

Perinatal care in the COVID-19 pandemic: analysis of Brazilian guidelines and protocols

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Abstract

Objectives: to analyze protocols and direct Brazilian women to prevent perinatal seizures during the COVID-19 pandemic, based on the positive perinatal experience.

Methods: exploratory analysis of document analysis. In the first phase, from April 11 to May 14, in order to search for words with keywords, 402 documents were found. The second phase consisted of reading the set of selected documents and dividing them into categories. The analysis was carried out in light of the guidelines for a positive perinatal experience of the World Health Organization.

Results: as well as directing flow detection phase protocols to mice that show or do not receive COVID-19 symptoms and are being updated with new evidence of systemic evidence. It appears that there are several guidelines for prenatal, partial and puerperium, divergences in some documents for example umbilical cord clamping, skin-to-skin contact, newborn bath.

Conclusions: analyze the permissible conclusions that most recommendations are in line with preconceived notions of positive perinatal experience, but is necessary to adaptation to the Brazilian context.

Key words COVID-19, Pregnancy, Maternal and child health, Prenatal care, Guidelines



Introduction

The Ministry of Health (MH), in April 2020, declared all pregnant and puerperal women as being in risk group for COVID-19, because although studies¹ were not conclusive about the risk of complications in pregnant women, surveys signalize that this population tends to be more sensible and vulnerable to diseases similar to H1N1.²

In the last but one week of May, there were 484 pregnant women with COVID-19 confirmed in the country. The signs and symptoms more frequently presented by pregnant women were cough (80.6%), fever (72.9%), dyspnea (62.2%) and respiratory distress (50.8%).³ A study demonstrated that, between January and June 2020, 124 maternal deaths occurred in Brazil, being the country with the highest maternal mortality by Covid-19 in the world. The study highlights weaknesses in the management of healthcare services such as ineffective care, barriers in access to ventilatory support and intensive care.⁴

The context of pandemic exposed women to different types of risks and fears, specifically in gestation, delivery and postpartum. These risks involve multiple issues of vulnerability, as well as aspects related to the disease itself, lack of secure information and access to healthcare services, to the hardness in obtaining assistance of quality and based on good practices,⁵ being fundamental the reflection about sexual and reproductive rights. The United Nations Population Fund highlighted as an essential action for all countries to protect women's health and rights, as well as putting sexual and reproductive health as fundamental human rights to be assured, which includes the gestation, delivery and puerperium process. In this way, in March 2020, the World Health Organization (WHO) emphasized and published guidelines for assuring better care for pregnant, parturient and puerperal women during the pandemic.⁶

The concept of positive experience in childbirth was created by WHO and showed itself to be a great improvement in the field of obstetric care. The concept went under revisions through the decades, and nowadays the elaborated scientific evidences consider not only biological characteristics and characteristics of access to healthcare services, but also thinking the positive childbirth experience as a sexual and reproductive right, with attention to emotional, social and cultural aspects of adult and adolescent women.^{7,8}

Insofar as a sanitary crisis settles down, the sexual and reproductive rights are increasingly

threatened.⁹ Yet it is not possible to measure its effects in women's health, it is known that the network of elective and emergency services changed. Thus, the objective of this study was to assess the Brazilian protocols and guidelines concerning perinatal healthcare during COVID-19 pandemic, in the light of the concept of positive childbirth experience.

Methods

Exploratory study of document analysis of Brazilian guidelines and protocols aiming perinatal attention elaborated to healthcare during COVID-19 pandemic.

The survey was developed between April 11 and May 14, starting with the location of source and selection of documents, using the keywords "COVID-19" AND "perinatalidade" (perinatality) AND "diretrizes" (guidelines) OR "protocolos" (protocols), in Google Scholar website, MS (Ministry of Health) portal and SciELO digital library. The following inclusion criteria were adopted: guidelines or protocols emitted by Brazilian agencies, which were published since the Brazilian government announced community transmission (March 20, 2020), which were related to perinatal healthcare during COVID-19 pandemic. After reading all of the findings (402), seven guidelines and protocols that were entirely available were selected for this study. Subsequently, the collected information was processed and analyzed,¹⁰ with the reading of the seven documents, separated in categories defined posteriorly according to the interest of this study. The analysis was executed by three of the authors, so as the peer review and conference. Each one of the categories was analyzed in the light of positive childbirth experience, as conceived by WHO.^{7,8}

Results

Four technical notes were analyzed,¹¹⁻¹⁴ the protocol service of the Brazilian Federation of Gynecology and Obstetrics (FEBRASGO – Portuguese acronym)¹⁵ and two supplies produced by the portal of good practices of the Oswaldo Cruz Foundation (FIOCRUZ – Portuguese acronym).^{16,17} Table 1 processes the findings of the categories: COVID-19 testing, adaptation to the social and/or cultural aspects, prenatal following, abortion, type of delivery, labor induction, location of delivery, home delivery, companion in delivery, presence of doulas, offering of liquids during labor, methods of pain relieving, umbilical cord clamping, skin to skin

contact, breastfeeding in the first hour, newborn bath, time of discharge for the binomial and breastfeeding at home.

