

The COVID-19 Vaccine Acceptance in Hemodialysis Patients in Togo

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Abstract

Introduction: Wide adoption of vaccination is the key to successfully control the spread of coronavirus 2019 (COVID-19). **Objective:** To evaluate the acceptability of COVID-19 vaccines and associated factors in hemodialysis patients in Lomé. **Patients and Method:** Cross-sectional study was conducted from August 1 to 31, 2021 in hemodialysis patients at the Sylvanus Olympio University Hospital to obtain their opinion on the anti-COVID-19 vaccination. **Results:** One hundred and twenty-three patients on regular hemodialysis were interviewed; their mean age was 45 years [37 - 55.5 years]. The average number of years patients were on dialysis was 3 years [2 - 5 years]. The general opinion on vaccination was mostly unfavorable (59.3%). Reasons given included: doubts about the quality of the vaccine (49.6%), fear of side effects (51.2%), alarming messages on social networks (36.5%) and doubts about the efficacy of the vaccines (33.3%). Only half of the patients in favor of vaccination were already vaccinated at the time of the survey. The main motivations for getting vaccinated were dominated by: fear of developing a severe form of COVID-19 if infected (32.5%), frailty due to age (19.5%) and medical history (15.4%). Social networks (72.3%), television (60.1%), family and friends (55.2%) were the main sources of information for patients about COVID-19 vaccination. **Conclusion:** Hemodialysis patients are mostly septic to anti-COVID-19 vaccination.

Keywords

Acceptance, Vaccination, Covid-19, Hemodialysis, Togo

1. Introduction

To help control the coronavirus (COVID-19) pandemic, unprecedented efforts

have been made to develop vaccines against this disease [1].

A wide adoption of vaccination is the key to successfully control the spread of the 2019 coronavirus disease (COVID-19) [2], whose associated risk is permanently established and remains higher for vulnerable populations, *i.e.*, for people who, because of their age or their chronic pathologies are at greater risk of developing severe forms of Covid-19 [3]. In Togo, the first phase of deployment of the vaccination against COVID-19 started on March 10, 2021 with healthcare personnel and was then extended to other targets, particularly people with comorbidities. Hemodialysis patients with COVID-19 are particularly at high risk of morbidity and mortality [2]. Controversy has continued to surround the COVID-19 vaccines since their introduction. However, little is known about the acceptance of vaccination in the Togolese population, particularly with patients at high risk of developing severe forms of the disease. In this study, we felt it was important to evaluate the acceptability of COVID-19 vaccines and to look for associated factors in people at high risk of severe COVID-19, particularly people undergoing hemodialysis at the Sylvanus Olympio University Hospital in Lomé.

2. Patients and Method

The survey was conducted in Togo public hemodialysis center only. A semi structured questionnaire was used to collect data from the participants. The survey form includes 9 questions, divided into 3 sub-sections: Socio-demographic characteristics, COVID-19 and vaccination and sources of information about the vaccine. The survey form is designed according to the SAGE group guidelines on vaccination and vaccine hesitancy [4].

This was a descriptive cross-sectional study conducted from August 1 to 31, 2021 in hemodialysis patients at the Sylvanus Olympio University Hospital in Lomé, to obtain their opinions on the COVID-19 vaccination. 123 patients older than 18-year-old who attended the Sylvanus Olympio University Hospital for their dialysis session were included in this study. All participants gave their verbal consent before enrolled in the study. The study was explained in French and local language. Hemodialysis patients who refused to participate in the study were not included. The questionnaires were administered by a trained medical doctor. After collection, the data were entered into an electronic Xls form deployed by the KoboToolbox platform. The categorical variables were expressed as percentage.

SPSS software (IBM SPSS Statistics 21; Armonk, NY) was used to perform statistical analysis. Chi-square and Pearson's test were used to assess differences (p-value threshold 0.05).

3. Operational Definition

The World Health Organization defines vaccine reluctance (or hesitation about vaccines) as the delay in accepting or refusing vaccines despite the availability of vaccination services. It includes factors such as "underestimation of danger, convenience and trust" [4].

