



AWARENESS & ACCEPTANCE OF COVID19 VACCINES AMONG PREGNANT WOMEN

Obstetrics & Gynaecology

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ABSTRACT

COVID-19 infection during pregnancy may result in rapid deterioration of health of pregnant women and might affect the foetus also.

Aim: To assess the awareness and factors influencing the acceptance of covid19 vaccine among pregnant women

Methodology: This study was conducted in the department of Obstetrics and Gynaecology, KIMS, Bangalore over three months. The antenatal patients visiting the outpatient department were included in the study. Those who have received two doses of vaccination already were excluded. A well-constructed questionnaire about the various factors associated with the vaccine was provided to all participants.

Results: 580 pregnant women participated in the study and completed the questionnaire. 31.4 % belonged to high risk pregnancy group. 85 % believed that vaccines in India have adequate efficacy and 72.9% were aware that vaccines have been approved during pregnancy. 84.7% were worried that the vaccine is harmful to the foetus. 45.9% said that they would agree to take the vaccine willingly. However, 72.2 % stated that they will be willing to take the vaccine if counselled for it by their doctor. 44.9% of participants were willing to take the vaccine if counselled by the doctor, at the initial month of the study, which increased to 84.9% of the participants enrolled during the third month of the study.

Conclusions: Vaccination is the most promising means of controlling the spread of the corona virus pandemic. Effective counselling of antenatal mothers by health care providers plays a pivotal role in promoting vaccine acceptance. Over time with increasing awareness, the acceptance of the vaccine among pregnant women is likely to show a steeply rising trend.

KEYWORDS

corona virus, vaccine, pregnant women, awareness, acceptance

INTRODUCTION:

The coronavirus disease 2019 (COVID-19) pandemic has led to many deaths worldwide.⁽¹⁾ Pregnant and postpartum women seem to be more likely to develop a more severe course of COVID-19 compared to their non-pregnant counterparts.⁽²⁻⁶⁾

It has been suggested that severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) infection in pregnant women is associated with an increased risk of severe disease course, with the need for invasive ventilation or extracorporeal membrane oxygenation, and/or even death.⁽³⁻⁷⁾ Another study, states that there could be a link between COVID-19 and the risk of pre-term and caesarean deliveries.⁽⁸⁾

Several vaccines have been developed and approved for use while maintaining the appropriate regulations.^(9,10)

It is essential to understand factors influencing the acceptance of vaccinations among various groups of the society, including antenatal women, which will contribute to the return of society to a pre-pandemic state.⁽¹¹⁾

Given the potential benefits and risks of the vaccine, International professional bodies have given supportive remarks regarding the COVID-19 vaccine in pregnancy. WHO recommends use of recombinant vaccine in pregnant women, provided the benefits of vaccination outweigh the potential risk. Pregnant women may also be exposed to COVID-19 vaccine before the woman knows she is pregnant. WHO does not recommend pregnancy testing before vaccination and delaying pregnancy or terminating pregnancy due to vaccination.

International Federation of Gynecology and Obstetrics (FIGO) believes that risk-based approach to immunization might be of disadvantage to the pregnant woman.

The Royal College of Obstetricians and Gynecologists (RCOG) states that pregnant women should be offered the vaccine as the general population.⁽¹²⁾

The American College of Obstetricians and Gynecologists (ACOG) states that pregnancy testing should not be required prior to receiving vaccine and vaccine may be administered to the people who may consider future pregnancy. Pregnant women can receive any COVID-19 vaccine.

MATERIALS AND METHODS

This prospective study was conducted in Kempegowda institute of medical sciences Hospital between August 2021 to October 2021, over 3 months with pregnant women who were seen for prenatal care. Those who have received two doses of vaccination already were excluded. Data was collected using a face-to-face questionnaire. Written informed consent was obtained from all participants. The applied protocol was approved by the Medical Research Ethics Department of the hospital.

The stage of pregnancy of the patients was based on the last menstrual period or first-trimester crown-rump length. The questionnaire contained 15 questions about sociodemographic characteristics, vaccination history, perception of risk related to the COVID-19 pandemic, the impact of the COVID-19 pandemic, and acceptance of and attitude toward COVID-19 vaccination.

Indications of a high-risk pregnancy included preterm labor, gestational hypertension, gestational diabetes mellitus, foetal structural anomalies, multifetal pregnancy, epilepsy, and placenta praevia. Questions were constructed in simple format and all participants answered the required questions as per their own thoughts without the presence of or guidance by a doctor or healthcare worker in order to avoid bias or influence their thoughts about the vaccines.

