

IMMUNOSUPPRESSIVE TREATMENT MANAGEMENT IN A COHORT OF HOSPITALIZED SOLID ORGAN RECIPIENTS AFFECTED BY COVID-19

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BACKGROUND AND OBJECTIVES

Solid organ transplantation (SOT) recipients' immunosuppression management is challenging. Drugs used in COVID-19 involve drug-drug interactions (DDI) with immunosuppressants. The aim of this study was:

- Describe DDIs in hospitalized SOT recipients (SOTr).
- Analyze DDIs management and their clinical impact.

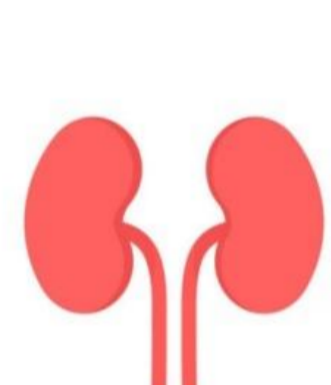
MATERIALS AND METHODS

- Retrospective unicentric study including SOTr with COVID-19 hospitalized during March 11th- April 25th.
- Clinical data and pharmacotherapy were recorded from admission up to 28 days(d) or discharge.
- Lexicomp[®] was used to detect and categorize DDI according to: risk level, reliability rating and severity.

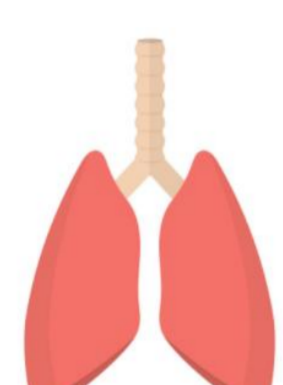
RESULTS

46 patients were included:

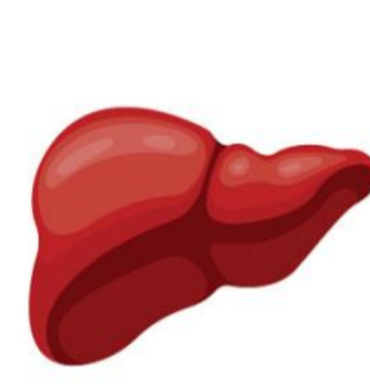
- 33 (71.7%) men
- 62.7 ± 12.6 (mean ± SD) years.



Kidney
30 (56.2%)



Lung
13 (28.3%)