Generally, the documents bring various, sometimes diverging, orientations. In relation to the test for detection of coronavirus, technical notes from the MH (Ministry of Health) do not suggest mass testing for all pregnant women, putting Primary Healthcare (PHC) as responsible for the screening of pregnant women with respiratory symptoms and in labor services, COVID-19 testing only for symptomatic parturients.¹²⁻¹⁴ The document from FEBRASGO¹⁵ mentions screening for all pregnant women and companions admitted in labor services. Regarding the need for adaptation to social or cultural aspects where the women reside, this element is placed in the technical note^{13,14} which recommends attention from the reference units of vulnerable puerperal women.

Regarding prenatal follow-up, the documents differ in the outflow for women that are suspect or positive-Covid, from those who are asymptomatic. Generally speaking, PHC is regarded as responsible for screening the pregnant women, recommending the delay of elective procedures for 14 days in suspect or confirmed cases, orienting women to perform home isolation and observe the evolution of symptoms.^{11,13,14}

New screening of pregnant women and companions should be executed in the admission of obstetric services. After screening, women and companions should receive surgical masks and should not walk around the institution. Abortion is only mentioned in the FEBRASGO material that orients expectant behavior for asymptomatic women. In relation to delivery, documents that analyze it are unanimous to state that only confirmed infection by SARS-CoV-2 does not configure indication for labor induction or cesarean section. The situation might be evaluated according to woman's overall status and the evolution of severe respiratory symptoms.^{12,14-16} The water immersion during labor is not indicated, for the virus has been found within feces.^{12,15}

Regarding labor induction, one of the technical notes from MH recommends it in case of clinical decompensation,¹² whereas FEBRASGO's¹⁵ document justifies labor induction in order to shorten the time of postpartum hospitalization. Once it is a virus transmitted by droplets, displacement of people in the hospital environment should be restricted, and in this case, the use of pre-partum, partum and postpartum (PPP) rooms for asymptomatic women is recommended in a document.¹² The presence of

companions, ensured by Federal Law 11.108, from April 7, 2005, is only assured after negative confirmation for COVID-19,^{12,14,15,17} the presence of doulas is not recommended by a document,¹⁵ once the assisting team must be reduced, the others do not mention it.

The offering of liquids is recommended by just one document.¹⁵ Two of the documents found,^{12,15} recommend the use of non-pharmacological methods for pain relieving, highlighting the shower bath.

Umbilical cord clamping was one of the categories in which was found the highest variability, since opportune clamping,¹⁶ going through the one to three minutes wait,¹⁵ according to the vitality of the newborn.¹⁷ This last document informs: "the clamping of umbilical cord should be executed in the proper moment and following guidelines of the neonatal reanimation program from Brazilian Pediatrics Society. In newborns of gestational age ≥ 34 weeks that presents adequate breathing and muscle tonus in tension at birth, it is recommended to clamp the umbilical cord from one to three minutes after birth. In newborns with gestational age < 34 weeks which started to breath or crying and show themselves active, it is indicated to wait 30 to 60 seconds before clamping the umbilical cord. It is recommended the immediate clamping of the cord only in newborns that didn't start to breath nor presented muscle tonus in tension and in case of placental circulation is not intact".¹⁷

The skin-to-skin contact is recommended after hygiene procedures such as bath in bed, using equipment of individual protection such as masks and caps.^{14,17} One of the documents¹⁵ contraindicates the skin-to-skin contact to women who tested positive for COVID-19, due to the possible infection of the newborn with fluids and consequent transmission.

Only material elaborated by Fiocruz^{16,17} indicates that breastfeeding in the first hour (golden hour) is recommended, since hygiene preventive procedures are taken,¹⁶ and the puerperal woman is in an adequate overall status.¹⁷ Of the documents that mention or not the need for bathing the newborn right after birth, for the material developed by Fiocruz¹⁷ there is no need for bathing the newborn, whilst FEBRASGO¹⁵ recommends drying and warming of the neonate, followed by bath. The discharge time should be reduced to 24 hours if the binomial is in a good status.^{12,14} Breastfeeding at home is stimulated^{12,14-16} and should be done with the mother using mask and making hand hygiene before and after breastfeeding.¹⁴⁻¹⁶

Table 1

Categories and recommendations found in analyzed documents about care in childbirth during COVID-19 pandemic. Brazil, 2020.

