

used telemedicine. Screening for COVID-19 for clinic visits was done by telephone, in-person questionnaires and/or temperature checks.

Table 1. Characteristics of Transplant Centers

Characteristic	No. (%)
No. of participating centers	65
Country	
Canada	3 (5%)
France	3 (5%)
Japan	11 (17%)
Malaysia	4 (6%)
Switzerland	2 (3%)
Turkey	2 (3%)
US	28 (43%)
Others	12 (18%)
Type of transplant	
Kidney	24 (37%)
Pancreas	25 (38%)
Liver	40 (62%)
Lung	21 (32%)
Heart	24 (37%)
Transplants performed in 2019	
Deceased donor kidney transplant (n=55)	
<50	28 (51%)
50-100	9 (16%)
100-200	12 (22%)
200-300	4 (7%)
>300	2 (4%)
Living donor kidney transplant (n=56)	
<50	37 (66%)
50-100	12 (21%)
100-200	6 (11%)
200-300	1 (2%)
Deceased donor liver transplant (n=42)	
<50	20 (48%)
50-100	12 (29%)
100-200	9 (21%)
200-300	1 (2%)
Living donor liver transplant (n=43)	
<50	39 (91%)
50-100	2 (5%)
100-200	1 (2%)
200-300	1 (2%)
Lung transplant (n=42)	
0	23 (51%)
1-30	12 (27%)
30-60	4 (9%)
>60	6 (13%)
Heart transplant (n=42)	
0	17 (40%)
1-30	14 (33%)
30-60	10 (24%)
>60	1 (2%)

Table 2. Countermeasures and Disruption of Transplant Services

Measure	No. (%)
Outpatient clinic visit	
Canceled pre-transplant clinics (n=64)	
Yes	36 (56%)
No	28 (44%)
Canceled post-transplant clinics (n=65)	
Yes	17 (26%)
No	48 (74%)
Telemedicine use (n=64)	
Yes ^a	54 (84%)
No ^b	10 (16%)
Postponing clinic appointments (n=65)	
No	9 (14%)
Yes	56 (86%)
All appointments	2 (3%)
Non-essential follow ups only	49 (75%)
Telemedicine	5 (8%)
Symptoms^c screening in outpatient clinics (n=65)	
No	9 (14%)
Yes	56 (86%)
Screening questionnaire at clinic entrance	39 (60%)
Telephone interview prior to appointment	28 (43%)
Temperature check	3 (5%)
Postponing living donor kidney transplant (n=58)	
Yes	50 (86%)
No	8 (14%)
Postponing deceased donor kidney transplant (n=57)	
Yes	20 (35%)
No	37 (65%)
Postponing living donor liver transplant (n=42)	
No postponing	10 (24%)
Yes, only for stable patients	10 (24%)
Yes, all patients	22 (52%)
Postponing deceased donor liver transplant (n=41)	
No postponing	24 (59%)
Yes, only for stable patients	10 (24%)
Yes, all patients	7 (17%)
Postponing lung transplant (n=31)	
No postponing	11 (35%)
Yes, only for stable patients	8 (26%)
Yes, all patients	12 (39%)
Postponing heart transplant in LVAD patients (n=33)	
No postponing	15 (46%)
Yes, only for stable patients	9 (27%)
Yes, all patients	9 (27%)
Postponing heart transplant in non LVAD patients (n=33)	
No postponing	15 (46%)
Yes, only for stable patients	7 (21%)
Yes, all patients	11 (33%)

^aOne center reported a mix of telemedicine with in-person visits if unusual symptoms were reported on a telephone interview call before the visit.

^bTwo centers reported phone call consultations only.

Conclusion. During the early phase of the pandemic, when management strategies were highly uncertain, non-urgent and living donor transplants were frequently postponed. Emergent liver transplants continued regardless. These findings could help us navigate SOT in future epidemics. Limitations included a small sample and lack of assessment of clinical outcomes from postponing SOT.

