hospitalization, which may be useful to trend. Further studies are necessary to create guidelines to better risk-stratify COVID-19 patients based on clinical severity.

## 441. Clinical Characteristics of Pediatric SARS-CoV-2 Infection and Coronavirus Disease 2019 (COVID-19) in Kuwait

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**Session:** P-14. COVID-19 Epidemiology and Screening

*Background:* Clinical presentation of coronavirus disease-2019 (COVID-19) ranges from asymptomatic to severe and life threatening. National-level registries found that children, generally, have less severe disease when compared to adults. However, most asymptomatically infected children will not present to hospital and may be missed. We aimed to describe the clinical characteristics in pediatric COVID-19 patients in Kuwait, and to estimate the potential duration of viral shedding.

*Methods:* A retrospective cohort study was performed in Jaber Alahmad Hospital (JAH) from Feb. 29th to Apr. 30th, 2020. During the study period and as part of the public health measures to contain COVID-19, all SARS-CoV-2 infected patients 1 month-18 years old, regardless of symptoms, were hospitalized at JAH, and were included. Demographics, clinical data, and laboratory results were collected. Polymerase chain reaction (PCR) negativity was defined as having two consecutive negative PCR results from a respiratory specimen. Descriptive statistics and multivariable regression analyses were performed.

*Results:* A total of 134 pediatric SARS-CoV-2 infections were identified. Of those, 91 patients (67.9%) were asymptomatic, the remaining cases had mild COVID-19 illness and mild pneumonia. The median age was 8.8 years (IQR: 4.7–12.4), 55.2% were males, and 89.5% were healthy. Cough and fever were the most commonly reported symptoms. The median duration to PCR negativity was 15 days (IQR: 13–19) for symptomatic patients and 15.5 days (IQR: 14–21) for asymptomatic patients. Predictors for symptoms included abnormal procalcitonin (aOR 6.6; 95% CI 1.48 -29.3), C-reactive protein (aOR 9.10; 95% CI 1.29–32.13), and X-ray finding of pneumonia (aOR 6.44; 95% CI 1.29–32.13).

*Conclusion:* Asymptomatic SARS-CoV-2 infection is very common in children. Among symptomatic patients, the disease seems to be mild. Children exhibit substantial duration of viral shedding, as measured by PCR positivity, regardless of symptoms.

## 442. Common symptoms of outpatient COVID-19 compared to non-COVID-19 Cases: A prospective epidemiologic study in a major US metropolitan area

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**Session:** P-14. COVID-19 Epidemiology and Screening

*Background:* The majority of novel coronavirus 2019 (COVID-19) cases is comprised of non-critically ill adults. However, the medical epidemiology and clinical profile for mild COVID-19 is poorly described in the United States.

*Methods:* We prospectively recruited 151 mildly symptomatic adults from Emory Healthcare COVID-19 screening clinics in Atlanta, Georgia from March 18 to June 16, 2020. Interview-based questionnaires captured participants' demographics, epidemiological history, and clinical features. Nasopharyngeal swabs were collected to test for SARS-CoV-2 by RT-PCR. Convalescent serum (13–74 days post symptom onset) from 19 participants was tested by an IgG ELISA. Descriptive and $\chi^2$ analyses were performed to determine the characteristics of COVID-19 cases compared to patients who tested negative.

*Results:* A total of 151 patients were recruited. The majority were non-Hispanic white (51%), female (60%), middle-aged adults (46.3 y +/-15). Twenty-seven (17.9%) tested positive for SARS-CoV-2 and most frequently reported fever (63%), cough (67%), fatigue (56%), and myalgias (56%). See Table 1. Fever was statistically more common in positive cases vs negative (63% vs 34%, p = 0.005). Cases also experienced loss of taste (22%) and loss of smell (19%) more frequently than non-cases (p=0.01 and p=0.03). Diarrhea (22% vs 23%) and shortness of breath (33% vs 36%) did not differ significantly between groups. None of the 14 PCR-negative participants tested

positive for SARS-CoV-2-specific IgG and 3 out of 5 COVID-19 cases tested positive for SARs-CoV-2-specific IgG.

**Table 1.** Demographics and clinical characteristics of mildly ill patients tested for COVID-19 with SARS-CoV-2 RT-PCR.

