

Practice of Obstetricians of Santa Catarina: Prevention of COVID-19 in Pregnant and Postpartum Women

Prática de Obstetras de Santa Catarina: Prevenção da COVID-19 em Gestantes e Puérperas

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Abstract

The health professionals who serve the pregnant and postpartum women population should ideally provide information about the risk of infection with Sars-Cov-2 (COVID-19), the efficacy and safety of the vaccines, and above all, reinforce the importance of complete immunization. The objective of this study was to evaluate the practices adopted by gynecologists and obstetricians in the state of Santa Catarina regarding prophylaxis of COVID-19 disease in pregnant and postpartum women. This was a cross-sectional, observational, descriptive study with a quantitative approach. The data were obtained by applying a questionnaire using the Knowledge, Attitude, and Practices methodology that was structured for online application via Google Forms, a tool made available by Google. Most respondents (69.1%) attributed the pandemic COVID-19 for the significant rise in maternal mortality. As for prophylactic prescribing 5.9% prescribed hydroxychloroquine, 9.1% azithromycin, 8.8% ivermectin, 11.7% multivitamin, 8.8% vitamin C and 66.2% vitamin D. In the period analyzed, 387 cases of severe acute respiratory syndrome were reported in pregnant or postpartum women, of which 5.2% died, 29.2% were intubated, and 24.3% were admitted to intensive care. Although most obstetricians (89.7%) recommended vaccination for their patients, 5.9% did not recommend it for any pregnant/post-partum women, and 4.4% did not answer the question or said they did not know. The hypothesis is considered that low adherence (68 out of 665 invited) of professionals to such a current issue may demonstrate some problem/issue regarding the prevention of COVID-19 in pregnant and postpartum women.

Keywords: Pregnant Women. Postpartum Period. Vaccination.

Resumo

Idealmente, compete aos profissionais de saúde que atendem a população de gestantes e puérperas oferecerem esclarecimento sobre o risco da infecção por Sars-Cov-2 (COVID-19), eficácia e segurança das vacinas e, sobretudo, reforçar a importância da imunização completa. O objetivo deste estudo foi avaliar as práticas adotadas por médicos ginecologistas e obstetras do estado de Santa Catarina no que se refere à profilaxia da doença por COVID-19 em gestantes e puérperas. Este foi um estudo transversal, observacional, descritivo de abordagem quantitativa. Conduzido entre o período de outubro a dezembro de 2021. Os dados foram obtidos por meio da aplicação do questionário empregando a metodologia Conhecimento, Atitude e Práticas (CAP) que foi estruturado para aplicação online via Google Forms, uma ferramenta disponibilizada pela Google. A maioria dos respondentes (69,1%) atribuiu a pandemia da COVID-19 para a elevação significativa da mortalidade materna. Quanto à prescrição profilática 5,9% prescreveram hidroxicloroquina, 9,1% azitromicina, 8,8% ivermectina, 11,7% polivitamínico, 8,8% vitamina C e 66,2% vitamina D. No período analisado, foram notificados 387 casos de Síndrome Respiratória Aguda Grave em mulheres gestantes ou puérperas, dessas, 5,2% morreram, 29,2% foram intubadas e 24,3% foram internadas em terapia intensiva. Apesar de a maioria dos obstetras (89,7%) recomendarem a vacinação para suas pacientes, 5,9% não a recomendaram para nenhuma gestante/puérpera e 4,4% não responderam a pergunta ou referiram não saber. Aventa-se a hipótese que baixa adesão (68 de 665 convidados) dos profissionais a uma questão tão atual pode demonstrar algum problema/questão quanto à prevenção da COVID-19 em gestantes e puérperas.

Palavras-chave: Gestantes. Período Pós-Parto. Vacinação.

1 Introduction

With the temporal evolution and persistence of the COVID-19 pandemic, the results of the world and Brazil showed that pregnant and postpartum women present a higher risk of severe outcomes and death¹.

Scientific evidences indicate that vaccination has been shown to be effective in preventing these outcomes². According to the recommendation of several national and international medical societies, such as American College

of Obstetricians and Gynecologists³, Royal College of Obstetricians & Gynaecologists⁴ and the Brazilian Federation of Gynecologists and Obstetricians⁵ that vaccination of pregnant and post-partum women against COVID-19 should be recommended.

However, part of the population is not vaccinated yet. And vaccination coverage among pregnant women is lower than among non-pregnant women at reproductive age⁶. The World Health Organization defines the hesitation to the vaccine as the delay or refusal, despite the availability, to administer the

vaccines recommended. Vaccination hesitation comprises a wide range of postures, from fear to total refusal, with several degrees⁷. The main axes that guide clinical practice and decision regarding immunization among physicians are: knowledge, safe sources of information, and critical analyzes⁸.

