

Does COVID-19 vaccination have a striking protective effect in HIV infected people? - A real-life experience of a portuguese center

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Background

In the beginning of SARS-COV-2 pandemic, HIV infection was pointed out as a possible factor of a more severe COVID-19 course. The aim of this study was to evaluate the severity of COVID-19 in patients with HIV chronic infection and correlate it with vaccination status.

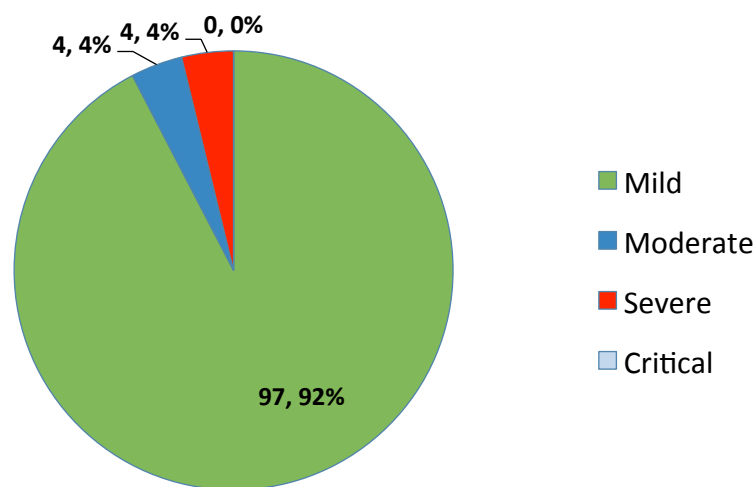
Materials and Methods

We conducted a retrospective, observational study that included a total of 3904 patients. This number represents HIV infected patients that had at least one medical appointment from march 2020 to march 2022 in a portuguese central hospital. From these, 877 subjects were identified as having had a COVID-19 diagnosis along this period, of whom 105 were randomly selected for COVID-19 severity characterization and vaccination status, through phone call clinical interviews and medical records consultation.

Results

Table 1. Patients characteristics at the time of the COVID-19 diagnosis **Figure 1. Severity of COVID-19 disease**

Sex	
Male, n (%)	76 (72.4%)
Age (years)	
Median (min, max)	49 (22, 82)
TCD4 count	
Median (cells/ μ L)	710
<200 cells/ μ L, n (%)	6 (5.7%)
Viral load	
<20copies/ml, %	88.6%
<500copies/ml, %	100%
Anti-SARS-COV-2 vaccination regimen	
Completed*, n (%)	28 (26.67)
Incompleted, n (%)	41 (39,05)
No vaccine, n (%)	36 (34,29)



Seven patients (6,7%) needed hospitalization.

*Completed vaccination regimen

- Until 15th september 2021: 2 doses Pfizer®/Moderna®/AstraZeneca® or 1 dose Janssen®

- From 15th september 2021: 2 doses Pfizer®/Moderna®/AstraZeneca® or 1 dose Janssen® + 1 dose Pfizer®/Moderna®



To evaluate the correlation between vaccination status (completed versus incompleted) and severity of disease we used a chi-square test and found out that these two variables were **independent** with a **p<0,05**.

Conclusions

The vast majority of our HIV patients contracted COVID-19 before having completed the recommended anti-SARS-COV-2 vaccination plan, even though the most had a mild course of the disease. No statistically significant correlation was found between vaccination status and COVID-19 severity. Selection and ascertainment bias related with the global good immunological status and virological control of our HIV cohort, the low numbers of severe and critical COVID-19 cases and the possible partial protection effect of an incomplete vaccination plan might have influenced our study results.