



Prophylactic use of Ivermectin against COVID-19

Rafaela Briguenti Ramalho¹, Valquíria Matoso Bim¹, Carolina Colombelli Pacca Mázaró^{1,2,3*}

¹ FACERES – Medical School of Sao Jose do Rio Preto, Sao Paulo, Brazil.

² Researcher at the Laboratory of Virology at the Faculty of Medicine of Sao Jose do Rio Preto – FAMERP, Sao Jose do Rio Preto, Sao Paulo, Brazil.

³ Professor at Universidade Estadual Paulista "Júlio de Mesquita Filho", Sao Jose do Rio Preto, Sao Paulo, Brazil.

*Corresponding author: Dr. Carolina Colombelli Pacca
Mazaro, FACERES - Medical School of São José do Rio
Preto, Sao Paulo, Brazil. Email: carolpacca@gmail.com.

DOI: <https://doi.org/10.54448/mdnt21619>

Received: 09-12-2021; Revised: 10-12-2021; Accepted: 11-07-2021; Published: 12-17-2021; MedNEXT-id: e21619

Introduction

The moment of the COVID-19 pandemic has brought to the world the need to find forms of treatment and of prophylaxis to face the disease caused by the virus [1]. Among so many alternatives, an April 2020 study has shown to be promising in proposing the use of the drug Ivermectin, which in an in vitro study, presented a reduction in the amount of viral RNA, suggesting the possibility of efficacy in the treatment and in the prophylaxis of COVID-19. Nevertheless, the studies have not advanced from the in vitro phase [2].

This drug, approved by Anvisa, is a broad-spectrum antiparasitic used clinically for onchocerciasis and lymphatic filariasis control in single doses of 150 to 200µg/kg. It has an excellent safety profile and, after oral administration, the plasma concentrations are, approximately, dose proportional. Therefore, the Ivermectin presents itself as a very fruitful drug and deserves a further research into possible human benefits, mainly due to the scarce drug interaction, which facilitates the treatment of people infected with Covid-19, if the administration of other drugs is needed concomitantly [3].

This study aims to analyze whether the population used Ivermectin prophylactically against Covid-19 with or without a guidance of a health professional and compare information sources for drug use.

Methods

Between October 2020 and February 2021 a link was shared (<https://forms.gle/NPW3yfZLPRggVioV9>) containing a questionnaire prepared by the research team on questions related to the prophylactic Ivermectin use, as well as socio-demographic data and the media investigation used by the population. The questionnaire

was disseminated through the researchers' social networks and was available for two months. The participants had access to the TCLE so that they had knowledge about the study and, if they were over 18, they could answer the questionnaire. After the specified period, the questionnaire was blocked, the answers were tabulated and statistically analyzed.

Ethical Approval

This study was approved by the CEP/CONEP Research Ethics Committee in accordance with CNS resolution nº 466/12 under registration nº 4.312.261.

Results and Discussion

The Covid-19 pandemic has generated a major public health problem, especially for leading the population to make indiscriminate use of medicines because they glimpse the promise of prophylaxis against the pathology, however, without scientific evidence for this. This study evaluated 455 participants, most between 18 and 29 years old (n=170, 37,4%), of female sex (n=333, 73,2%), with higher education (**Table 1**) and determined that health professionals and students are more informed through scientific articles when compared to other professions (**Table 2**).

Health professions are always questioned about the pandemic, therefore, it is of utmost importance that they update themselves correctly. The findings of this study show that most of these professionals get informed on Official Health Sites (36,5%) and on Scientific Publications (51,9%) and, when compared to other professionals, there is a significant statistical difference. This data reinforces the importance of these professionals to update themselves correctly and to perform Evidence-Based Health.

It is known that the prophylactic use of medicines for a particular pathology needs to be scientifically evaluated, however, common sense can influence some people. In this study it was observed that health professionals and students had lower use of prophylactic form of Ivermectin for COVID-19 when compared to other professional classes (**Table 3**). Of the total

number, 218 people claimed to have made use of Ivermectin prophylactically to treat Covid-19, which represents 48.2% of the sample and, of these, 64.2% had self-medication. This result may suggest that the information obtained correctly through scientific studies can decrease the indiscriminate use of some medicines.

Table 1. Socio-demographic data.

Variables	Frequency (n=455)	%
Age		
18-29 years old	170	37.4
30-44 years old	152	33.4
45-59 years old	101	22.2
≥ 60 years old	32	7.0
Sex		
Female	333	73.2
Male	122	26.8
Profession		
Health area	104	22.9
Other areas	230	50.5
Student	121	26.6
Education level		
Complete/incomplete medical education	78	17.1
Higher education	377	82.9
Ethnicity		
White	360	79.1
Black	7	1.5
Brown	73	16.0
Yellow	15	3.3

Table 2. Comparison between the professions and the means of information used.

Socio-demographic variables	TV (%)	Newspapers and magazines (%)	Health sites (%)	Scientific publications (%)	p-value
Profession					
Health area	5.8	5.8	36.5	51.9	<0.001
Other area	18.3	12.6	46.5	22.6	
Student	7.4	0.8	44.6	47.1	

Table 3. Prophylactic use of Ivermectin against Covid-19 compared to professions.

Socio-demographic variables	Used Ivermectin (%)	Did not use Ivermectin prophylactically (%)	p-value
Profession			
Health area	45.2	54.8	0.002
Other area	55.7	44.3	
Student	36.4	63.6	

Conclusion

The study allows us to conclude that health professionals, as well as students, are more likely to search for information more correctly through scientific studies, which are more reliable sources. Therefore, this

portion of the population made less prophylactic use of Ivermectin, which demonstrates that there is a relation between the information media used and the use of this drug. This enables us to conclude that the education and the professional axis have a strong influence on individual choices, being, hence, very much needed.

Thus, it is observed the imprescindibility of correct orientation in a massive way of the population to inform what are the best means of information to be used to promote the correct use of medicines.

Keywords: Ivermectin. COVID-19. Prophylaxis.

Acknowledgement

Nil.

Ethical approval

This study was approved by the CEP/CONEP Research Ethics Committee in accordance with CNS resolution nº 466/12 under registration nº 4.312.261.

Informed consent

The patient signed the consent form.

Funding

Not applicable.

Data sharing statement

No additional data are available.

Conflict of interest

The authors declare no conflict of interest.

About the License

© The authors (s) 2021. The text of this article is open access and licensed under a Creative Commons Attribution 4.0 International License.

References

1. World Health Organization W. Coronavirus disease 2019 (COVID-19) Situation Report – 68 – 28 March 2020. Geneva: World Health Organization; 2020 [Available from: https://www.who.int/docs/default-source/coronaviruse/situation-reports/20200328-sitrep-68-covid-19.pdf?sfvrsn=384bc74c_2].
2. Caly L, Druce JD, Catton MG, Jans DA, Wagstaff KM. The FDA-approved Drug Ivermectin inhibits the replication of SARS-CoV-2 in vitro. *Antiviral Res.* 2020;104787.
3. Guzzo CA, Furtek CI, Porras AG, Chen C, Tipping R, Clineschmidt CM, et al. Safety, Tolerability, and Pharmacokinetics of Escalating High Doses of Ivermectin in Healthy Adult Subjects. *2002;42(10):1122-33.*

