

Characterization of PLWH with COVID-19

in a tertiary care reference centre for Emerging Infectious Diseases in Portugal



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BACKGROUND

In the current COVID-19 pandemic, some risk factors for severe disease and death have been identified, including age, male gender, diabetes mellitus, cardiovascular and lung diseases, chronic kidney disease and cancer. Although still scarce, current data doesn't support an increased risk for severe COVID-19 on people living with HIV (PLWH)^{1,2}. Our aim was to describe clinical characteristics and outcomes of PLWH with COVID-19 followed in our hospital, a reference centre for Emerging Infectious Diseases in Portugal.

MATERIALS & METHODS

RETROSPECTIVE ANALYSIS

On cases of PLWH with a confirmed COVID-19 diagnosis

- between March 02 and July 14, 2020

Data showcased on table 1 was collected from patient records
Proven COVID-19 required a **positive SARS-CoV-2 nucleic acid amplification test** on respiratory samples

RESULTS (please refer to table 1)

At our unit, we have followed 2092 patients with COVID-19

8 of whom were PLWH

6 males, mean age of 48 ± 15 years

All on antiretroviral therapy (ART) at the time of diagnosis

2 were on PI based regimens, 2 were on TAF

RESULTS (cont.)

Median CD4+ T cell count: 626 (range 14-1337) cells/mm³
7 patients virally suppressed

6 patients had at least one comorbidity other than HIV

2 patients received treatment with hydroxychloroquine:

- one with concomitant ankylosing spondylitis on methotrexate
- **the other a 67-year old HIV-2 infected patient**



on a failing ART regimen without immune recovery
with detectable HIV viremia
multiple comorbidities

diagnosed with SARS-CoV-2 pneumonia while hospitalized for candidemia
required supplemental oxygen therapy
the only casualty in our cohort

7 patients were classified as having mild disease

6 of whom currently considered fully recovered

median 40.5 days (range 21-74 days) until 2 consecutive negative SARS-CoV-2 PCR tests

CONCLUSION: PLWH accounted for <0.4% of patients with COVID-19 in our centre. PLWH may still get infected during PI and/or tenofovir based ART. A severe clinical picture among those with viral suppression on ART was not seen thereby adding to the growing evidence supporting the notion that adequately controlled HIV doesn't by itself place one at increased risk for severe disease or excess mortality.

	Age (years)	Sex	Years since HIV diagnosis	Antiretroviral treatment (ART)	Years of ART	CD4 T-cell count (/mm ³)	CD4/CD8 T-cell ratio	HIV-RNA (copies/ml)	Other comorbidities
1	27	Male	8	TAF/FTC/RPV	5	592	0.71	<20	No
2	31	Male	7	ABC/3TC+RPV	7	433	0.76	<20	Epilepsy
3	38	Male	5	ABC/3TC/DTG	5	810	0.76	<20	Ankylosing spondylitis
4	43	Female	11	ABC/3TC+RAL	9	1337	2.38	<20	No
5	54	Female	20	DRV/r+DTG	15	424	0.38	<20	Dyslipidemia, COPD
6	55	Male	17	ABC/3TC	17	784	1.59	<20	Dyslipidemia, BPH
7	67	Male	17	TAF/FTC+DRV/r+DTG+MVC	17	14	0.03	6870	Dyslipidemia, DM, CVD, COPD, cancer
8	67	Male	13	ABC/3TC+NVP	13	660	0.46	<20	Dyslipidemia, BPH

	COVID-19 symptoms	COVID-19 classification	Hospital admission	Supplemental oxygen	Hydroxychloroquine	Outcome	Time from symptom onset to offset	Days from diagnosis to cure*
1	Cough, chest pain	Mild	No	No	No	Recovered	12	55
2	Cough, nasal congestion, odynophagia, headache, myalgias, anosmia, dysgeusia	Mild	No	No	No	Recovered	13	24
3	Fever, myalgias, headache, odynophagia	Mild	Yes	No	Yes	Recovered	15	74
4	Nausea, vomiting, myalgias, anosmia, dysgeusia	Mild	No	No	No	Recovered	41	67
5	Back pain	Mild	No	No	No	Recovered	10	21
6	Fever, odynophagia	Mild	No	No	No	Follow-up	20	NA
7	Fever, dyspnoea	Severe	Yes	Yes	Yes	Death	12	NA
8	Malaise, cough	Mild	No	No	No	Recovered	15	26

Table 1 | PLWH with COVID-19 followed at our centre between March 02 and July 14, 2020. COVID-19 was classified as severe if one of the following signs/symptoms present: dyspnoea, respiratory rate ≥ 30/min, blood oxygen saturation < 94% and/or lung infiltrates > 50% within 24-48 h. 3TC lamivudine, ABC abacavir, DRV darunavir, DTG dolutegravir, FTC emtricitabine, MVC maraviroc, NVP nevirapine, r ritonavir, TAF tenofovir alafenamide, TDF tenofovir disoproxil. BPH benign prostatic hyperplasia, COPD chronic obstructive pulmonary disease, CVD cardiovascular disease, DM diabetes mellitus. NA not applicable. *Cure was defined as resolution of signs and symptoms of COVID-19 and two consecutive negative nucleic acid amplification tests for SARS-CoV-2 collected at least 24h apart.

^[1] Blanco JL, Ambrosioni J, Garcia F, et al. COVID-19 in patients with HIV: clinical case series. Lancet HIV.2020;7(5):e314-e6.

^[2] Härter G, Spinner CD, Roeder J, et al. COVID-19 in people living with human immunodeficiency virus: a case series of 33 patients. Infections. 2020.