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477. Increased Referrals for New PFAPA (Aphthous Stomatitis, Pharyngitis, Adenitis) Diagnosis During the COVID-19 Pandemic

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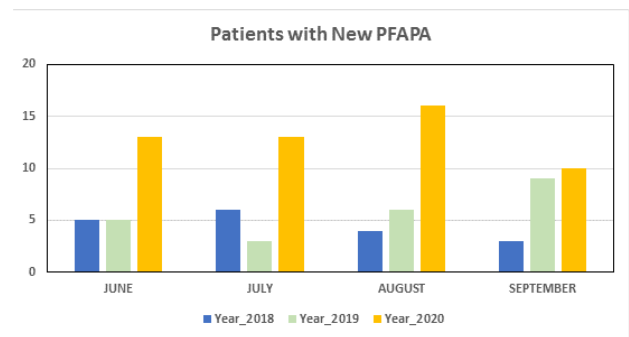
Session: P-23. COVID-19 Special populations (e.g. pregnant women, children, immunocompromised, etc)

Background. COVID-19 pandemic caused by SARS-CoV-2 resulted in a global health crisis in 2020. Quarantining, wearing masks and physical distancing- key infection prevention strategies implemented to stop the spread of COVID-19, also led to dramatic decreases in rates of common respiratory viral infection seen in young children. Due to lack of school and daycare exposure, we evaluated a larger than usual number of patients with periodic fevers without any known infectious contacts. Based on this observation, we conducted an analysis of all suspected cases of periodic fevers seen at our institution during the COVID-19 lockdown compared to prior seasons.

Methods. The clinical charts were queried for all patients presenting to any Lurie Children's Hospital outpatient specialty clinic or laboratory with ICD diagnosis code of MO4.1 and MO4.8 (all recurrent and periodic fever syndromes) from June 1, 2020 through September 30, 2020, and compared to similar months the previous 2 years (2018 and 2019). Each patient chart was reviewed by the lead investigator to verify all new diagnoses of PFAPA. The number of new patients with PFAPA diagnosis were tallied and analyzed. Statistical comparisons were made using Kruskal-Wallis tests for monthly distributions in different years.

Results. We noted a significant increase in patients with new PFAPA diagnosis between June through August 2020 compared to similar months in 2018 and 2019 (Figure 1). Experienced pediatric infectious disease physicians and rheumatologists diagnosed majority of the cases. During these months, a monthly median (IQR) of 13 (11.5, 14.5) patients were diagnosed among different Lurie specialty clinics, which is more than 2.5 folds increase in new PFAPA patients from the previous two years which were about 5 (3.5, 6) (Figure 2).

Number of Patients with New PFAPA Diagnosis



There was a significant increase in number of new patients diagnosed with PFAPA between June through August 2020 compared to similar months in 2018 and 2019.

Monthly Distribution Summary for New PFAPA Diagnosis

	Year 2018-2019	Year 2020
Mean (95% CI)	5.1 (3.5, 6.8)	13.0 (9.1, 16.9)
Median (IQR)	5.0 (3.5, 6.0)	13.0 (11.5, 14.5)

Statistical comparisons were made using Kruskal-Wallis tests for monthly distributions in different years

Conclusion. We observed a significant increase in PFAPA patients referred to our institution soon after introduction of public health measures to slow spread of COVID-19. Given that most children were not in daycare, schools, or camps, we suspect that parents and pediatricians were able to recognize patterns of periodic fevers in children much quicker than preceding years, when fevers would typically be attributed to an infectious process.

Disclosures. Ravi Jhaveri, MD, AstraZeneca (Consultant) Dynavax (Consultant) Elsevier (Other Financial or Material Support, Editorial Stipend as Co-editor in Chief, Clinical Therapeutics) Seqirus (Consultant)

478. Contemporaneous Evaluation of Kawasaki Disease and Multi-system Inflammatory Syndrome in Children in Northern Virginia

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Session: P-23. COVID-19 Special populations (e.g. pregnant women, children, immunocompromised, etc)

Background. Multi-system inflammatory syndrome in children (MIS-C) can present like Kawasaki disease (KD). After Centers for Disease Control and Prevention guidance was issued in May 2020, we implemented local management strategies emphasizing limited laboratory work up of non-toxic children with suspected MIS-C or KD. We then re-evaluated our management recommendations to ensure appropriate resource utilization for children with MIS-C and KD.

