The COVID-19 Epidemic in Madagascar: clinical description and laboratory results of the first wave, March-September 2020

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Abstract

Background: Following the first detection of SARS-CoV-2 in passengers arriving from Europe on 19 March 2020, Madagascar took several mitigation measures to limit the spread of the virus in the country. Methods: Nasopharyngeal and/or oropharyngeal swabs were collected from travellers to Madagascar, suspected SARS-CoV-2 cases, and contact of confirmed cases. Swabs were tested at the national reference laboratory using real-time RT-PVR. Data collected from patients were entered in an electronic database for subsequent statistical analysis. All distribution of laboratory confirmed cases were mapped and six genomes of viruses were fully sequenced. Results: Overall, 26,415 individuals were tested for SARS-CoV-2 between 18 March and 18 September 2020, of whom 21.0% (5,553/26,145) returned positive. Among laboratory-confirmed SARS-CoV-2 positive patients, the median age was 39 years (CI95%: 28-52), and 56.6% (3,311/5,553) were asymptomatic at the time of sampling. The probability of testing positive increased with age with the highest adjusted odds ratio of 2.2 [95% CI: 1.9-2.5] for individuals aged 49 years and more. Viral strains sequenced belong to clades 19A, 20A, and 20B in favour of several independent introduction of viruses. Conclusions. Our study describes the first wave of the COVID-19 in Madagascar. Despite early strategies in place Madagascar could not avoid the introduction and spread of the virus. More studies are needed to estimate the true burden of disease and make public health recommendations for a better preparation to another wave.

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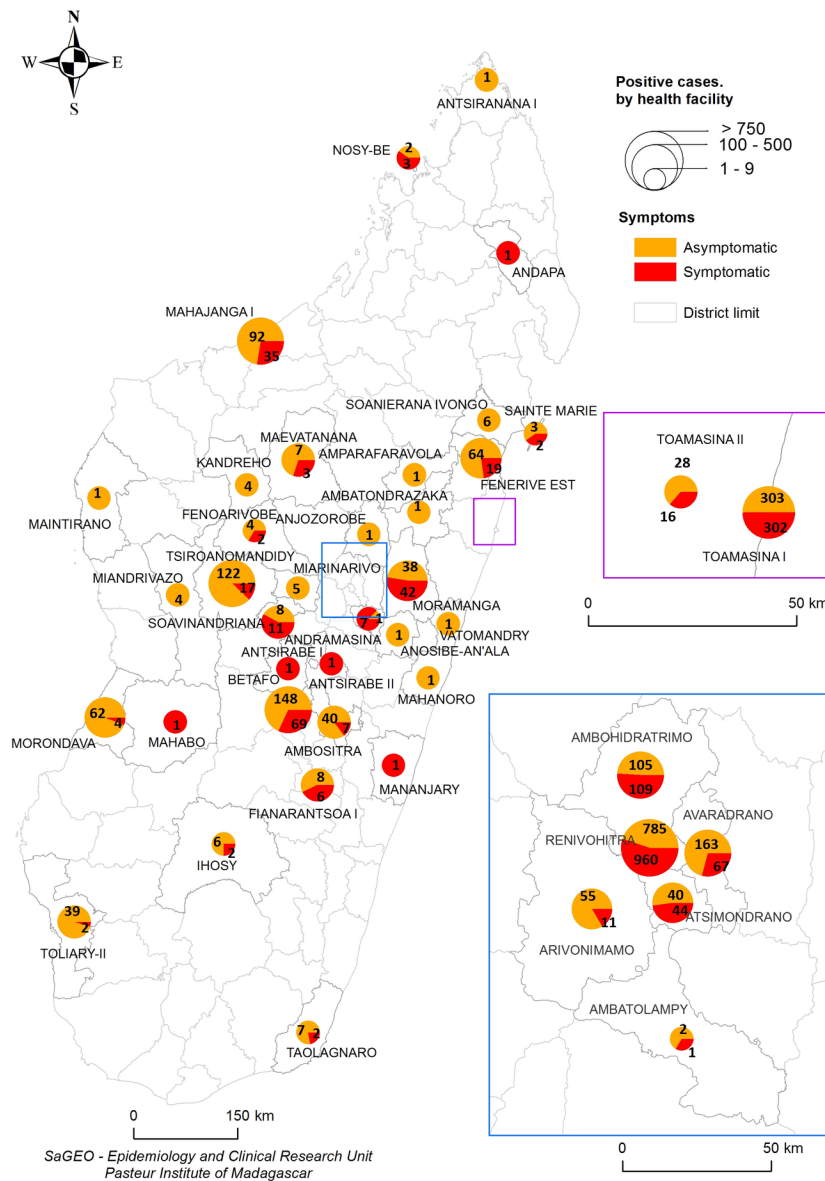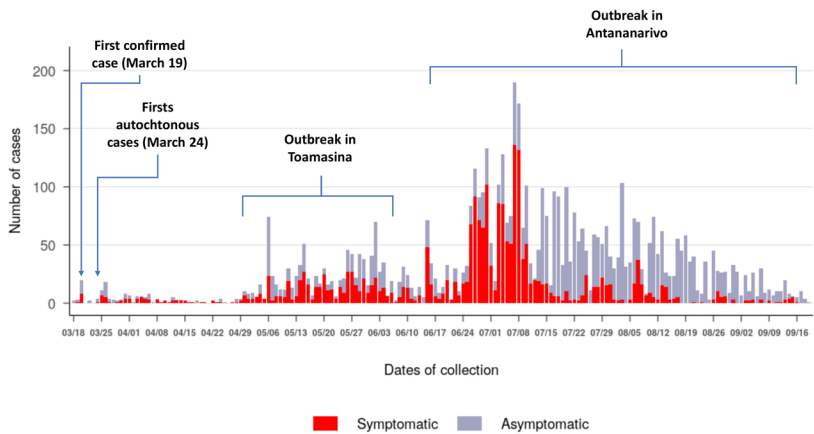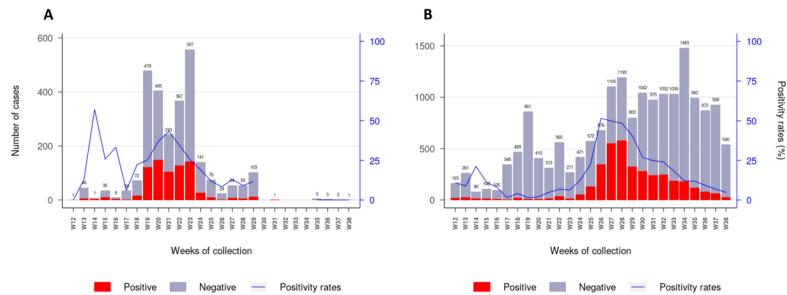
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FIGURE 2

First confirmed case (March 19)

Firsts autochtonous cases (March 24)

Outbreak in Toamasina

Outbreak in Antananarivo

■ Symptomatic ■ Asymptomatic

FIGURE 3

A

B

■ Positive ■ Negative — Positivity rates

FIGURE 4

■ Negative ■ Positive — Positivity rate

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