID-19 vaccine reported reactions.

P012

SAFETY OF CEFAZOLIN PERIOPERATIVE PROPHYLAXIS IN PLASTIC SURGERY PATIENTS WITH PENICILLIN ALLERGY

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Introduction: Preoperative antimicrobial prophylaxis, typically with first generation cephalosporin (cefazolin) is crucial in reducing surgical site infections (SSI) in plastic surgery patients. Despite low cross-reactivity with cefazolin, the presence of penicillin allergy (PA) on a patient's chart is known to result in the use of alternative antibiotics and increased risk of SSI in other surgical patients. Our study sought to examine patterns of perioperative antibiotics use and rates of reaction in plastic surgery patients with reported penicillin allergy in our institution, data yet to be investigated in this field.
Methods: This was a six-month, single-center retrospective chart review of adult patients of three body contouring plastic surgeons. Presence of PA, perioperative antibiotic administered, and patient outcomes including incidence of allergic reaction and SSI were recorded.
Results: 457 patients of which 91% (n=416) were female received 479 plastic surgery procedures. PA was listed in 16 (3.5%) patients documented as anaphylaxis, 57 (12.5%) non-anaphylactic hypersensitivity, and 7 (1.5%) unknown reaction. Cephalosporin allergy (CA) was reported in 18 (4%) of patients with 8 (1.7%) reporting both PA and CA. Of patients with PA, 30 (41%) received cefazolin and the rest received either clindamycin or ciprofloxacin. None developed anaphylaxis or a histamine-mediated reaction. 2 patients with PA who received clindamycin and 1 patient with PA who received cefazolin developed SSI. 1 patient with CA who received clindamycin developed SSI.
Conclusion: Cephalosporins remain first line perioperative prophylaxis for appropriate patients with PA. However, plastic surgeons still frequently choose alternative antibiotics, highlighting the need for further education.

P013

GRADED CHALLENGES TO PENICILLIN IN ICU PATIENTS

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Introduction: There is emerging data for safety and efficacy of graded challenges to penicillin (GCP), without penicillin skin testing, in patients with low risk reaction histories. We describe outcomes of GCP in ICU patients.
Methods: From 8/2021 to 6/2022, allergy/immunology physicians completed e-consults for ICU patients with a penicillin allergy label. Low risk history was defined as unknown reaction or a history of a cutaneous-only reaction >5 years ago and was verified by chart review or patient/family contact. GCP consisted of a 2-3 step challenge to amoxicillin or ampicillin. Patient demographics, GCP results, pre/post GCP antibiotics regimens, and a 2-4 week follow up were collected.
Results: There were 40 ICU patients with low-risk reaction histories. Historical reactions included: rash (17, 43%), hives (10, 25%), angioedema (5, 13%), and unknown (8, 20%). The median age was 63.5 years (interquartile range: 58.8- 72.3). Patient characteristics included: 24/40 patients (60%) intubated, 12/40 (30%) receiving steroids, 10/40 (25%) COVID-19+, 8/40 (20%) receiving vasopressors, 7/40 (18%) on antihistamines, and 1/40 (3%) on ECMO. A total of 32/40 (80%) patients underwent GCP. There was a negative GCP in 31/32 (97%) patients; one patient developed self-limited abdominal pain. Twelve of 32 (38%) patients transitioned to penicillins: from cephalosporins (10/12), vancomycin (3/12), metronidazole (1/12), meropenem (1/12), macrolide (1/12). There were 15/40 (37.5%) deaths at 2-4 weeks follow up.
Conclusions: : GCP was safe and efficacious in critically ill ICU patients with low risk reaction histories. Given the high ICU mortality, patients should be carefully identified for GCP.

P014

CHARACTERIZING ANAPHYLAXIS IN INFANTS PRESENTING TO THE EMERGENCY DEPARTMENT

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Introduction: Prior research suggests that there may be age-based differences in the presentation of anaphylaxis. However, the symptomatology of anaphylaxis in infants remains poorly characterized, and more research is needed to ensure accurate diagnosis and treatment.
Methods: This is a retrospective chart review of patients aged 0 - 24 months who presented to the emergency department (ED) of a pediatric tertiary referral center between Jun 2019 and Jun 2022 and met diagnostic criteria for anaphylaxis (n = 169). Demographics and clinical data, including presenting symptoms and treatment, were extracted from the medical record. Data were analyzed descriptively. The study was reviewed by the Institutional Review Board (IRB) and granted exemption.
Results: Among 169 patients, mean age was 1.0 years (SD = 0.42). 95 patients (56.2%) were 12 months or younger, and 109 (64.5%) were male. Almost all episodes were triggered by food (96.5%), especially egg (26.6%), peanut (25.4%), milk (13.6%), and cashew (10.1%). Symptoms were reported in the skin/mucosal (97.6%), gastrointestinal (74.6%), respiratory (56.8%), and cardiovascular (34.3%) systems. Most patients with cardiovascular symptoms had isolated tachycardia (84.5%). 146 patients (86.4%) received epinephrine, with 51 (30.1%) receiving it prior to arrival and 16 (9.5%) requiring more than 1 dose. 17 patients (10.1%) were admitted to the hospital, but none required intensive care.
Conclusion: In this cohort of infants with anaphylaxis, almost all episodes were triggered by food, especially egg, peanut, milk and cashew. Skin/mucosal and gastrointestinal symptoms were most common. Most patients received epinephrine, but few required hospital admission.

