



Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

Elsevier hereby grants permission to make all its COVID-19-related research that is available on the COVID-19 resource centre - including this research content - immediately available in PubMed Central and other publicly funded repositories, such as the WHO COVID database with rights for unrestricted research re-use and analyses in any form or by any means with acknowledgement of the original source. These permissions are granted for free by Elsevier for as long as the COVID-19 resource centre remains active.

COVID-19 in Africa: between hope and reality

When WHO declared the COVID-19 pandemic to be a Public Health Emergency of International Concern on Jan 30, 2020, countries around the world began to prepare. Preparation, however, is becoming increasingly difficult in many African countries, especially in central African countries, such as Republic of the Congo and others, where the effects of the Ebola virus disease epidemic on the economy and health structures are still being felt. The first case of COVID-19 in Africa was reported on Feb 14, and within a few weeks the virus had spread to 54 African countries. Only a few African Union member states have been successful in implementing detection, prevention, and control measures. Republic of the Congo reported its first case on March 14, and by May 9 a total of 274 confirmed cases and ten deaths had been reported. Very few countries in Africa have sufficient and appropriate diagnostic capacities, and obvious challenges exist to handle an outbreak of this extent.¹

Densely populated communities in urban areas are particularly vulnerable to COVID-19 outbreaks, and the most vulnerable region in Republic of the Congo is undoubtedly Brazzaville. Our institution, the Congolese Foundation for Medical Research,² supports the National Public Health Laboratory with COVID-19 diagnoses and thus with extended monitoring measures. We feel that operational research at the local level in Brazzaville through testing people living in densely populated communities and health workers is a moral responsibility. As of May 9, three asymptomatic health-care workers had tested positive for severe acute respiratory syndrome coronavirus 2. With the number of cases observed in our laboratory growing (up to 24 cases per day), fear and anxiety among our Congolese scientists also grows.

A question that Republic of the Congo and other member states in the region must ask themselves is why are we seeing only a gradual increase in the detection of cases? Are we missing infections? A probable answer is that people with symptoms do not present to health-care facilities because of their concerns about fragile health systems, social stigma, and quarantine in suboptimal facilities. Other questions still to be resolved are related to the dynamics of viral transmission across geographical regions, between humans, across different ecosystems, and within different genetic backgrounds, and to whether any protective herd immunity exists.

Given the fragile health systems in most sub-Saharan African countries, new and re-emerging infectious disease outbreaks can paralyse health systems and existing structures. Yet the COVID-19 pandemic poses a challenge not only for sub-Saharan African countries³ but also for those with well functioning health systems.⁴ The responsibility now for African scientists is to join forces and fight at local and regional levels⁵ to ensure the slow down and eventual halt of the spread of COVID-19. This can be well achieved by supporting existing regional and local health structures in sub-Saharan Africa.

We declare no competing interests. Both authors contributed equally and are members of the Pan-African Network for Rapid Research, Response and Preparedness for Infectious Diseases Epidemics, which is funded through the European and Developing Countries Clinical Trials Partnership (grant number RIA2016E-1609).

**Francine Ntoumi, Thirumalaisamy P Velavan*
fntoumi@fcrm-congo.com

Fondation Congolaise pour la Recherche Médicale, Brazzaville, Republic of the Congo (FN, TPV); Marien Ngouabi University, Brazzaville, Republic of the Congo (FN); Institute for Tropical Medicine, University of Tübingen, Tübingen, Germany (FN, TPV); Vietnamese-German Center for Medical Research, Hanoi, Vietnam (TPV); and Faculty of Medicine, Duy Tan University, Da Nang, Vietnam (TPV)

1 Velavan TP, Meyer CG. The COVID-19 epidemic. *Trop Med Int Health* 2020; **25**: 278–80.

- 2 Ntoumi F. The ant who learned to be an elephant. *Science* 2011; **333**: 1824–25.
- 3 Kapata N, Ihekweazu C, Ntoumi F, et al. Is Africa prepared for tackling the COVID-19 (SARS-CoV-2) epidemic. Lessons from past outbreaks, ongoing pan-African public health efforts, and implications for the future. *Int J Infect Dis* 2020; **93**: 233–36.
- 4 Ippolito G, Hui DS, Ntoumi F, Maeurer M, Zumla A. Toning down the 2019-nCoV media hype and restoring hope. *Lancet Respir Med* 2020; **8**: 230–31.
- 5 Dexter D, Simons D, Kiyaga C, et al. Mitigating the effect of the COVID-19 pandemic on sickle cell disease services in African countries. *Lancet Haematol* 2020; **7**: e430–32.



Published Online
June 15, 2020
[https://doi.org/10.1016/S1473-3099\(20\)30465-5](https://doi.org/10.1016/S1473-3099(20)30465-5)

Negative SARS-CoV-2 PCR in patients with chilblain-like lesions



Published Online
June 18, 2020
[https://doi.org/10.1016/S1473-3099\(20\)30518-1](https://doi.org/10.1016/S1473-3099(20)30518-1)

We read with interest the Correspondence by Claudio Guarneri and colleagues suggesting that chilblain-like lesions could reveal asymptomatic severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) infection.¹ Several reports of cutaneous manifestations suspected to be linked to SARS-CoV-2 infection, mostly chilblain-like lesions, have been published.^{2–5} All are case reports or retrospective case series without systematic and in-depth evaluation of cases, and in most PCR or serology testing for SARS-CoV-2 infection were not done.

We did a prospective cohort study in patients with cutaneous manifestations who were referred to Centre Hospitalier Universitaire de Nice, France, between April 9 and 17, 2020, with suspected SARS-CoV-2 infection. 40 consecutive patients (21 [53%] female) with chilblain-like lesions were included. Consistent with previous reports,^{2–5} most patients were young, with a median age of 22 years (range 12–67; IQR 15–28). 26 (65%) patients were tested for SARS-CoV-2 RNA with RT-PCR using primers and probes recommended by WHO, and all patients were tested for SARS-CoV-2-specific IgA, IgM, and IgG antibodies with ELISAs (IgM and IgG with EDI Novel Coronavirus COVID-19 ELISA