COVID-19 in Africa: What else?

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Dear Editor,

In Spring 2020, both WHO and the UN Economic Commission
for Africa predicted that COVID-19 would take a heavy toll in
Africa. However, 10 months after the first cases in Africa were
detected, mortality, probably the most significant way to
measure the burden of COVID-19, was still low. It has
remained at a low level by April 2022 (Table 1).

One could say that mortality tends to be higher in older
populations, as the median age of Africa is 19.7 (compared to
42.5 in Europe and 38.6 in northern America). However, high
mortality has also been reported in South Africa (median age
27). Also, while South Africa was one of the countries with the
best laboratory facilities to confirm deaths related to COVID-
19, laboratory facilities have rapidly increased in our other
countries [1].

Factors which may explain the dampened course of COVID-
19 in Africa have been discussed, ranging from genetic char-
acteristics to immunological factors and even microbiota.
However, after the first Chinese publications about the antiviral
effects of chloroquine (CQ) and its derivatives against SARS-
COV2 and a preliminary trial in France [2], many African
countries adopted CQ or hydroxychloroquine (HCQ) with or
without azithromycin (AZ) to treat presumptive or confirmed
COVID-19 cases. This, despite the WHO position and other
published or retracted studies claiming that this regimen would
not be effective or toxic.

More evidence came with the demonstration of a synergistic
effect in vitro of the HCQ-AZ combination on SARS-CoV-2 and
from observational studies with thousands of cases. Both HCQ
and AZ are immunomodulators, which may prevent the "cyto-
kine storm" of COVID-19. The HCQ antithrombotic effects
might also be useful in the context of Covid-associated pulmo-
nary embolism and coagulopathy. Finally, HCQ-AZ has been
associated with a reduction in viral shedding, with potential public
health effects by reducing the duration of contagiousness [2].

By the end of 2020, while in several African countries a
pragmatic, safe use of CQ or HCQ with or without AZ had
prevailed, Western countries were still awaiting the results of
clinical trials to define their strategy, worrying about hypothetical
side effects of HCQ-AZ, which has been used for decades, or
were promoting other treatments (with no demonstrated effi-
cacy) or standard care only, which may be limited when people
are asked to remain at home by health authorities.

The dogma about the need randomized controlled trials (RCTs)
to support therapeutic choice and public health decision is an issue.
However, a Cochrane Library publication stated that observa-
tional studies and randomized controlled trials (RCTs) give the
same results [3]. By April 2022, more than 400 studies had been
published concerning CQ or HCQ, including about 313 peer
reviewed, including in Senegal and Ghana, and about 339
comparing treatment and control groups [https://c19hcq.com].
Most of them are observational studies reporting that early

treatment shows positive results [4]. Interestingly, the supplementary material must be sometimes carefully reviewed to learn that HCQ was one of the most active drugs, as this had been omitted in the text and the summary.

Other factors, such as blood type, climate, and prevalence of obesity among the population, have to be assessed in order to provide more insights on COVID-19 epidemiological patterns in Africa. SARS-CoV-2 variant emergence may also be an issue [5]. The age structure of the population of our countries may also help explain differences in fatality rates across countries better than the mean age.

The use of HCQ-AZ for COVID-19 treatment and has resulted in political issues, academic discord, as well as passionate debates in the media and scientific journals about the efficacy or possible toxicity of CQ or HCQ. This, seen from an African perspective, where billions of doses have been dispensed in the past century, speaks volumes about the real safety of these drugs.

To date, most of the countries with the highest mortality from COVID-19 include the countries where the most negative media noise about CQ, HCQ or HCQ-AZ has been made, and this despite current higher percentage of population fully vaccinated (Table 1). Although the link between the widespread cost-effective use of CQ, HCQ or HCQ-AZ and the evolution of COVID-19 in Africa has not been yet demonstrated with certainty, it at least deserves to be discussed.

TABLE 1. Covid-19 mortality (number of deaths/100,000 population) in selected African countries, including some where use of chloroquine hydroxychloroquine with or without azithromycin has prevailed to treat COVID-19. These African countries are those where the authors, as infectious disease and microbiology experts, have been involved in the COVID-19 pandemic response. South Africa, some European countries and the USA are presented as comparators. For an update and other countries, see https://coronavirus.jhu.edu/data/mortality

	Mortality December, 2020	Mortality April, 2022	% Of population fully vaccinated April, 2022
Algeria	6.12	15.68	13.9
Democratic Republic of Congo	0.12	1.49	NA
Gabon	2.97	13.61	11.31
Mali	0.99	3.61	5.04
Mauritania	5.05	21.12	22.9
Morocco	18.29	43.41	63.32
Niger	0.36	1.28	6.4
Republic of the Congo	6.71	6.98	NA
Senegal	2.2	11.75	6.21
South Africa	33.08	169.17	30.8
Belgium	155.77	272.51	79.51
France	86.09	224.21	80.5
UK	96.44	256.79	73.22
USA	91.03	300.97	66.6

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