

A study of women with unplanned pregnancies during COVID-19 pandemic and their contraceptive awareness

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Abstract:

Background: This was a study conducted to assess the contraception awareness among women with unplanned pregnancies and their outcomes, during lockdown period of COVID-19 pandemic.

Materials and Methods: We conducted an observational study on 50 cases of unplanned pregnancies during the lockdown period from 25 March 2020 till 31 July 2020. Women were assessed based on their basic information and knowledge of contraception. Maternal outcomes were assessed based on the period of gestation, mode of abortion and choices of future contraceptives.

Results: Incidence of unplanned pregnancies was 40.9%. 72% belonged to 25-34 years age group and 68% were graduates or postgraduates. 92% knew about barrier method, 62% were familiar with IUCD, 18% were aware of oral contraceptive pills whereas 60% knew about permanent sterilization. 34% women used condom during their current pregnancy, 26% followed rhythm method, whereas 24% did not use any contraception. 74% presented before 07 weeks of gestation, 22% presented between 07-12 weeks of gestation whereas 02 patients presented beyond 12 weeks of pregnancy. 62% aborted by the medical method, 30% underwent suction and evacuation whereas 08% continued their pregnancy. After the MTP, 16% underwent IUCD insertion, 10% received DMPA injection, 30% received oral contraceptive pills and 24% chose barrier methods of contraception.

Conclusion: During this pandemic, the marked reduction in access to health care facilities has led to an increase in unplanned pregnancies and unsafe abortions in turn. Moreover, even the educated society faces the lack of knowledge on contraception and needs information through modern means of telecommunication.

Keywords: unplanned pregnancy, COVID-19, contraception

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I. Introduction

In current times of global pandemic, the health care system has been overwhelmed with critical care of COVID-19 patients worldwide. With much of the population being under lockdown or in restricted areas, the routine health care facilities have taken a major hit.

Family planning and contraception have been one of the necessities which are facing a significant downfall in the last few months of the pandemic.

In best case scenario, with public and private sector, clinical family planning services resumed in phased manner from third week of May 2020; FRHS has laid down that 24.55 million couples would not be able to access contraception. This would result in an additional 1.94 million unintended pregnancies, 5.55 lakh live births, 1.45 million abortion (including 0.68 million unsafe abortions) and 1425 maternal deaths.¹

In India, the historic Medical Termination of Pregnancy Act of 1971 legalized abortion process to protect women from the grave risks of unsafe abortions. Despite this, unsafe abortion remains the third leading cause of maternal mortality in India, and close to eight women die from complications of unsafe abortions every day.²

We have studied a population of women presenting with unplanned pregnancies during these times of crisis and assessed their knowledge of various methods of contraception.

II. Aims and Objectives

1. To study the incidence of unplanned pregnancies in the given population
2. To assess the clinical condition and complications associated during the MTP
3. To study the awareness of contraceptive methods and their preferences in the given population

III. Material And Methods

The observational study was conducted from 25 Mar 2020 to 31 Jul 2020 during the lockdown period of first wave of COVID-19 pandemic.

Study Design: Prospective observational study.

Study Location: This was a naval hospital catering to mainly defense population from different strata of society all over the country in Department of Obstetrics and Gynecology, at INHS Sanjivani, Southern Naval Base, Kochi, Kerala, India.

Study Duration: 25 Mar 2020 to 31 July 2020.

Sample size: 50 patients.

Inclusion criteria: All women who presented with unplanned pregnancies

Exclusion criteria: All women with planned pregnancies and women who underwent MTP for indications related to maternal comorbidities or fetal abnormalities.

