Clinical Profile and Prevalence of COVID-19 among Suspected Cases at Kara University Hospital, TOGO from 2020 to 2023: A Retrospective Study

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ABSTRACT

Introduction : The coronavirus disease (COVID-19) pandemic is unprecedented for the past 100 years in terms of impacts on human activity. From the beginning of the pandemic, each country affected by COVID-19 infection including Togo provided daily general information in relation to the number of cases detected, confirmed, under treatment, recovered and deceased. Based on this, we found it appropriate to do this study to assess the particular situation of COVID 19 infection at Kara University Hospital with the objective of describing the clinical profile and prevalence of suspected cases.

Methods : This was a retrospective study of the records of patients received in consultation or hospitalized in the various departments of the CHU Kara who had benefited from an RT-PCR test on nasopharyngeal swabs for the diagnosis of Covid-19 from March 2020 to March 2023. Included in this study were all patients who had symptoms of covid 19, those who had returned from travel and those who had contact with a patient with covid 19.

Results : During the study period, 754 patients had received an RT-PCR test on nasopharyngeal swabs for the diagnosis of Covid-19. These were mainly men with a sex ratio of 1.64. These 754 patients were divided into 132 contact cases (17.51%), 567 suspected cases (75.20%), 35 tests (4.64%) and 20 travellers (2.65%). With regard to suspected cases, the most represented age group was 25-34 years (21.16%), followed by 35-44 years (19.75%), and 45-54 (16.40%). Those over 65 accounted for 10.23% and those under 15 accounted for 6%.

The most common clinical signs in suspected cases were cough (58.89%), followed by fever (45.15), general weakness (42.50%), headache (36.33%), shortness of breath (32.63%), muscle aches (28.92), runny nose (28.57%).

Finally, of the 567 suspected cases, 157 (27.69%) have been confirmed, including 55 women. The evolution was marked by 09 (5.73%) deaths including 03 women.

***Conclusion** : This study confirms the frequency of Covid-19 in the various departments of the Kara University Hospital with a relatively low mortality rate, probably because of the young age of the affected subjects. Compliance with barrier measures should be continued to avoid further epidemics or even deaths.*

Introduction

Coronavirus disease (COVID 19) is an infectious disease caused by a virus, severe acute respiratory syndrome coronavirus 2 (SARS-cov-2). The first cases were reported in China in December 2019[1]. From January 2020 cases spread around the world and on March 11, 2020, the World Health Organization (WHO) declared a state of pandemic [2].

The coronavirus disease (COVID-19) pandemic is unprecedented in the past 100 years in terms of its impacts on human activity [3]. All over the world, measures had been put in place (development of hospitals, construction of treatment centers, equipment, etc.) for the care of COVID 19 patients. And each country reported the situation on a daily basis in relation to the number of cases. screened, confirmed, under treatment, cured and deceased.

Symptoms of COVID-19 are nonspecific and presentation of the disease can vary from no symptoms (asymptomatic patients), to severe pneumonia And the dead. In the majority of cases (around 80%), people infected with COVID-19 present mild to moderate symptoms, while 14% of them have severe symptoms (dyspnea and hypoxemia), and 6% present a clinical picture. critical (respiratory failure, septic shock, multi-organ failure) [4].

The COVID-19 pandemic has hit Africa less than feared. Africa remains comparatively less affected in terms of numbers of cases and deaths. Although sub-Saharan Africa represents 17% of the world's population, it only accounts for 1.9% of global COVID-19 cases [5].

In TOGO, after a year of viral activity, statistics indicated a low incidence of morbidity and death rates linked to COVID-19. From the start of the COVID 19 pandemic until March 2023 a total of 813,209 laboratory tests had been carried out throughout the national territory, the number of cumulative positive cases was 39,513 including 39,223 cured cases and 290 deaths [6]. The situation in TOGO being generalized, we found it appropriate to carry out this study to assess the particular situation of COVID 19 infection at Kara University Hospital with the aim of describing the clinical profile and prevalence of suspected cases.

Method

Study framework

The services of the Kara University Hospital Center (CHU Kara) served as the study setting. With its 50,000 annual consultations including more than 12,000 hospitalizations, the Kara CHU located 420 km north of Lomé, the capital of Togo, was the only level 3 hospital for the three northern regions of Togo and had a capacity of theoretical reception of 224 beds including 209 beds put into service in 2021. It served a total population of more than 3 million inhabitants and had a wide range of practitioners including 2 internists.