Methods. We identified MIS-C and KD cases via convenience sampling of Pediatric Infectious Diseases records at Inova Fairfax Medical Center from May 1, 2020 to February 28, 2021. Manual chart review extracted clinical points of interest and descriptive statistics compared cohorts. Oral changes included edema, erythema, cracking, or strawberry tongue. Abdominal symptoms included pain, emesis, and diarrhea. Respiratory symptoms included shortness of breath, tachypnea, cough, and need for mechanical ventilation. Musculoskeletal symptoms included pain and edema. Neurological symptoms included headache, dizziness, altered mental status, and irritability.

Results. We identified 8 KD cases and 29 concurrent MIS-C cases. MIS-C cases tended to be older and have presenting abdominal symptoms (median age 8 years old versus 2 years old, $p < 0.01$) and hypotension (20 versus 0, $p < 0.01$), otherwise there was no difference in the frequency of oral changes, rash, conjunctivitis, musculoskeletal symptoms, or neurological symptoms. 7 KD cases and 8 MIS-C cases did not require intensive care. Patients with MIS-C who did not need intensive care still had a lower initial absolute lymphocyte count (ALC) (median 1275/ μ L, $p < 0.01$), lower initial platelet count (median 217/ μ L, $p = 0.05$), and higher initial C-reactive protein (CRP) (median 18.3 mg/dL, $p = 0.06$) compared to KD cases; other results were not different between the two cohorts.

Table 1. Characteristics and Findings of KD and MIS-C Cases Not Requiring Intensive Care

	KD Cases (n=7)	MIS-C Cases (n=8)	p-value
Male gender	5	4	0.61
Median age in years (IQR)	2 (0.42-4)	6 (2.5-8)	0.05
Positive SARS-CoV-2 PCR	0	4	0.08
Positive SARS-CoV-2 Antibodies	0	6	0.13
Fever duration at time of evaluation in days (IQR)	5 (4-6)	5.5 (5-6.5)	0.32
Conjunctivitis	6	8	0.47
Rash	6	6	> 0.99
Oral changes	5	4	0.61
Abdominal symptoms	3	5	0.62
Respiratory symptoms	2	0	0.2
Musculoskeletal symptoms	2	3	> 0.99
Neurologic symptoms	1	5	0.12
Median initial WBC count in $10^3/\mu$ L (IQR)	11 (9-17)	9.5 (8-10.5)	0.12
Median initial absolute lymphocyte count per μ L (IQR)	2860 (2640-3660)	1275 (611.5-1800)	< 0.01
Initial platelet count in $10^3/\mu$ L (IQR)	367 (281-579)	216.5 (102-247)	0.05
Initial ALT in U/L (IQR)	36 (15-98)	35.5 (26-103.5)	0.56
Initial albumin in g/dL (IQR)	3.5 (3.3-3.7)	3.3 (2.7-3.8)	0.35
Initial CRP in mg/dL (IQR)	11.2 (5-15.1)	18.3 (13.5-23.8)	0.06
Initial ESR in mm/hr (IQR)	81 (62-97)	53.5 (37-104)	0.39
Initial BNP in pg/mL (IQR)	30	358.3 (86.5-502.5)	0.12
Initial troponin I in ng/mL (IQR)	< 0.1	0.02 (< 0.01 to 0.11)	0.31
Initial ferritin in ng/mL (IQR)	284.29	265.4 (221-1394)	0.83
Initial echocardiogram abnormal	4	5	> 0.99
Coronary artery dilation or prominence	4	4	> 0.99

Conclusion. We observed differences in the initial ALC, platelet count, and CRP between KD and MIS-C cases not requiring intensive care, whereas other labs such as ferritin, troponin, B-natriuretic peptide, and initial echocardiograms did not significantly differ between the two cohorts. Thus, our diagnostic management recommending limited laboratory evaluation for non-toxic patients with suspected KD or MIS-C is reasonable.

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479. Real-world Evaluation of SARS-CoV-2 Monoclonal Antibodies in Solid Organ Transplant Recipients

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Session: P-23. COVID-19 Special populations (e.g. pregnant women, children, immunocompromised, etc)

Background. Patients with COVID-19 infection at highest risk for poor outcomes include immunocompromised patients, such as solid organ transplant (SOT) recipients. Monoclonal antibody (mAb) infusions were developed to promote passive immunity. Analysis of the first 200 patients who received SARS-CoV-2 mAb at our hospital showed a 27 % absolute reduction in hospitalization and emergency department (ED) visits. Understanding the role of SARS-CoV-2 mAb therapy in management of the SOT population is likely to inform decision making for these patients.