RESULTS

Sociodemographic features of participants are shown in Table 1. Of 580 pregnant women who completed the questionnaire, 32.1% were in the first trimester, 29.6% in the second trimester and 38.3% were in the third trimester. Of these, 55 % were primigravida while 45% were multigravida. 31.4 % had one or the other risk factors making them a high risk pregnancy.

When assessed regarding the knowledge and awareness about the vaccines, 85 % believed that vaccines in India have adequate efficacy and 72.9% were aware that vaccines have been approved during pregnancy by government of India.

However, majority of them (84.7%) said that they were worried that the vaccine is harmful to the foetus. 45.9% said that they would agree to take the vaccine willingly. The highlight was that 72.2 % stated that they will be willing to take the vaccine if counselled for it by their doctor, stressing upon the need for proper counselling to promote vaccination.

Fear associated with health hazards due to the vaccine and anxiety related to the safety profile of the vaccine for the foetus were most

common concerns among the lot.

It was seen that over the study period, more and more people were keen on taking the vaccine, probably due to rising awareness amongst the population with time. During the first month of the study, 44.9% of participants were willing to take the vaccine if counselled by the doctor, which increased to 84.9% of the participants enrolled during the third month of the study, who stated their intent to receive the vaccine if it were recommended by their doctor.

Table 1. Demographic details of the patients involved

	Number	Percentage
Age group		
20 to 30	393	67.8
31 to 40	187	32.2
Education status		
Upto primary education	346	59.7
Graduation and above	234	40.3
Obstetric score		
Primigravida	319	55
Multigravida	261	45
Trimester of pregnancy		
First	186	32.1
Second	172	29.6
Third	222	38.3
Risk factors		
Low risk	398	68.6
High risk	182	31.4

Table 2. Knowledge about vaccines among pregnant women

Questions asked	Yes		No	
	Number	Percentage	Number	Percentage
Vaccines in India have been approved during pregnancy	423	72.9	157	27.1
Vaccines in India have adequate efficacy	493	85	87	15
Vaccines are safe to be administered in all trimesters	239	41.2	341	58.8

Table 3. Attitude Among Pregnant Women Towards The Vaccines

Questions Asked	Yes		No	
	Number	Percentage	Number	Percentage
I fear that the vaccine can lead to health problems	393	67.8	187	32.2
I am worried that the vaccine is harmful to the foetus	491	84.7	89	15.3
I agree to take the vaccine willingly	266	45.9	314	54.1
I will be willing to take the vaccine if counselled for it by my doctor	419	72.2	161	27.8

Table 4. Acceptance Of Vaccine Over The Study Period

Period at study	Number of participants	Number agreeing to take the vaccine if counselled by their doctor	Percentage of participants agreeing to take the vaccine if counselled by the doctor
Day 1 to day 30	196	88	44.9
Day 30 to day 60	186	159	82.3
Day 60 to day 90	198	172	86.9

DISCUSSION

On July 2, 2021, the Indian government brought out an operational guideline regarding vaccinating pregnant women, including details about educating them about the risks from the vaccines versus the risks of getting infected with Covid-19. Those eligible would be able to get any of the three vaccines currently authorised in India-Covishield (the local version of the AstraZeneca vaccine), Sputnik V (imported from Russia), or Covaxin (India's homegrown vaccine).^[13]

Skjefte et al states that one of the top three reasons for pregnant women to decline COVID-19 vaccination during pregnancy even if the vaccine were safe and free were that they did not want to expose their

developing baby to any possible harmful side effects (65.9%), similar to our study where 84.7% of the participants were anxious about the safety profile of the vaccine for the foetus.^[1]

As per Skjefte et al., health care providers had a limited impact as only around 45.9% of pregnant women would be more likely to have themselves vaccinated if recommended by health care providers. In the present study, there seems to be a major impact if the doctors treating the patients were to counsel the patients about the vaccine, as 72.2% were willing to take the vaccine if counselled by their health care provider.

Vaccine hesitancy is a complex, multifaceted problem with significant variability based on region, race, ethnicity, pregnancy, education level, employment status, social and geopolitical influence.^[14] Various steps, including rebuilding public vaccine confidence by uniform, consistent, transparent, and effective communication from policymakers, media, and health care providers, and effective community engagement are important to improve vaccine acceptance.^[14,15]

CONCLUSIONS

COVID-19 vaccination is the most promising aid to control the spread of the COVID-19 global pandemic. It is important to safeguard the vulnerable population of pregnant women while also prioritizing their involvement in clinical trials for vaccine and anti-viral therapies and vaccine administration. Health care providers need to stay updated with the new information to provide evidence-based information and effective counselling to antenatal patients as they play a pivotal role in promoting the vaccine and increasing its acceptance. Over time, it seems likely that with increasing awareness, the acceptance of the vaccine among pregnant women will show a steeply rising trend.

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