P015

PRE-VACCINE COUNSELING TO ASSIST WITH RISK ASSESSMENT PRIOR TO COVID-19 VACCINATION

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Introduction: During early vaccine roll-out of Pfizer-BioNTech, Moderna, and Johnson & Johnson (J&J) COVID-19 vaccines, reports of severe allergic reactions led to hesitancy among patients with allergic history and disorders. Evaluation was initially limited due to restricted access to vaccines and pandemic-associated clinical constraints.
Methods: We conducted a retrospective chart review of patients over 18 years of age who sought vaccine counseling in-person or by telehealth between December 1, 2020 and May 1, 2021 prior to their first dose of vaccine. Demographics, atopic history, anaphylaxis history and vaccine administration/reactions were recorded. Follow up phone calls were used to complete data collection.
Results: We identified 80 patients (N= 63 Female, 17 Male). The most frequently reported comorbidities included rhinitis (54%), asthma (36%), hypertension (21%), and chronic urticaria (21%). Twenty-six patients (33%) reported a history of anaphylaxis, 14 of which were attributed to medications. Of the 80 patients evaluated, 77 (93%) successfully completed a vaccination series (defined as 1 dose of J&J or 2 doses of an mRNA vaccine). Of the 77 patients that completed vaccination, 7 (9%) reported reaction to a dose of vaccine, all consistent with expected adverse effects. No reactions suggested anaphylaxis. Three patients elected not to receive vaccination; none of these patients had history of anaphylaxis.
Conclusion: Many patients with atopic history expressed hesitancy regarding COVID-19 vaccine administration and sought pre-vaccine counseling. Our experience suggests an effective role for counseling in patients with no prior exposure to COVID-19 vaccination as over 90% of patients with allergic history, including anaphylaxis, were safely vaccinated.

P016

LONG-TERM SAFETY IN ADULTS WITH MODERATE-TO-SEVERE ATOPIC DERMATITIS TREATED WITH DUPILUMAB UP TO 4 YEARS

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Introduction: In patients with atopic dermatitis (AD), classical immunosuppressive treatments are not recommended for continuous use due to safety concerns. This analysis reports long-term safety of dupilumab up to 4 years in adults with moderate-to-severe AD.
Methods: In the LIBERTY AD OLE (NCT01949311) study, adult patients ≥18 years old with AD initially received dupilumab 300mg weekly. 226 ongoing patients transitioned to 300mg every other week (q2w) to align with approved dosing. Use of topical corticosteroids (TCS) or calcineurin inhibitors was permitted. Treatment-emergent adverse events (TEAE) are reported as number of patients per 100-patient years (nP/100PY). Due to the lack of a control arm, LIBERTY AD CHRONOS (NCT02260986) 52-week safety results are provided.
Results: 2,207/1,065/557/362/352 patients completed up to 52/100/148/172/204 weeks of treatment. Mean (SD) treatment exposure was 103.4±57.8 weeks. Of the 2,677 patients included in the analysis, 2,273 experienced ≥1 TEAE (167.5 nP/100PY), which were mainly mild or moderate, and were lower than in the 300mg weekly + TCS arm of the 1-year CHRONOS trial (322.4 nP/100PY). 99 patients (1.8 nP/100PY) experienced TEAEs leading to treatment discontinuation. Of 536 patients reporting ≥1 event of conjunctivitis, 95% had mild (4.7 nP/100PY) or moderate (5.0 nP/100PY) severity. 89% of conjunctivitis events were resolved or resolving, and 0.5% (0.2 nP/100PY) led to treatment discontinuation. Efficacy was sustained and consistent with previous reports of this study.
Conclusion: The overall safety profile of dupilumab up to 4 years was consistent with the known safety profile and demonstrated sustained efficacy in adult patients with moderate-to-severe AD.

P017

COVID-19 VACCINE ADMINISTRATION IN PATIENTS WITH FIRST-DOSE ADVERSE REACTIONS OR HISTORY OF SEVERE ALLERGIC REACTION

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Introduction: The COVID-19 pandemic has claimed over 6 million lives from 2020 onward. Vaccines against SARS-CoV-2 are one of our best tools in preventing severe illness and mortality. There have been multiple reactions reported to the SARS-CoV-2 vaccine that initially precluded further revaccinations, making protection against the virus incomplete. Our study aimed to identify true SARS-CoV-2 vaccine reactions, underlying patient risk factors, and to confirm the safety of our vaccine challenge protocol for revaccination.
Methods: Patients with reported adverse first-dose SARS-CoV-2 vaccine reactions precluding second dose, or those with history of severe allergic reaction were given a graded vaccine challenge of an initial 10% dose, observed for 30 minutes, with advancement to the 90% dose if no concerning reaction.
Results: Of the 50 patients enrolled, 49/50 (98%) were able to obtain the full vaccine dose. 8 (16%) of patients had a first dose reaction concerning for delayed hypersensitivity, and 7/8 of those patients tolerated the full repeat vaccine dose. 42 (84%) patients had history of immediate reaction to the first dose of the vaccine and all tolerated the full dose via challenge protocol. 1/50 patients needed epinephrine, but was able to fully obtain the dose with outpatient treatment during the course, and subsequent revaccination.