Ideally, it is up to health professionals who serve this population to provide clarification on the risk of infection by COVID-19, efficacy and safety of vaccines, and, above all, to reinforce the importance of complete immunization.

In view of the above, the objective of this study was to evaluate the practices adopted by gynecologists and obstetricians of the state of Santa Catarina regarding prophylaxis of infection by COVID-19 in pregnant and post-partum women.

2 Material and Methods

This was a cross-sectional, observational, descriptive study with a quantitative approach. The research project was submitted, evaluated and approved by the Ethics Committee in Institution Research on Human beings (CAAE: 49469621.1.0000.0121). The individuals eligible for inclusion were gynecologists and obstetricians of Santa Catarina. Those who did not provide services to pregnant and post-partum women in the research period were excluded and/or did not wish to participate in the study by not signing the Free and informed consent form.

The data were obtained through the application of the questionnaire using the⁹ CAP methodology (Knowledge, Attitude and Practices) which was structured for *online* application via *Google forms*, a tool provided by *Google*.

Thus, through a partnership with the Association of Obstetrics and Gynecology of Santa Catarina (SOGISC), the questionnaire was sent by electronic mail to the 665 members of the state.

In order to summarize the participants' sociodemographic data, as well as to analyze the data referring to the PAC questionnaire, the statistics were descriptive with measures of central tendency and variability for numerical variables and absolute and relative frequency for categorical variables. The data set was performed using the Statistical Package for the Social Sciences program, release 27 (SPSS Inc., Chicago, IL, USA).

3 Results and Discussion

Only 68 of the 665 members of SOGISC responded to the questionnaire submitted reflecting a response rate of 10.2%. To van Gelder et al.¹⁰, the low rate of responses with the application of *online* questionnaires is a limitation of this data collection instrument and is its main disadvantage, however, the hypothesis was raised that this low adherence of professionals invited to such a current issue can, in itself, demonstrate some problem and/or issue regarding the prevention of COVID-19

in pregnant and post-partum women.

The mean age of the participants in the survey was 43 years (SD = 11.6), ranging from 25 to 71 years. The mean time in years of obstetrics was 16 years (SD = 12.5). The majority (69.1%) were female, 67.6% were married/common law marriage, 63.2% had children.

Although most of the obstetricians interviewed (89.7%) recommended vaccination for their patients, some of the respondents (5.9%) did not recommend it for any pregnant/post-partum women and 4.4% did not answer the question or reported not knowing. Considering Brazil's epidemiological situation before the COVID-19 pandemic for this population (a country with a high number of maternal deaths), the Ministry of Health¹¹ points out that the vaccination benefit of this group is greater than the potential risks inherent in vaccination in pregnant women.

Most of the participating obstetricians (69.1%) believed that the COVID-19 pandemic was responsible for significantly increasing maternal mortality rates in Brazil, but 14.7% of the respondents believed there was no connection and 16.1% did not respond or reported not knowing. The increase in maternal mortality due to COVID-19 is a global phenomenon, however, Brazil is one of the leaders in this scenario^{4,12-14}.

In the analyzed period, 387 cases of Severe Acute Respiratory Syndrome were reported in pregnant or post-partum women. Non-vaccinated women accounted for more cases and more severe outcomes, 29.8% of them were hospitalized in an intensive care unit, 35.3% needed invasive mechanical ventilation, and 5.5% died. Dagan et al.¹⁵, show the efficacy of immunization in conducting a study with pregnant women who received Pfizer vaccine (intervention group) and pregnant women who did not receive (control group) and the findings showed that the estimated efficacy of the vaccine from 7 to 56 days after the second dose was 97% for infections with documented symptoms and 89% for hospitalization related to COVID-19.

Information on immunization, the distribution of respondents regarding vaccination of pregnant and post-partum women, recommended type of vaccine, as well as the prophylactic prescription for COVID-19 are set out in Table 1. There is still no proven and safe specific treatment to prevent contagion or severe forms of infection by COVID-19. The World Health Organization^{16,17} and other international societies do not recommend any medication as a form of prophylaxis for COVID-19, for mild, moderate or severe forms of the disease for both the general population and for pregnant and post-partum women. According to the Ministry of Health¹⁸, National Immunizations Program¹⁹ and Brazilian Federation of Gynecology and Obstetrics Associations²⁰, the vaccination scheme for pregnant and post-partum women are: two doses of Pfizer and alternatively CoronaVac in places where Pfizer is not available, whereas until the conclusion of this study, AstraZeneca vaccines remain contraindicated²¹.

