parameters that could be associated with a blunted antibody response.

Methods: Adolescent KTR who received mRNA SARS-CoV-2 vaccine had SARS-CoV-2 spike protein antibody levels measured 4-8 weeks after their second vaccine dose. White blood cell counts, lymphocyte subset numbers and ratios, hemoglobin levels, antibody titers to previous vaccines administered prior to transplant, and immunosuppressive medication dosing were evaluated prior to vaccination.

Results: Fourteen of 26 vaccinated adolescent KTR (54%) had a positive spike antibody level. There was no significant difference in median absolute CD4 (974 versus 936 cells/uL), CD8 (707.5 versus 798 cells/uL), CD19 (270.5 versus 226 cells/uL), or CD27 (71.5 and 75.5 cells/uL) cell counts between non-responders and responders, respectively. There was a trend toward negative spike antibodies with higher doses of mycophenolate mofetil, MMF using Mann-Whitney U-test (91 mg/m^2/day median difference, p=0.06). All three patients receiving azathioprine developed spike antibodies. Lower hemoglobin levels were associated with lack of spike antibodies (12.2 versus 13.6 g/dL, p=0.019). MCV levels were normal in both groups. History of vaccine response to Hepatitis B, diphtheria, tetanus, Bordetella pertussis, or S. pneumoniae serotypes did not predict spike antibody response.

Conclusion: Our results suggest that the lack of SARS-CoV-2 spike protein antibody levels in adolescent KRT may be due to antiproliferative and bone marrow suppressive effects of MMF.

Clemens von Pirquet - 1st Place Award

A046

CHARACTERISTICS AND OUTCOMES AMONG IMMUNODEFICIENCY PATIENTS HOSPITALIZED WITH SARSCOV-2 IN THE NEW YORK CITY AREA

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Introduction: SARS-CoV-2 remains a threat to immunodeficient patients. Additional studies examining the natural history of COVID-19 disease in this vulnerable population are needed to maximize patient outcomes.

Methods: This case series included primary or secondary immunodeficient patients with laboratory-confirmed COVID-19 diagnosis admitted between March 1, 2020, and December 1, 2020, to 13 community and academic hospitals in a large health system.

Demographics, comorbidities, laboratory findings, clinical measures and outcomes were collected from a centralized electronic health record.

Results: 214 hospitalizations were identified. Descriptive statistics were generated. This cohort was 57.0% (N=122) male, 51.9% (N=111) white, with median age 67 years (range 2-97 years). Secondary immunodeficiency comprised 77.9% (N¼166), 6.1% (N=13) had primary immunodeficiency, 4.7% (N=10) had both, while 11.3% (N=24) had unspecified immunodeficiency. Most common comorbidities included cardiovascular disease (N=104, 48.8%), diabetes mellitus (N¼86, 40.4%), and chronic kidney disease stages I-IV (N=74, 34.7%). This cohort's clinical outcomes were compared to previously published characteristics of the larger inpatient cohort from the same healthcare network. Cohort median length of stay was 9.0 days (interquartile range 4.0-16.0), ICU admission rate was 23.4% (N=50), and 15.5% (N=33) received renal replacement therapy compared to 4.5 days (interquartile range 2.4-8.1), 14.2%, and 3.2%, respectively. Overall mortality was 26.6% (N=57) with 2.3% (N=5) expiring prior to intubation, compared to 21%, 11.7%, respectively. Work is underway to characterize presentation vitals and laboratory results.

Conclusion: Our preliminary findings suggest that immunodeficient patients hospitalized with COVID-19 experienced increased lengths of stay, ICU admission, and mortality compared to the general population.

Food Allergy

A050

DELAYED EGG INTRODUCTION AND LESS FREQUENT EGG INTAKE AND INCREASED EGG ALLERGY IN CHILDHOOD

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Introduction: Egg allergy is the second most common food allergy in childhood internationally. Current evidence suggests that early introduction followed by consistent and frequent feedings is protective against egg allergy development. However, optimal timing of egg introduction and frequency of feedings in infancy requires clarification.

Methods: In this pre-birth cohort from the Infant Feeding Practices Study II conducted by the CDC and US-FDA, infant feeding and food allergy data was collected in surveys from pre-birth to 6 years. Egg allergy was reported by parent in survey by checking "diagnosed as allergic to egg". 1379 participants had complete food allergy data to 6 years.

Results: 14/2237 (0.6%) of children reported egg allergy at 1 year, and 11/1379 (0.8%) reported egg allergy 6 years. Children who hadn't introduced egg by 12 months were more likely to have egg allergy at 6 years (9/472, 0.02% vs. 2/682, 0.00%, p<0.001). Children with egg allergy at 1 year old and 6 years old had less frequent egg consumption at 4, 5, 6, 9 and 10 months of age. In this study, children with egg allergy at 1 year were eating less egg at 10 months than those without egg allergy (0.36 eggs/week vs. 0.93 eggs/week, p=0.021). Those with egg allergy at 6 years were also eating less egg at 10 months than those without egg allergy (0.09 eggs/week vs. 0.93 eggs/week, p<0.001).

Conclusion: This pediatric birth cohort suggests that increased frequency of egg intake in infancy is associated with decreased egg allergy in childhood.

		No Egg Allergy	Egg Allergy	P value†
		Mean (SD)	Mean (SD)	
		12 months		
	Total	n=2235	n=14	
Egg intake at 2m (eggs/week)	2251	0.00 (0.05)	0.00 (0.00)	0.182
Egg intake at 3m (eggs/week)	2175	0.01 (0.00)	0.00 (0.00)	0.078
Egg intake at 4m (eggs/week)	2215	0.01 (0.25)	0.00 (0.00)	**0.029**
Egg intake at 5m (eggs/week)	2091	0.02 (0.30)	0.00 (0.00)	**0.013**
Egg intake at 6m (eggs/week)	2023	0.09 (1.03)	0.00 (0.00)	**0.000**
Egg intake at 7m (eggs/week)	1957	0.14 (0.79)	0.00 (0.00)	**<.0001**
Egg intake at 9m (eggs/week)	1940	0.41 (1.38)	0.08 (0.27)	**0.001**
Egg intake at 10m (eggs/week)	1764	0.93 (2.41)	0.36 (0.68)	**0.021**
		6 years		
	Total	n=1365	n=11	
Egg intake at 2m (eggs/week)	1379	0.00 (0.03)	0.00 (0.00)	0.318
Egg intake at 3m (eggs/week)	1316	0.01 (0.20)	0.00 (0.00)	0.259
Egg intake at 4m (eggs/week)	1274	0.01 (0.28)	0.00 (0.00)	0.092
Egg intake at 5m (eggs/week)	1269	0.02 (0.30)	0.00 (0.00)	**0.040**
Egg intake at 6m (eggs/week)	1242	0.05 (0.59)	0.00 (0.00)	**0.001**
Egg intake at 7m (eggs/week)	1214	0.14 (0.79)	0.00 (0.00)	**<.0001**
Egg intake at 9m (eggs/week)	1197	0.38 (1.38)	0.18 (0.61)	0.330
Egg intake at 10m (eggs/week)	1117	0.93 (2.55)	0.09 (0.30)	**<.0001**
Egg intake at 12m (eggs/week)	1154	1.76 (2.44)	0.36 (0.93)	**0.001**

†P values were calculated by using the t-test. Sum of categories may not be equal to total due to missing data.