



Abstracts

□ CHARACTERISTICS AND OUTCOMES OF 21 CRITICALLY ILL PATIENTS WITH COVID-19 IN WASHINGTON STATE.

Arentz M, Yim E, Klaff L, et al. *JAMA*. Published online March 19, 2020. doi:10.1001/jama.2020.4326.

Severe acute respiratory distress syndrome coronavirus 2 (SARS-CoV-2) has spread from China across multiple continents and now is becoming more prevalent in the United States. The first area known to be affected has been in Kirkland, Washington. This case series reports characteristics and outcomes of these initial critical patients.

Patients included in this retrospective case series were admitted to the intensive care unit (ICU) at Evergreen Hospital between February 20 and March 5, 2020, and were positive for SARS-CoV-2 nasopharyngeal swab. Laboratory tests were included from the day of admission as well as day 5. Radiographic studies were interpreted by an intensivist and radiologist. Follow up was after 5 or more hospital days or death. Descriptive statistics were used.

A total of 21 patients were included. The mean age was 70 (range 43–92) and 52% were male. Nearly all (85%) had comorbidities, the most common being chronic kidney disease (47.6%), congestive heart failure (42.9%), chronic obstructive pulmonary disease (33.3%), and diabetes (33.3%). On presentation, 76.2% reported dyspnea, 52.4% had fever, and 47.6% had cough. Patients had symptoms for an average of 3.5 days before coming to the hospital. Notable mean laboratory values included white blood cell count of 9365/uL (range 2890–16900), creatinine of 1.45mg/dL (range 0.1–4.5), venous lactate of 1.8mmol/L (range 0.8–4.9), and procalcitonin of 1.8ng/mL (range 0.12–9.56). Three patients had an elevated troponin (>0.3ng/mL). Radiographic studies most commonly revealed bilateral reticular nodular opacities (52.4%), ground-glass opacities (47.6%), pleural effusion (28.6%), peribronchial thickening (23.8%), or focal consolidation (19%). Over two-thirds (71%) of patients required mechanical ventilation, on average within 1.5 days of admission. 57.1% of patients developed acute respiratory distress syndrome (ARDS), and half of intubated patients required prone positioning. Overall, most (67%) required vasopressors and one-third developed cardiomyopathy. At the time of the study conclusion, 11 (52.4%) had died, 2 (9.5%) had stabilized, and 8 (38.1%) were still critically ill on mechanical ventilation.

The authors discussed limitations including small sample size and skewed population as most were elderly residents of a skilled nursing facility.



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Comment: This is the first report of patients in the United States with confirmed SARS-CoV-2 (COVID-19). These critically ill patients had high rates of intubation, ARDS, and death. While most presented with dyspnea, many were afebrile and without cough. While such a small study has obvious limitations, this report underscores the importance of having high clinical suspicion for disease even if symptoms are atypical as many have rapid decline in respiratory status necessitating mechanical ventilation.

□ CLINICAL CHARACTERISTICS AND INTRAUTERINE VERTICAL TRANSMISSION POTENTIAL OF COVID-19 INFECTION IN NINE PREGNANT WOMEN: A RETROSPECTIVE REVIEW OF MEDICAL RECORDS.

Chen H, Gun J, Wang C, et al. *Lancet* 2020; 395: 809–15.

Multiple reports have been published recently on characteristics of patients with COVID-19 in the general population, but there is little information on pregnancy-related presenting symptoms and outcomes. The goal of this study was to report clinical data as well as incidence of vertical transmission in pregnant patients with COVID-19.

This retrospective chart review was performed on pregnant women admitted to Zhongnan Hospital of Wuhan University in China with confirmed COVID-19 between January 20 through January 31, 2020. Clinical, laboratory, and radiologic records were reviewed by two investigators. Additionally, analyses from amniotic fluid, cord blood samples, and neonatal throat samples from the time of delivery were included. Vertical transmission was defined as positive testing for COVID-19 in these samples. Descriptive statistics were used.

There were nine patients included in the analysis. All were in the third trimester on admission, the earliest presenting at 36 weeks, 2 days and all had a known source of exposure to COVID-19. None of the patients had baseline comorbidities, but one patient had gestational hypertension and another developed pre-eclampsia. The most common symptoms of COVID-19 were fever on admission (78%), postpartum fever (67%), cough (44%), myalgia (33%), and sore throat (22%). Most had low or normal leukocyte count (78%) and 5 (56%) had lymphopenia. C-reactive protein was greater than 10mg/L in 75% of patients. One was found to be co-infected with influenza, and all