Type and study population

This was a descriptive cross-sectional study with retrospective data collection. The data collection was carried out on the basis of the results of RT-PCR tests carried out on nasopharyngeal samples for the diagnosis of Covid-19. All patients who presented symptoms of covid 19, those who returned from travel and those who had contact with a patient with covid 19 were included in this study.

Operational definitions:

Suspected cases: these were any patients who had presented symptoms of covid 19 according to the diagnostic criterion.

Contact cases: patients who have been in contact with one or more confirmed cases of covid 19 (family, visitors, neighbors, colleagues, classmates, etc.) but who did not present symptoms. At the start of the covid 19 infection, people who lived in the same house and who shared a certain intimacy with a confirmed case benefited from a systematic RT-PCR test to screen the latter.

Travelers: certain people returning from travel were subject to RT-PCR testing

Confirmed case: any patient whose RT-PCR test is positive

Screening: these were patients without symptoms who voluntarily came to ask for a covid 19 RT-PCR test as part of a trip or during contact with a suspected case.

Collette and data analysis

We used the Kara University Hospital dataset collected by the Regional Health Directorate of the Kara region, where results from all health centers in the region were compiled. The data collection was carried out on the basis of a pre-established information sheet from the first cases of covid 19 in TOGO and which had been made available in all health centers.

The data were collected with Excel 2021 and analyzed using Epi info 7.2.2.6 software.
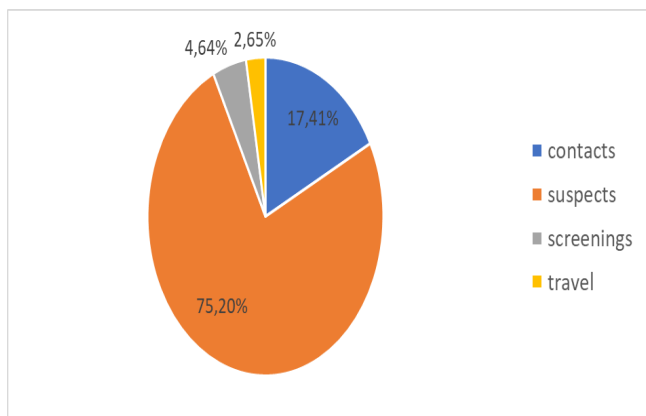
Limitations of the study

We were unable to obtain certain data, such as the results of the percentages of sexes by age.

Ethical aspect

The data collection took into account the rules of anonymity and the work was carried out after agreement from the administrative and scientific committee of the hospital as well as the administrative committee of the district.

Results

Figure 1: distribution of cases detected

Shortness of breath	185	32,63
Muscle pain	164	28,92
Runny nose	162	28,57
Sore throat	125	22,05
Chest pain	106	18,69
Articular pain	94	16,58
Abdominal pain	58	10,23
Loss of smell (anosmia)	49	8,64
Loss of taste	43	7,58
Irritability/mental confusion	35	6,17
Nausea	28	4,94
Vomiting	20	3,53
Diarrhea	18	3,17

The average age was 54 years +/- 16.79 with extremes of 0 and 82 years. The age group of [25-44] represented 40.91% that of [0-14 years], 5.99% of cases. (Figure 2)
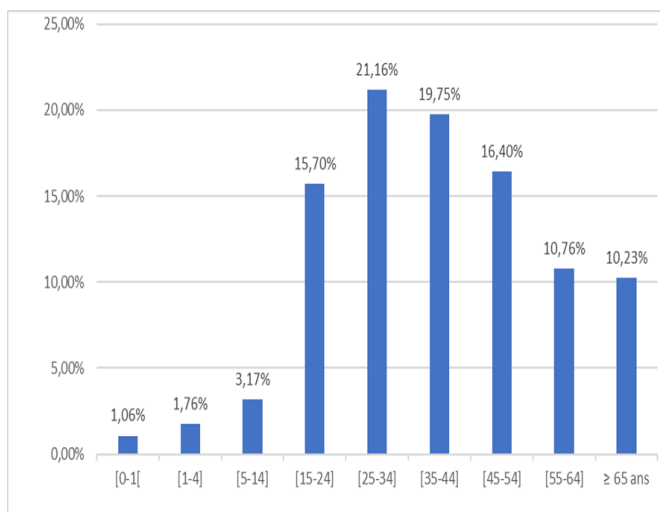
Figure 2: distribution of patients according to age group.

