



# Favorable outcome of COVID-19 among African American (AA) renal transplant recipients in Detroit

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## INTRODUCTION

Transplant recipients are more vulnerable to infections including COVID-19, given their comorbidities and chronic immunosuppression. Most preliminary care series report rapid clinical progression and higher mortality compared to the general population.

## METHODS

Retrospective study at Harper University Hospital - Detroit Medical Center. Twenty-five renal transplant recipients (RTR) presenting consecutively with COVID-19 symptoms and positive NP swab PCR for SARS-CoV2 between 03/01/2020 - 05/01/2020 were included. Data on demographics, clinical presentation, laboratory findings, management and outcomes were collected.

## RESULTS

Patients had a median age of 56 (IQR 47-66), all African American and deceased donor transplant recipients. Fourteen (56%) were male and the average BMI was 29.5 (IQR 26-39).

Table 1: Patients' baseline co-morbidities

	n (%)
Hypertension	24 (96)
Diabetes	13 (52)
Cardiovascular disease	11 (44)
Pulmonary disease	10 (40)
Smoking history	8 (32)
Cancer	3 (12)

Most common presenting symptom was dyspnea, followed by fever, cough, and diarrhea. Half of patients had multifocal opacities on initial chest x-ray (52%). Immunosuppression with tacrolimus and low dose prednisone was continued, while mycophenolate mofetil was held on admission. Prophylactic anticoagulation was given to 80% of patients, while therapeutic anti-coagulation to 8%.

Table 2: Presenting Symptoms

	n (%)
Dyspnea	16 (64)
Fever	14 (56)
Cough	14 (56)
Diarrhea	14 (56)

## Pharmacologic management

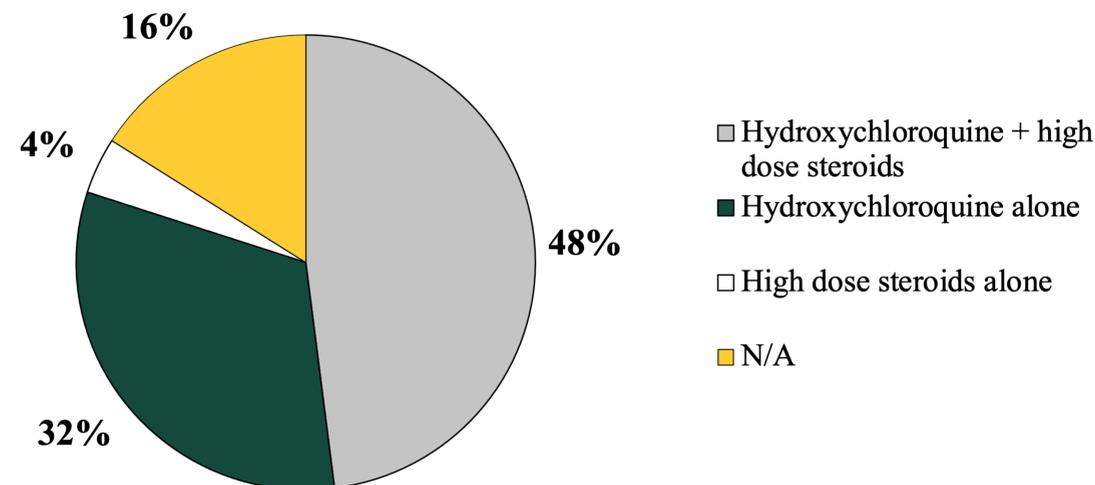


Figure 1: Pharmacologic management of COVID-19 positive renal transplant patients. Twelve patients received Hydroxychloroquine and high dose steroids, 8 patients received hydroxychloroquine alone, 1 patient received steroids alone, and 4 did not receive any medications.

## Oxygen management

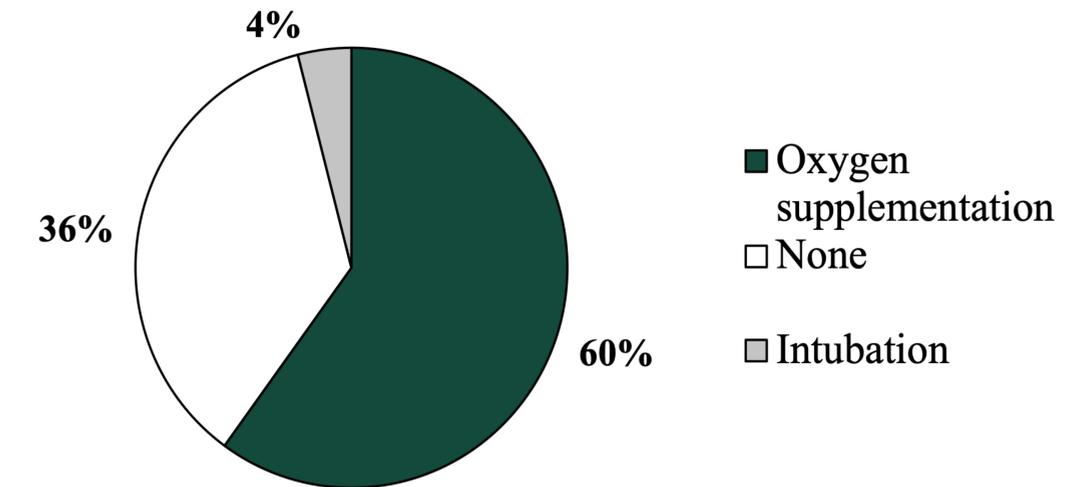


Figure 2: Oxygen management of COVID-19 positive renal transplant patients. Fifteen patients required nasal cannula or high flow oxygen, while 1 required intubation.

Oxygen supplementation given to 60% of patients and one patient required intubation. Three patients (12%) were admitted to intensive care, of which one expired. Treatment with mycophenolate was reintroduced based on resolution of symptoms and laboratory parameters.

## CONCLUSION

COVID-19 infected RTR in this cohort had lower mortality of 4% (n=1) compared to State-wide mortality of 10%. Clinical presentation was similar to non-immunocompromised hosts, but diarrhea was common. Despite multiple co-morbidities and chronic immunosuppression, our patient cohort had favorable outcome and lower mortality compared to other series. Exact reasons for this optimal outcome are unclear.