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Evaluation of Rashes Among Patients Testing Positive for COVID-19 in an Urban Emergency Department

SARS-CoV-2 virus emerged in the United States in early 2020 causing a pandemic of respiratory illness. While respiratory and flu-like symptoms are well-known, other cutaneous findings such as maculopapular lesions, purpura, pruritic lesions, urticaria, acral lesions and chilblain are not. As a novel virus, it is important to document any COVID-related associations, as they may serve as a diagnostic, epidemiological, or prognostic markers of disease, and fill in gaps in our current understanding of COVID. We aim to identify the types of cutaneous manifestations among patients who tested positive for COVID in the ED, and to identify which groups are more associated with these manifestations.

This was a retrospective chart review of the medical record to identify patients meeting study criteria. We queried electronic medical records to identify patients testing positive COVID-19 between March 1, 2020, and May 31, 2021. We collected basic demographics including age, gender, race, and ethnicity. We also collected associated COVID symptoms and whether the patient was admitted to the hospital due to COVID-related symptoms. The medical records were reviewed to identify patients with a secondary diagnosis of rash. Data analysis was carried out using SAS 9.4.

Our interim analysis of 3,261 charts yielded 8 patients meeting our study criteria of being COVID-19 positive and presenting with a secondary diagnosis of a rash. The sample demographics included 75% female, 62.50% non-Hispanic, with a mean age of 52. Rash descriptions included maculopapular, urticaria, purpura, pruritic, chilblain, dermatitis, bullous, and erythematous lesions. The most frequent rash types were urticaria and erythema. Most frequent associated symptom was acute hypoxic respiratory failure.

While our sample size was small; we can make some observations. Non-Hispanic females were more impacted. A dual diagnosis of COVID-19 and rash was uncommon, as compared to literature. These findings may be due to decreased awareness of rash as a symptom of COVID-19 and lack of documentation of cutaneous findings when evaluating the patients in the ED. Data collection will be continued to increase the sample size and complete more statistical analyses.