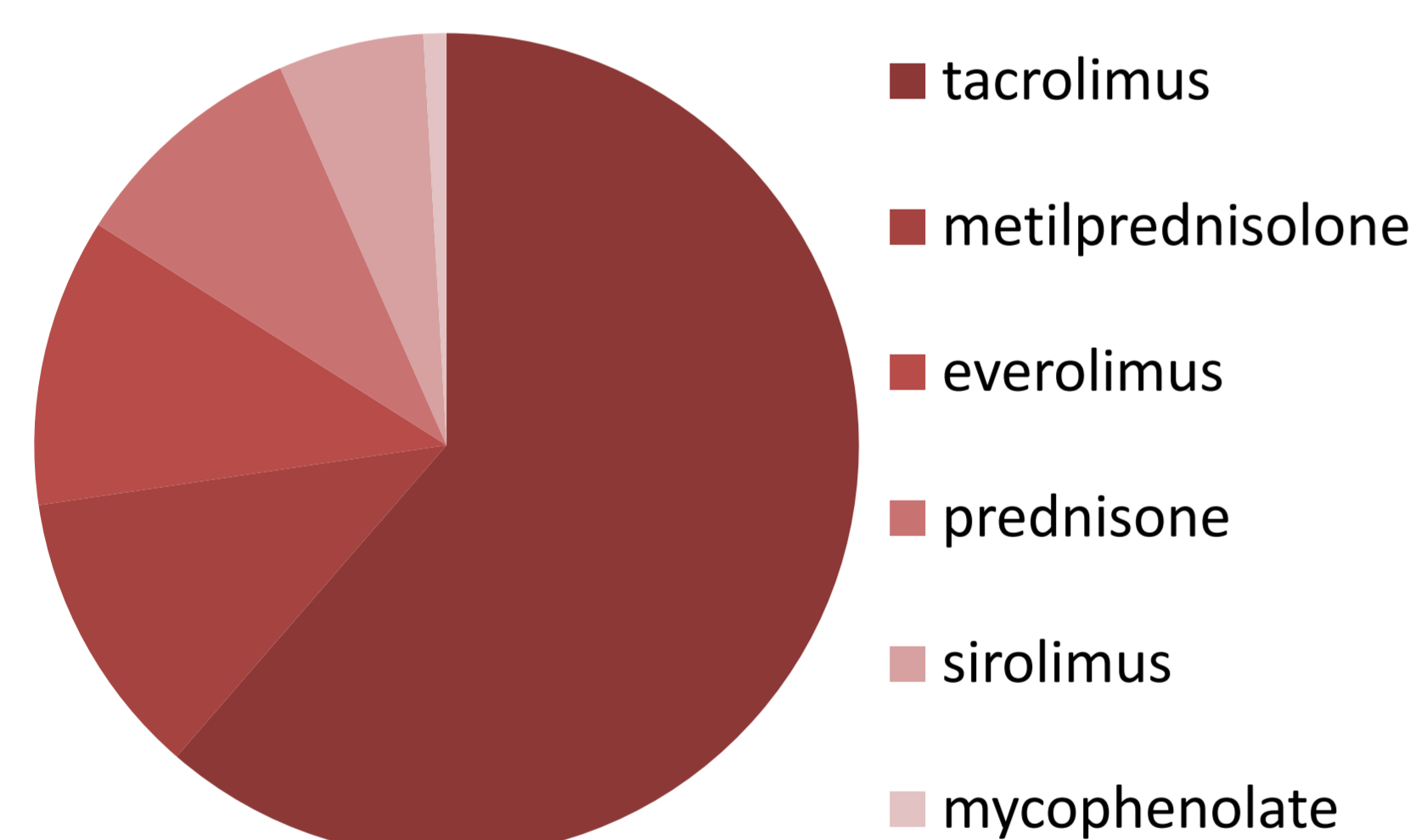
Liver
3 (6.5%)