4. Results

One hundred and twenty-three patients regularly undergoing hemodialysis in the nephrology/hemodialysis department were interviewed with a male predominance (n = 74) and an M/F sex ratio of 1.51. The mean age was 45 years [37 - 55.5 years]. Patients aged between [30 - 60 years] were the most represented (n = 91, 73.9%). Their level of education was high school (n = 56, 45.5%) and higher (n = 47, 38.2%) in the majority of cases. The median time on dialysis for patients was 3 years [2 - 5 years]. The general opinion on vaccination was unfavorable in 59.3% of cases (n = 73). Reasons given included doubts about the quality of the vaccine (n = 61, 77.2%), fear of side effects (n = 63, 79.7%), information on social networks (n = 45, 57%), and doubts about the efficacy of vaccines (n = 41, 51.9%) (Figure 1). Only half of the patients in favor (n = 44) of vaccination were already vaccinated at the time of the survey. Those who were not yet vaccinated (n = 22) were still willing to be vaccinated. The main motivations for getting vaccinated were dominated by: fear of developing a severe form of COVID-19 if infected (n = 40, 90.9%), frailty due to age (n = 24, 54.5%), and medical history (n = 19, 43.2%) (Figure 2). Social networks (n = 89), television (n = 74), and family and friends (n = 68) were the main sources of information about COVID-19 vaccination for patients (Figure 3).

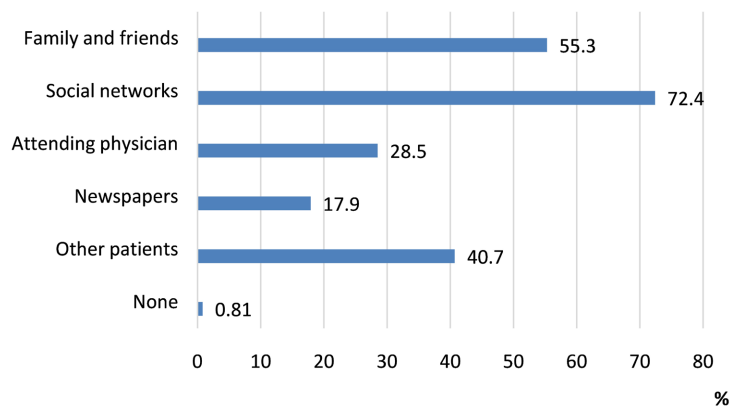


Figure 1. Reasons for non-acceptance of COVID-19 vaccines.

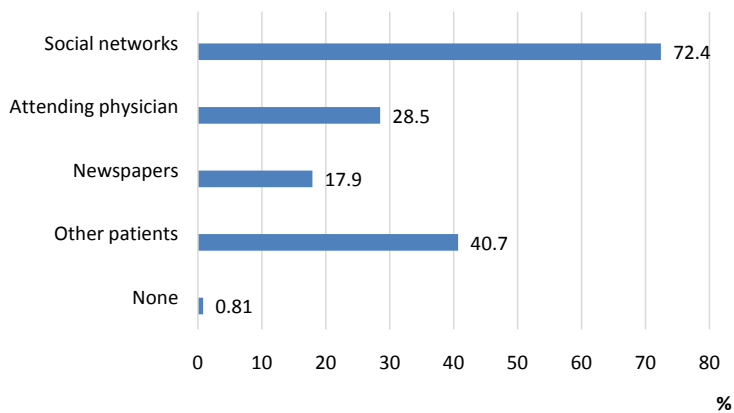


Figure 2. Motivations for COVID-19 vaccination.