Document/date of publication/Category	TN 07/2020 ¹¹ (04/08/2020)	TN 09/2020 ¹² (04/10/2020)	TN 12/2020 ¹³ (04/18/2020)	Protocol FEBRASGO ¹⁵ (04/27/2020)	TN 13/2020 ¹⁴ (05/04/2020)	Gestation and COVID ¹⁶ (05/19/2020)	NB care in birth room ¹⁷ (05/25/2020)
COVID-19 testing	No mention	Testing in the labor service only for symptomatic pregnant women	Testing in the labor service only for symptomatic pregnant women	Testing in the labor service for all pregnant women and companions	Testing in the labor service only for symptomatic pregnant women	No mention	No mention
Adaptation to the social/cultural aspects	No mention	No mention	No mention	No mention	Care for all puerperal women in social vulnerability	No mention	No mention
Prenatal follow-up	Continuity in asymptomatic pregnant women	No mention	Continuity in asymptomatic pregnant women	No mention	Continuity in asymptomatic pregnant women	No mention	No mention
	Postponement of elective procedures for 14 days to symptomatic pregnant women, morphological ultrasound for follow-up of fetal growth	No mention	Home isolation for 14 days for symptomatic pregnant women	No mention	Isolation for 7 to 10 days for symptomatic pregnant women	No mention	No mention
Abortion	No mention	No mention	No mention	In asymptomatic patients with retained abortion expectant conduct may be offered up to 4 weeks	No mention	No mention	No mention
Type of delivery	No mention	SARSCoV-2 is not indicative for cesarean section	No mention	Indicates cesarean section for women with severe or critical symptoms. For the others, vaginal delivery	Indicates cesarean section for women with severe or critical symptoms. For the others, vaginal delivery	Indication of cesarean section only in cases of severe respiratory symptoms	No mention

TN= Technical Note; FEBRASGO = *Federação Brasileira das Associações de Ginecologia e Obstetrícia* (Brazilian Federation of Gynecology and Obstetrics Associations); COVID=coronavirus disease; NB= newborn.

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	No mention	Does not recommend labor in water immersion	No mention	Does not recommend labor in water immersion	No mention	No mention	No mention
Labor induction	No mention	Labor induction in case of clinical decompensation	No mention	Labor induction when the pregnant women is in adequate clinical conditions	No mention	No mention	No mention
Labor location	No mention	Does not recommend home birth for suspect or confirmed women	No mention	Recommends hospital delivery for all pregnant women	Delivery and labor follow up in location with maternal-fetus management	Delivery and labor follow up in location with maternal-fetus management	No mention
	No mention	Recommends PPP rooms for confirmed or suspect pregnant women	No mention	No mention	No mention	No mention	No mention
Home birth	No mention	-	No mention	Does not recommend	No mention	No mention	No mention
Labor companion	No mention	After negative confirmation of Covid-19 for the screening, a companion wearing mask is allowed	No mention	According to the rules of each institution. After negative confirmation of Covid-19 for the screening, a companion wearing mask is allowed	After negative confirmation of Covid-19 for the screening, a companion wearing mask is allowed	No mention	Allowed since asymptomatic/a

TN= Technical Note; FEBRASGO = *Federação Brasileira das Associações de Ginecologia e Obstetrícia* (Brazilian Federation of Gynecology and Obstetrics Associations); COVID=coronavirus disease; NB= newborn.

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Presence of doulas	No mention	No mention	No mention	Does not recommend	No mention	No mention	No mention
Offering of liquids during labor	No mention	No mention	No mention	No mention	Allowed	No mention	No mention
Pain relieving methods	No mention	Recommended	No mention	Recommended	No mention	No mention	No mention
Umbilical cord clamping	Inconclusive	No mention	No mention	Wait 1 to 3 minutes	No mention	Opportune clamping	Variable according to the NB's vitality
Skin-to-skin contact	No mention	No mention -	No mention	Not recommended skin-to-skin contact to patients with COVID-19	Hygiene before and after contact with the NB, including bath in the bed, use of caps.	No mention	Hygiene before and after contact with the NB, including bath in the bed, use of caps.
Breastfeeding in the first hour	No mention	No mention	No mention	No mention	No mention	Recommended since it is according to the necessary preventive procedures.	Puerperal women in adequate overall status should maintain breastfeeding following necessary protection procedures
Newborn's bath	No mention	No mention	No mention	Drying and warming of NB, followed by bath	No mention	No mention	NB should be dried up with intact umbilical cord, bath right after birth not necessary

TN= Technical Note; FEBRASGO = *Federação Brasileira das Associações de Ginecologia e Obstetrícia* (Brazilian Federation of Gynecology and Obstetrics Associations); COVID=coronavirus disease; NB= newborn.

