Outcomes and Complications of Tocilizumab and Baricitinib use in Transplant Patients with COVID-19

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BACKGROUND AND METHODS

Immunomodulators have been shown to improve outcomes of patients with severe COVID-19.

However, it is not known if tocilizumab or baricitinib use would be beneficial in transplant patients who are already receiving immunosuppressants.

Augmented immunomodulation may increase risk of opportunistic infection.

This is a multicenter retrospective cohort study of solid and bone marrow transplant patients with a positive COVID-19 PCR.

April 2020 to January 2022

Primary outcome: incidence of secondary infections

Secondary outcomes: mortality, ventilation days and thromboembolic events.

RESULTS

77 transplant patients

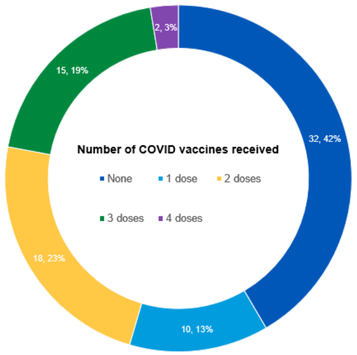
-Tocilizumab (n=56)

-Baricitinib (n=19)

Patient characteristics	Total (%)
Male	49 (63.6)
Age (years)	65 [54 – 71]
BMI	28.2 [24.9 – 32.3]
Hispanic/Latino ethnicity	12 (15.6)

RESULTS

Type of transplant	
Kidney	35
Heart	11
Lung	12
Liver	3
Combined	8
BMT	8



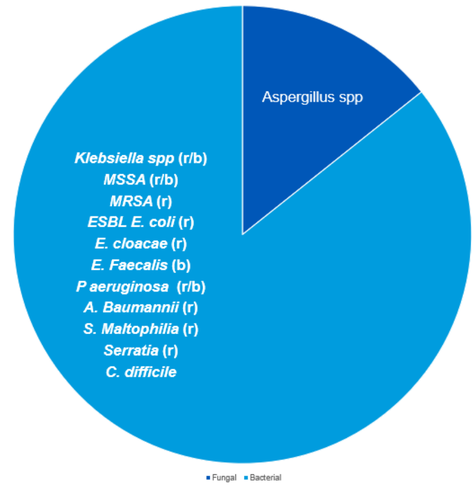
Admission	
MASS on admission	9 [7 – 12]
NIH Severity	
Severe	14 (18.2)
Critical	63 (81.8)
Time after transplant (months)	55 [21.3 – 106.4]
Laboratory on admission	
ALC (cells/liter)	0.62 [0.24 – 0.79]
CRP (µg/mL)	102.15 [51-65 – 127.55]
IL-6 (pg/ml)	6.35 [42 – 270]

Management/outcomes	Patients (%)
Reduction immunosuppression	61 (79.2)
Dexamethasone	71 (92.2)
Remdesivir	68 (88.3)
Convalescent plasma	30 (38.9)
Ventilation method	
Nasal Cannula	15 (19.5)
High flow nasal cannula	33 (42.8)
Mechanical ventilation	29 (37.7)

RESULTS

- At 90 days of receiving immunomodulator, 23 (29.9%) with culture proven infection
- 13 patients had DVT and four PE
- All cause mortality was 36 patients (46.7%)

Figure 1. Secondary infections after immunomodulator



CONCLUSIONS

No statistical difference was seen in mortality between patients with infections and not infections group.

No statistical difference was seen between type of transplants for infection or mortality.

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