The symptoms of covid 19 in our study were very variable. Cough was present in 58.91% of cases, and fever in 45.15%. (Table 1)

Table 1: distribution of the different symptoms presented by the patients

	Numbers	%
Cough	334	58,91
Fever	256	45,15
General weakness	241	42,50
Headache	206	36,33

Of the 567 suspected cases, 157 cases or 27.7% were confirmed positive for covid 19. Among the 157 confirmed cases there were 55 (35%) women with a sex ratio of 1.85.

The treatment instituted respected the therapeutic protocol in force in Togo, in particular the association:

- Hydroxychloroquine tablet (200mg 3 times a day for 10 days)
- Azithromycin tablet (500mg the first day then 250mg from the 2nd to the 10th day)
- Vitamin C tablet (1000mg per day for 10 days)

The outcome of treatment was favorable in most cases. Among the confirmed cases, we recorded a total of 148 (94.27%) cured cases and 09 (5.73%) deaths including 04 women (table 2).

Table 2: Case summaries by gender

	Women		Men	
	Work force	(%)	Work-force	(%)
Suspected	194	34,22	373	65,7
Confirmed cases	55	35	102	65
Recovered	51	34,46	97	65,5
Death	04	44,44	05	55,5

Discussion

Out of 754 patients screened with the RT-PCR covid 19 test, there were 567 suspected cases among which 157 cases were positive. It is likely that the real number of infections is much higher, since the number of tests carried out is low and many asymptomatic people were probably not diagnosed at the beginning due to the obvious refusal of the population to go to the centers of care for fear of testing positive and thus being subject to quarantine. The Kara University Hospital Laboratory carries out tests for COVID-19 and is able to confirm cases. At the start of the pandemic all cases (contacts, suspects, screenings and travelers) were screened. However, due to a limited quantity of tests available, several criteria have been established to identify screening priorities. The priority was now more on suspicious and therefore symptomatic people. This could explain the low screening rate.

In our study, we reported a male predominance with a sex ratio of 1.64. This result is similar to that of Impouma et al (7) and that of Mekolo et al (8) in Cameroon who reported a male predominance of 59.7% and 68% respectively.

The priority was now more on suspicious and therefore symptomatic people. The most represented age group was 25 to 34 years old, this result is identical to that found by Impouma et al (7). This could be explained by the fact that Africa's population is relatively young. Indeed, young people are much more likely to present simple, rarely symptomatic or asymptomatic forms of the disease, although some serious forms have been described in young subjects in the literature (9).

Children under 14 years old had virtually no symptoms. Bawe et al in TOGO (10) in a study on the epidemiological-clinical profiles of children with COVID-19 in Lomé reported that infection with the new coronavirus in children is most often asymptomatic. Ludvigsson (11) in his study had found that the clinical effects of COVID-19 on young children are uncertain compared to older groups, with lower morbidity and mortality rates as well as a better prognosis than in adults.

According to the WHO, children were not the face of the COVID-19 pandemic and that they were fortunately largely spared from the direct health effects of COVID-19 (12). The symptomatology of COVID 19 infection was polymorphic. The most common symptoms found in our study were cough (58.91%), fever (45.15%) and general weakness (42.50%). Lapierre et al (3) found fever (87.5%), cough (67.7%) and fatigue (38.1%) Peguero-Rodriguez et al (13) found that fever, cough, shortness of breath and fatigue were present in more than 50% of cases and Mekolo et al (8) reported that the main complaints were dyspnea, cough, asthenia and fever (55-60%). All these studies had shown that fever and cough were the most frequently encountered signs in patients with covid 19. Out of 567 suspected cases, there were 157 confirmed cases, i.e. a rate of 27.69%. Togola et al in Mali reported a lower positivity rate of 14.86%. Mortality was 5.73% (9/157). Mekolo et al reported a mortality of 30%. At the end of a year of covid 19 viral activity in TOGO, statistics indicated a low incidence of morbidity and death rates linked to COVID-19 (6.13) and according to official figures, contaminations and Deaths in Africa have remained relatively lower than in other regions of the world (15,16,17). Several theories had been mentioned (Impact of heat and humidity on the spread of the virus, vulnerability of the African population based

on the age pyramid.

Conclusion

In this study, we provided data on COVID-19 cases, deaths, recoveries. Our results focused on reported suspected cases. Given the low testing capacity in most countries, it is likely that there is under-detection of cases, also linked to the fact that some people avoided isolation. The interpretation of the results presented here should take these limitations into account.

However, despite the fact that the covid 19 infection was a pandemic that shook the world, Africa remains the least affected continent. Our results reflect this observation.

The results on the covid 19 pandemic found in our study reflect those found in the majority of African countries and more particularly in Togo.