Immunosuppression at admission

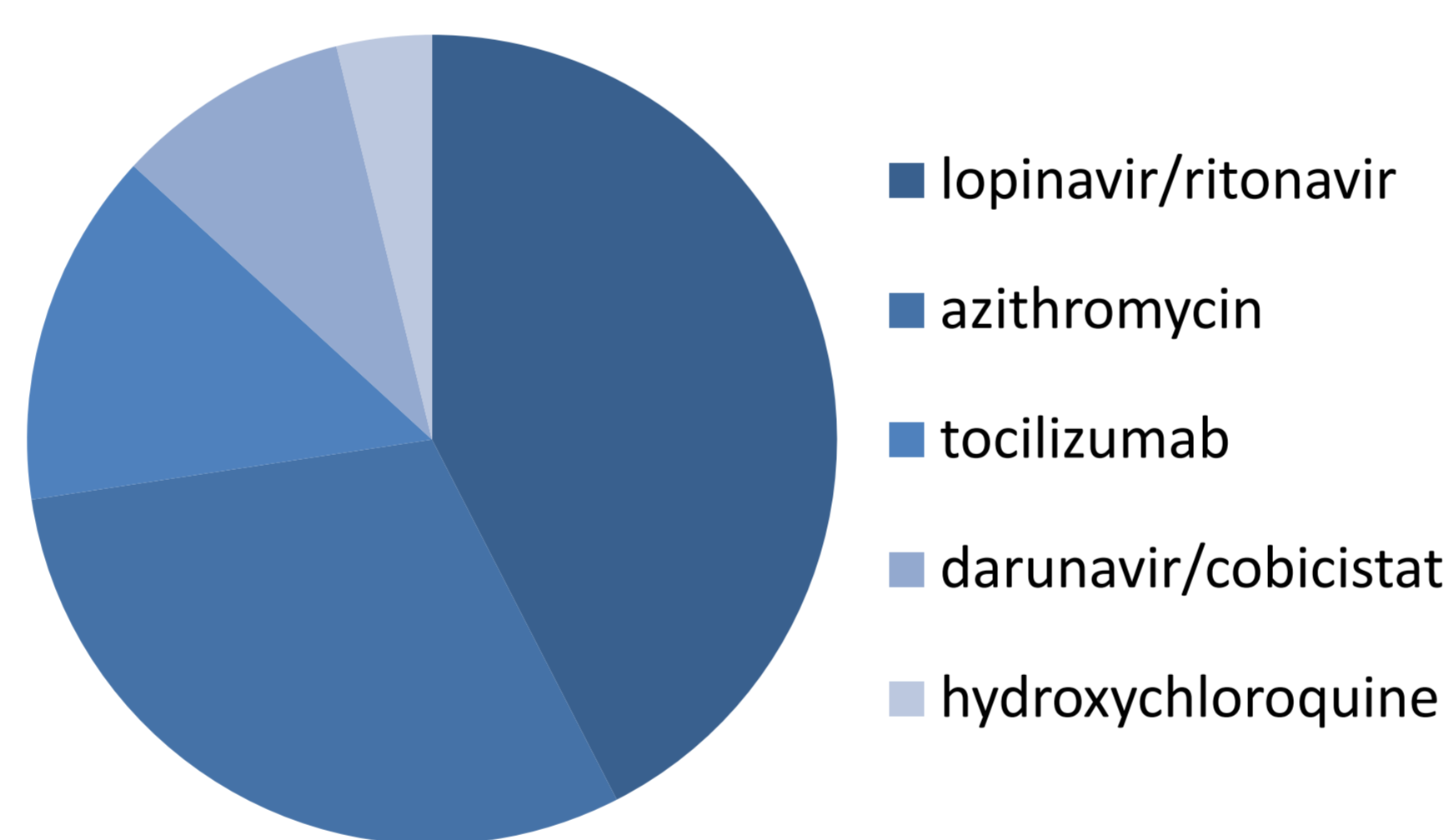
- tacrolimus: 41 (89.1%)
- mycophenolate mofetil/ mycophenolate sodium: 28 (60.9%)
- prednisone: 39 (84.8%)
- everolimus: 7 (15.2%)
- sirolimus: 7 (15.2%)
- cyclosporine: 1 (2.2%)

106 DDIs were detected and affected 42 (91.3%) patients.

Immunosuppressant was withheld in 33 (71.7%) patients due to DDI.