| Characteristic | Positive COVID-19 PCR | Negative COVID-19 PCR | Overall |
|---|---|---|---|
| Sex, n (%) | | | |
| Male | 12 (44%) | 46 (37%) | 58 (38%) |
| Female | 15 (56%) | 78 (63%) | 93 (62%) |
| Age (years), mean ± SD | 45 ± 15 | 47 ± 15 | 46 ± 15 |
| Race*, n (%) | | | |
| White | 9 (45%) | 52 (52%) | 62 (51%) |
| Black or African American | 7 (35%) | 35 (35%) | 42 (34%) |
| Hispanic, Latino, or Spanish | 3 (10%) | 4 (4%) | 7 (6%) |
| Asian | 2 (10%) | 5 (5%) | 7 (6%) |
| Other | - | 2 (2%) | 2 (2%) |
| Tobacco use*, n (%) | | | |
| Current smoker | - | 2 (3%) | 2 (2%) |
| Ever smoker | 1 (5%) | 17 (23%) | 19 (20%) |
| Never smoker | 19 (95%) | 58 (77%) | 77 (80%) |
| Chronic medical conditions, n (%) | | | |
| Cancer | 2 (8%) | 5 (4%) | 7 (5%) |
| Diabetes | 4 (15%) | 9 (7%) | 14 (9%) |
| Autoimmune disease | 2 (8%) | 11 (10%) | 13 (9%) |
| Immunodeficiency | 1 (4%) | - | 1 (<1%) |
| Organ transplant | - | 1 (<1%) | 1 (<1%) |
| Cardiovascular disease | 1 (4%) | 7 (6%) | 9 (6%) |
| High cholesterol | 3 (12%) | 20 (16%) | 23 (15%) |
| Hypertension | 6 (23%) | 31 (25%) | 37 (25%) |
| Asthma | 3 (12%) | 12 (10%) | 15 (10%) |
| Other respiratory disease | - | 2 (2%) | 2 (1%) |
| Other disease | 7 (27%) | 25 (20%) | 32 (21%) |
| Healthcare workers, n (%) | 14 (54%) | 56 (46%) | 71 (47%) |
| Contact with COVID-19 case, n (%) | 14 (54%) | 57 (47%) | 72 (48%) |
| Time between first symptom onset and PCR test (days), mean ± SD | 5 ± 4 | 7 ± 8 | 6 ± 7 |
| Symptoms, n (%) | | | |
| Fever | 17 (63%) | 42 (34%) | 59 (39%) |
| Chills | 12 (44%) | 55 (44%) | 67 (44%) |
| Cough | 18 (67%) | 75 (61%) | 93 (62%) |
| Nasal congestion | 12 (44%) | 37 (30%) | 49 (32%) |
| Chest congestion* | 3 (11%) | 14 (11%) | 17 (11%) |
| Chest pain | 6 (23%) | 28 (23%) | 34 (23%) |
| Rhinorrhea* | 1 (4%) | 28 (23%) | 29 (19%) |
| Shortness of breath | 9 (33%) | 44 (36%) | 53 (35%) |
| Wheezing* | 2 (8%) | 18 (15%) | 20 (13%) |
| Sore throat | 13 (48%) | 72 (58%) | 85 (56%) |
| Fatigue* | 15 (56%) | 63(51%) | 78 (52%) |
| Malaise* | 8 (29%) | 45 (36%) | 53 (35%) |
| Nausea | 3 (11%) | 17 (14%) | 20 (13%) |
| Vomiting | - | 8 (7%) | 8 (5%) |
| Diarrhea | 6 (22%) | 28 (23%) | 34 (23%) |
| Rash* | - | 4 (3%) | 4 (3%) |
| Joint pains* | 10 (37%) | 32 (26%) | 42 (28%) |
| Muscle pains | 15 (56%) | 61 (49%) | 76 (50%) |
| Loss of smell | 5 (19%) | 7 (6%) | 12 (8%) |
| Loss of taste | 6 (22%) | 8 (7%) | 14 (9%) |
| Headache* | 13 (48%) | 50 (41%) | 64 (42%) |

*May be underestimated due to missing responses



Symptomology of Mild COVID-19 Cases and Non-COVID-19 Cases
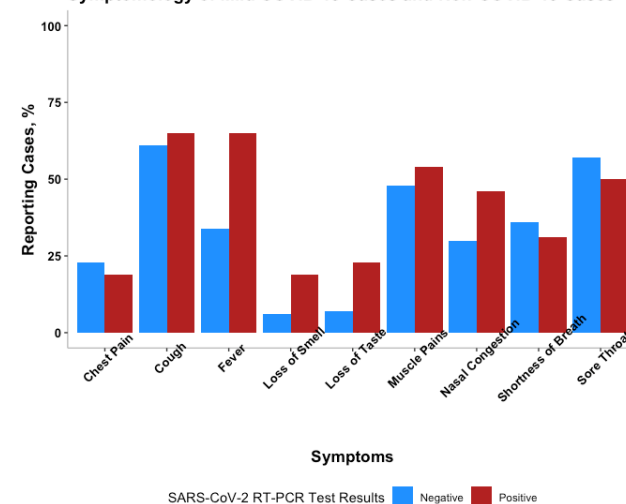
*Conclusion:* Mild COVID-19 cases reported fever, loss of smell and loss of taste significantly more than non-COVID-19 cases. Strong correlations between anosmia and ageusia with COVID-19 have been reported elsewhere, however these symptoms were only present in 19–22% of cases at the time of testing, limiting their utility for clinical diagnosis. Also, none of the PCR-negative participants tested positive for convalescent serology, supporting good sensitivity and negative predictive value of the RT-PCR test used in our clinic. Symptoms alone cannot differentiate COVID-19 from other illnesses, highlighting the critical need for widely available and highly sensitive and specific diagnostic tests.

## 443. Comparison of Clinical Characteristics of Endemic vs. SARS-CoV-2 Coronavirus Infection in Patients Admitted to a Community Teaching Hospital

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