Table 1 - Distribution of respondents on vaccination recommendation and prescription of medications for prophylaxis of COVID19 for pregnant and post-partum women (Santa Catarina, 2021)

Variables	I do not recommend /I do not prescribe n (%)	I have already prescribed/ recommended, I do not prescribe any more n (%)	I recommend prescribe n (%)	I don't know/ Did not reply n (%)
Vaccines (any)	4 (5.9) ^a	–	61 (89.7) ^a	3 (4.4) ^a
Pfizer – Biontech	8 (11.8)	–	57 (83.8)	3 (4.4)
CoronaVac – Sinovac	16 (23.5)	–	49 (72.1)	3 (4.4)
Johnson – Janssen	41 (60.3)	–	24 (35.3)	3 (4.4)
Astrazeneca – Oxford	56 (82.3)	–	9 (13.2)	3 (4.4)
Prophylactic medication	53 (77.9)	4 (5.9)	4 (5.9) ^b	7 (10.3)
Chloroquine/Hydroxychloroquine				
Azithromycin	44 (64.7)	6 (8.8)	13 (19.1) ^b	5 (7.4)
Ivermectin	51 (75)	3 (4.4)	6 (8.8) ^b	8 (11.8)
Multivitamin	50 (73.5)	2 (2.9)	8 (11.7) ^b	8 (11.8)
Vitamin C	51 (75)	4 (5.9)	6 (8.8)	7 (10.3)
Vitamin D	45 (66.2)	4 (5.9)	13 (19.2) ^b	6 (8.8)

Note: ^a refers to any vaccine against COVID-19; ^b prescription for prophylaxis of severe forms in patients already diagnosed with COVID19 – chloroquine/hydroxychloroquine (n=3), Azithromycin (n=11), Ivermectin (n=3), polyvinyl chloride (n=2), Vitamin D (n=5).

Source: Resource data.

Although most (89.7%) of the obstetricians recommended vaccination against COVID-19, it is highlighted in Table 1 that 82.3% of respondents contraindicated AstraZeneca vaccine, which reflected in Pfizer 83.8% with the most suitable vaccine for pregnant and post-partum women.

The low adherence (10.2%) of professionals invited to such a current issue can, in itself, demonstrate some problems/issues regarding the prevention of COVID-19 in pregnant and post-partum women.

Although most of the obstetricians interviewed (89.7%) recommend vaccination for their patients, a portion of the respondents either did not recommend vaccination for any pregnant/post-partum woman until the time of the research, did not answer the question or reported not knowing.⁵ Due to the epidemiological situation of Brazil in relation to the COVID-19 pandemic for this population (a country with a high number of maternal deaths), the vaccination benefit of this group is greater than the potential risks inherent to the vaccination in pregnant women.

The recommendation of the vaccines by the respondents was mostly (83.8%) Pfizer, followed by CoronaVac (72.1%), however, a small portion recommended Janssen and AstraZeneca and some physicians did not answer this question. In Brazil, after a post-vaccination event (Thrombosis Syndrome with Thrombocytopenia) described in a pregnant woman in May 2021, some states and municipalities began to require the presentation of a medical report on comorbidities and the signing of a consent term. The vaccination scheme recommended by the Ministry of Health (MS), National Immunizations Program (NIBP) and Fembrigo for pregnant and post-partum women: two doses of Pfizer and alternatively CoronaVac where Pfizer's is not available. AstraZeneca and Janssen vaccines are currently contraindicated.

Among the obstetricians responding the questionnaire, most did not recommend the questioned medications (hydroxychloroquine, azithromycin, ivermectin, multivitamin C and D) as prophylaxis. However, there are obstetricians prescribing prophylactic medications for COVID-19 in their clinical practice. Until now there is no proven and safe specific treatment to prevent contagion or severe forms of infection by COVID-19.³ WHO and other international societies do not recommend any medication as a form of prophylaxis for COVID-19, for mild, moderate or severe forms of the disease for both the general population and for pregnant and post-partum women.

This study presented a limitation on the low adherence of professionals in response to the questionnaire sent, however, as a strong point was an unprecedented and fundamental study, since vaccination is still dependent on medical prescription in many places, in addition to the occurrence of vaccine hesitation both among the population and among a portion of health professionals, even with evidence that vaccination decreases severe maternal results and deaths.

Investment in continuing education activities involving health professionals is also suggested, and further studies on the subject are strongly recommended, seeking to understand the barriers that lead to vaccine hesitation, thus helping to facilitate access to vaccination and, consequently, allow safer pregnancy and postpartum for Brazilian women.

4 Conclusion

In clinical practice, some gynecologists and obstetricians prescribed drugs for prophylaxis against COVID-19, namely, hydroxychloroquine, azithromycin, ivermectin, multivitamin and vitamins C and D. Although most participants recommended vaccination for pregnant and post-partum

women, seven did not indicate for any woman in their clinical practice or abstained from the response. Among those who suggested, the immunizers were: Pfizer, followed by CoronaVac, Janssen and AstraZeneca.

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