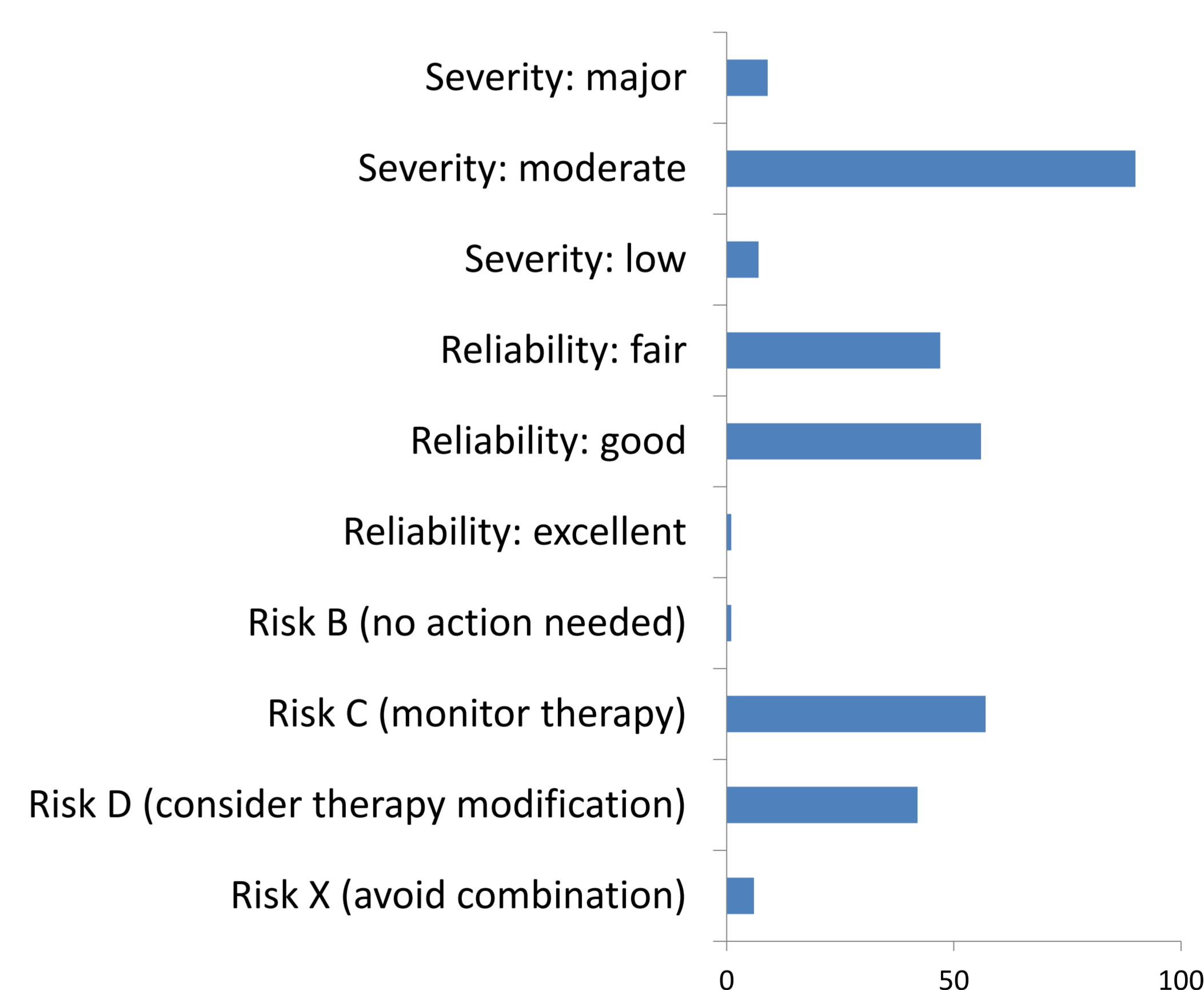


Immunosuppressants involved in DDIs



Anti-infectious treatments involved in DDIs

DDIs' characterization



- 36 (87.7%) out of 41 patients receiving **tacrolimus** suffered 65 DDIs.

- Treatment was withdrawn in 22 patients (61.1%), dose was reduced in 18 (50%) patients and increased in 4 (11.1%).
- Through tacrolimus levels were supratherapeutic in 8 (25%) patients at admission, 13 (43.3%) at 48h, 10 (31.3%) at 7d and 2 at 14d (17.7%, n= 28).
- No graft rejection was detected.
- 2 cases of kidney acute failure were attributable to tacrolimus.

7 patients receiving everolimus had 12 DDIs. Treatment was stopped in all of them.

4 patients receiving sirolimus had 6 DDIs. Treatment was stopped in all cases.

❖ DDIs were highly prevalent in hospitalized SOTr with COVID-19.

❖ Pharmaceutical care is critical to promptly detect and manage DDIs in SOTr.