References

1. Zhang JJ, Dong X, Cao YY, Yuan YD, Yang YB, Yan YQ et al. Clinical characteristics of 140 patients infected with SARS-cov-2 in Wuhan, China. Allergy. 2020 ;75(7) : 1730-41.

2. World Health Organization . Director-General's opening remarks at the media briefing on COVID-19-11 March2020 [en ligne]. C2023 [consulté le 11 juillet 2023]. Disponible sur https://www.who.int/fr/director-general/speeches/detail/who-director-general-s-opening-remarks-at-the-media-briefing-on-covid-19---11-march-2020.

3. Lapierre A, Fontaine G, Tremblay PL, Maheu-Cadotte MA, Desjardins M. La maladie à coronavirus (COVID-19) : portrait des connaissances actuelles. Soins d'Urgence. 2020 ;1 (1) :13-9

4. World Health Organization. Report of the WHO-China Joint Mission on Coronavirus Disease 2019(COVID-19) [en ligne]. C2023 [consulté le 11 juillet 2023]. Disponible sur https://www.who.int/docs/default-source/coronaviruse/who-china-joint-mission-on-covid-19-final-report.pdf

5. Eboko, F, et Sina Schlimmer. « COVID-19 : l'Afrique face à une crise mondiale », Politique étrangère. 2020 ; (4) : 123-34.

6. Djolar K et Guézéré A. « Les frontières du Togo par temps de COVID-19 : entre affirmation de l'autorité de l'État et développement d'une économie de la fermeture », L'Espace Politique [En ligne], c2023 [consulté le 05 avril 2023]. Disponible sur http://journals.openedition.org/espacepolitique/10177.

7. Benido Impouma, Franck Mboussou, Bridget Farham, Caitlin M. Wolfe1, Krys Johnson, Catherine Clary et al. The COVID-19 pandemic in the WHO African region: the first year (February 2020 to February 2021). Epidemiology and Infection 149, e263, 1–10. Https://doi.org/10.1017/S0950268821002429

8. David Mekolo, Francois Adrien Bokalli, Fru McWright Chi, Steve Beukou Fonkou, Mbachan Maseoli Takere, Conrald Metuge Ekukole et al. Clinical and epidemiological characteristics and outcomes of patients hospitalized for COVID-19 in Douala, Cameroon. PAMJ. 2021 ; 38(1) : 246.

9. L. Plaçais, Q. Richier. COVID-19 : caractéristiques cliniques, biologiques et radiologiques chez l'adulte, la femme enceinte et l'enfant. Une mise au point au cœur de la pandémie. Rev Med Interne. 2020 ; 41 : 308-18.

10. Bawe LD, Kotosso A, Abaltou B, Assenouwe A, Aziagbe KA, Tchamdja G et al. Profils épidémio-cliniques des enfants atteints de COVID

-19 à Lomé. Rev Mali Infect Microbiol. 2021 ; 16 : 11-5.

11. Ludvigsson J.F. Systematic review of COVID-19 in children show milder cases and a better prognosis than adults. Acta Paediatrica. 2020 ;109 :1088–95.

12. United Nations Policy brief : the impact of CO-VID-19 on children [en ligne]. C2023 [consulté le 05 avril 2023]. Disponible sur https://unsdg.un.org/resources/policy-brief-impact-covid-19-children

13. Peguero-Rodriguez G, Lapierre A, Fontaine G et Zombre I. Mise à jour sur la COVID-19. 2020 ; 1 (2) : 52-5.

14. OB Togola, MD Soumaré, LC Mariame, K Kayembé, O Sangho et al. ETUDE DESCRIPTIVE DES CAS DE COVID-19 EN COMMUNE III DE BAMAKO DU 26 MARS AU 27 AOUT 2020. Mali Médical. 2021 ; 35(2) : 61-6.

15. Gouv.tg. Situation au Togo - covid 19 [En ligne]. C2023 [consulté le 12 juillet 2023]. Disponible sur https://covid19.gouv.tg/situation-au-togo/.

16. Fred Éboko, Ibrahima Khalil Kanté, Arona Diedhiou. Covid-19, réponse institutionnelle et rôle du climat Étude comparative entre la Côte d'Ivoire et les autres pays d'Afrique de l'Ouest. L'Afrique et le monde à l'heure virale. 2022 ; 1 (2) : 11-6.

17. LO M, SY A et Yade S. « La Covid-19 en Afrique : bilan d'étape et perspectives [En ligne]. C2023 [consulté le 05 avril 2023]. Disponible sur https://www.policycenter.ma/sites/default/files/RP_20-13_Moubarack_Lo.pdf