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Table 1**concluded**

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Time of binomial's discharge	No mention	24 hours for healthy binomial	No mention	-	24 hours for healthy binomial	No mention	No mention
Breastfeeding at home	No mention	Recommended	No mention	Recommends use of mask and hand hygiene before and after	Recommends use of mask and hand hygiene before and after	Recommends use of mask and hand hygiene before and after	No mention

TN= Technical Note; FEBRASGO = *Federação Brasileira das Associações de Ginecologia e Obstetrícia* (Brazilian Federation of Gynecology and Obstetrics Associations); COVID=coronavirus disease; NB= newborn.

Discussion

Since pregnant and puerperal women were included in the risk group for COVID-19, MH and other Brazilian agencies have been emitting service protocols in attempt of establishing fluxes for prevention and treatment. For it is a new disease, the speed of publication and change of protocols has been requiring fast adaptation from health professionals and services, which perhaps not always will come together with practices based on evidences, on humanization and on women's rights.¹⁸

The results of this analysis show differing in the execution or not of tests for detection of coronavirus in pregnant women that present or not respiratory symptoms of the disease; such fact is anchored in the time of onset of COVID-19 symptoms. However, more than 80% of women with COVID-19 which are admitted into childbirth care services are asymptomatic.¹⁹

The care in the pregnancy-puerperium cycle in Brazilian context already had weaknesses before the pandemics, characterized by the excessive use of hard technologies and medicalization of women's bodies, of labor and birth and institutional racism. High rates of cesarean sections,^{20,21} frequent use of episiotomies²² and obstetric violence highlighted by racism²³ are consequences of this scenario.

The power relations present in the control of pregnancy-puerperal cycle are more tensioned during the sanitary crisis, with severe threats to reproductive and sexual rights, so that the COVID-19 pandemic might be a risk factor for obstetric violence.^{6,24,25}

Furthermore, for a positive childbirth experience, the social determinants of health are key factors,^{7,8} as well as for the understanding of mortality of pregnant and puerperal woman by COVID-19, a survey demonstrated that eight out of ten pregnant and puerperal women which died of coronavirus in the world were Brazilian and the majority of them were non-white,⁴ and an English series evidenced that black women with morbidities such as obesity, hypertension and diabetes have more probability of presenting COVID-19.²⁶

When considering the profile of maternal mortality in Brazil, in which morbidities such as hypertension (eclampsia and pre-eclampsia) stands out as the main causes,²⁷ delaying prenatal care in 14 days for women with coronavirus symptoms, as protocols suggest, can be determinant to a unfavorable maternal and neonatal outcome, since, however the prenatal coverage in Brazil is nearly universal, there is no completeness in the actions, such as, for

example, the execution of complementary exams that don't reach 70% of all pregnant women.²⁸

It is perceived in the MH guidelines the responsibility of PHC as a manager of mother-and-child care. The Unified Health System has been standing out, in this pandemic situation, the only alternative for the majority of population, being necessary, thus, investments in the system, as well as in the techno-assistance model of Family Health Strategies, in order to assure the access to prenatal and puerperal quality care.²⁹

The study showed protocols aligned to international recommendations,³⁰ attempting to ensure women's autonomy, as well as demedicalization of the perinatal cycle. In this crisis, women's rights, hardly achieved over long years of improvements and expressed in public policies, are severely threaten.

More than the propagation of protocols of flux, actions that follow the management indicators of adequate practices which support positive experience in childbirth are necessary. The daily findings of scientific researches should be considered and adapted to the sociodemographic reality of each territory. It is necessary the regulation and organization of mother-and-child healthcare network, in order to ensure access, quality, safety and continuity in care for women and newborns with or without COVID-19.

Author's contribution

Stofel NS and Christinelli D participated in the concept and design of the study, data analysis and acquisition. Silva RCS participated in data analysis and acquisition. Salim NR, Beleza ACS and Bussadori JCC participated in data interpretation and writing of the manuscript. All authors participated in data interpretation, writing and critical revision of the manuscript and approved the final version of the article.

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