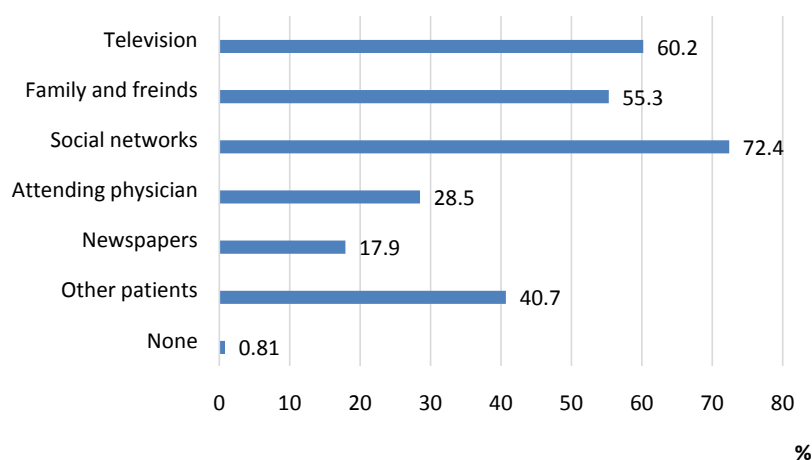


Figure 3. Hemodialysis patients' sources of information about COVID-19 vaccines.

5. Comment

To our knowledge, this is the very first study on the acceptance of COVID-19 vaccines in West Africa in hemodialysis patients. Reluctance to vaccination is neither new nor unique to COVID-19 vaccines [5]. We reported a high vaccine reluctance rate of 64.2%. Since the beginning of the COVID-19 pandemic, all patients in general and hemodialysis patients in particular have been shaken both psychologically and morally. Patients developed conceptions that coronavirus disease meant the end of the world. The misinformation that circulated on social networks aggravated patients' mindsets about the disease. A climate of mistrust has been created not only in hemodialysis patients and the medical staff, but also with policies, on the basis of conspiracy theories. Indeed, for hemodialysis patients, vaccines have been perceived as causing more harm than the diseases they are intended to prevent, and that much of this concern is rooted in tensions between citizens and authorities, often generated by mandatory vaccination policies [6]. This climate of mistrust has led people to disbelieve in the efficacy of vaccination, the existence of the disease, and the complications that may arise from it. All these hesitations have led people to turn to religions and ancestral traditions which, according to them, are the only solution to contain the pandemic.

The reasons for hesitation or non-acceptance are also due to individual or personal experiences; previous negative history with other vaccines; lack of sufficient information on vaccine safety; insufficient sharing of information on side effects by the authorities for some; for others, the influence of family, friends and colleagues not to vaccinate also played a prominent role [7]. Ensuring proper understanding, demand, and promotion of acceptance of current and future COVID-19 vaccines is essential for personal health, protection of the most vulnerable populations, reopening of social and economic life, as well as the health and safety of the population through herd immunity [8].

This study is based on a monocentric cohort which constitutes a limitation for this work since it does not allow the results comparability from one site to another.

6. Conclusion

Contrary to the general population, there is a strong reluctance to anti-covid 19 vaccinations, as evidenced by the hemodialysis patients in Lomé, who are mostly septic to this vaccination.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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Appendix

I) Socio-demographic features

1) Identity:

2) - Sex

- Age

a) F

b) M

3) Occupation:

4) Marital status

- Married

- Divorced

- Not Married

- Widow/Widower

5) Dialysis duration

a) <3 ans

b) 3 - 5 ans

c) >5 ans

6) Level of education

a) None

b) Basic

c) Secondary

d) Tertiary

e) Higher

II) Covid-19 and vaccination

7) Are you vaccinated?

a) Yes

b) No

8) Please give your opinion on the covid-19 vaccine

a) In support of

b) Against

If answer a):

- Already vaccinated

- Willing to do so?

- Is it because:

■ Medical history?

✓ HTA

✓ Diabetes

✓ HIV

■ Medical history of a family member or relative infected with Covid-19

■ Medical history of a family member or relative who died of Covid-19

■ Less fragile health - in relation to your age?

■ Fear of having a severe form?

If answer "b", Why?

- Fearing for quality
- Adverse effect
- Vaccine inefficiency
- Information on social media?
- Influence by others?
- Conspiracy theory?
- I don't think Covid is a real problem

III) Sources of information on Vaccination

9) What are your sources of information about the vaccine?

- a) Television
- b) Family and friends
- c) Social media
- d) My GP (nephrologist)
- e) Newspapers
- f) Other hemodialysis patients
- g) I have not received any information about the covid-19 vaccine