Methods. We conducted a retrospective chart review of SOT patients diagnosed with COVID-19 who received mAb therapy between 11/18/20 and 04/26/21. Patients were excluded if they were < 18 years of age or if they weighed < 40 kg. We compared those patients who were hospitalized or visited the ED within 29 days of mAb therapy to those who recovered without further visits to our hospital.

Results. A total of 50 SOT patients receiving mAb therapy were included in this analysis. Bamlanivimab was given to 33 patients, while 9 patients received bamlanivimab/etesevimab and 8 patients received casirivimab/imdevimab. Twelve (24 %) patients were hospitalized or visited the ED within 29 days of mAb therapy; 38 patients did not. These 2 groups did not significantly differ by age, gender, body mass index, time from SOT, or other risk factors for severe COVID-19 illness per FDA Emergency Use Authorization guidance. Both groups were primarily made up of kidney transplant recipients (66.7 % and 68.4 %, respectively). Significantly more patients in the hospitalization/ED group were receiving antimetabolites as part of their immunosuppression (IS) regimen prior to COVID-19 diagnosis (100 % vs 68.4 %, $p = 0.047$). Patients in the hospitalization/ED group received mAbs within a median of 6 days (IQR 3.8) of symptom onset compared to 4 days (IQR 4) ($p = 0.006$).

Conclusion. SOT recipients were more likely to be hospitalized or visit the ED due to COVID-19 after mAb if they were receiving antimetabolite IS or received mAb later after symptom onset. These data stress the importance of early mAb administration in all SOT patients, particularly in those on antimetabolite therapy.

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480. Alternate Diagnoses in Children Evaluated for Multisystem Inflammatory Syndrome in Children (MIS-C)

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Session: P-23. COVID-19 Special populations (e.g. pregnant women, children, immunocompromised, etc)

Background. SARS-CoV-2 infection is typically a mild illness in children. Multisystem inflammatory syndrome in children (MIS-C) is a rare, post-infectious, hyperinflammatory condition associated with SARS-CoV-2 infection. The presentation of MIS-C is nonspecific and diagnostic criteria is broad. The Centers for Disease Control (CDC) defines MIS-C as a hospitalized patient < 21 years presenting with fever, laboratory evidence of inflammation, no alternative plausible diagnosis, and with positive exposure history or testing for current or recent SARS-CoV-2 infection. Since there is no single diagnostic test for MIS-C, there are other disease processes that can mimic its presentation and delay prompt diagnosis and management.

Methods. Between March 2020 and February 2021, we reviewed 282 charts of patients admitted for evaluation of MIS-C at our institution.

Results. 101 were found to have MIS-C, 45 found to have Kawasaki Disease (KD), and 129 were ruled out. Of the ruled-out group, the most common final diagnoses were viral infection, urinary tract infection, and acute SARS-CoV-2 infection. Other diagnoses included rickettsial infections, pneumonia, rheumatologic conditions, and bloodstream infection. Rhinovirus/enterovirus, adenovirus, Epstein-Barr virus (EBV), and Herpes Simplex Virus (HSV) were the most common viruses other than SARS-CoV-2 identified.

Conclusion. These findings highlight the importance of maintaining a broad differential when evaluating a patient for MIS-C, especially as community seroprevalence rises, making antibody presence less predictive of MIS-C.

Disclosures. Susan Wu, MD, Eli Lilly (Shareholder)

481. SARS-CoV-2 Infection in Hospitalized Children: An Elevated Body Mass Index is a Marker of Increased Risk of Acute Respiratory Failure

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Session: P-23. COVID-19 Special populations (e.g. pregnant women, children, immunocompromised, etc)

Background. Several risk factors are known to increase the severity of coronavirus disease 2019 (COVID-19) illness in adults, including age and obesity. Specific comorbidities affecting COVID-19 outcomes in children are less well defined.