Procedure methodology

Data was obtained during the antenatal OPD visits. Knowledge, attitude, and practice questionnaire was provided to each patient with their anonymity preserved. Women were assessed based on their age, education, number of children at presentation. Their knowledge on various methods of contraception was assessed. We gathered information on the contraceptives used in the past, the reason of choice for a particular contraceptive and the method used to avoid the current pregnancy. At first visit in the OPD, detailed history was taken about present pregnancy and its period of gestation, past obstetric history and presence of any systemic comorbidities. General status of each patient was assessed. Basic investigations i.e., hemoglobin levels, blood grouping, viral serological markers and screening for gestational diabetes mellitus and thyroid disorders were done. The ultrasound confirmation of intrauterine pregnancy and its period of gestation was done. A written informed consent was obtained from each woman prior to the procedure of termination. Pregnancies of less than 49 days were given medical treatment with Tablet Mifepristone 200mg PO SD followed by Tablet Misoprostol 800mcg PV after 48 hours. Patients were explained the side effects and complications of the procedure. Suction and evacuation were performed in cases of incomplete abortions and pregnancies of more than 49 days. Every woman was reassessed after an interval of 15 days with a review ultrasound to rule out incomplete abortion.

Maternal outcomes were assessed based on the period of gestation at presentation, the mode of termination of pregnancy and the associated complications.

All women were provided with various methods of contraception i.e. barrier method, oral contraceptive pills, IUCD insertion and DMPA injection.

Statistical analysis

Data was statistically analyzed using SPSS version 22.0 and categorical analysis done using Chi square test with p value <0.05 considered statistically significant.

IV. Result

During the current study the incidence of unplanned pregnancies was found to be 40.9%. Our OPD had a total of 122 antenatal cases registered during the study period, out of which 50 were unplanned pregnancies. In the year 2019, our incidence of unplanned pregnancies was 15.5%.

Basic Information: Age group of the study population ranged between 18-35 years with an average age of 28.12years. 72% (36/50) were in the age group between 25-34 years whereas 28% (14/50) were in the age group between 18-24 years. 44% (22/50) had completed graduation, 24% had completed their postgraduation and 32% (16/50) had not pursued education beyond higher secondary. All women were parous wherein 56% (28/50) were primipara, 34% (17/50) had two children and 10% (05/50) had three children.

Knowledge and attitude: 08% (04/50) were unaware of any method of contraception and had not used any method in the past. 92% (46/50) of the study population had knowledge of barrier method, 62% (31/50) were familiar with IUCD, 30% (15/50) were aware of emergency contraception, 18% (09/50) were aware about oral contraceptive pills, 32% (16/50) knew the rhythm method, 14% (07/50) were aware about lactational amenorrhea, 10% (05/50) were aware of DMPA injections whereas 60% (30/50) knew about permanent sterilization method.

Women were asked about the priority of choice of contraceptive method. 32% (16/50) preferred depending on effectivity, 08% (04/50) chose affordability, 60% (30/50) chose ease of availability of the contraceptive tool. 72% (36/50) did not know which method of contraception was effective. When asked about the fertile period in a menstrual cycle, 10% (05/50) said during menses, 58% (29/50) said few days before menstruation, 12% (06/50) did not know the relationship with the menstrual cycle. Only 20% (10/50) knew that ovulation takes place 14 days before menstruation. 22% (11/50) thought that an unsupervised abortion could

have serious consequences on health, 42% (21/50) thought it had slight effect, 18% (09/50) did not know whereas 18% (09/50) thought that it did not have any effect on physical and mental health.

Practice: The study population was asked about the method of contraception they have used in the past. 40% (20/50) had used barrier method, 10% (05/50) used rhythm method, 04% (02/50) used oral contraceptive pills and emergency contraceptive pills each, 02% (01/50) had used IUCD and 20% (10/50) had used no method of contraception. 26% (13/50) had unplanned pregnancies in the past, whereas 74% (27/50) did not have such experiences in the past. During the current unplanned pregnancy, 28% (14/50) had used condom, 02% (01/50) had used oral contraceptive pills, 06% (03/50) had used emergency contraceptive pill, 26% (13/50) followed rhythm method, 10% (05/50) followed lactational amenorrhea method, 28% (14/50) did not use any method to avoid pregnancy. (Table no. 1)

Maternal outcomes: 74% (37/50) presented at early gestation i.e., less than 07 weeks of pregnancy, 22% (11/50) presented between 07-12 weeks of pregnancy whereas two patients presented between 12-24 weeks of gestation. 62% (31/50) aborted with medical method, 30% (15/50) underwent suction and evacuation whereas 08% (04/50) decided to continue the pregnancy and delivered uneventfully.

Complications were seen in women with pregnancy more than 07 weeks. 30% (15/50) presented with post-abortion irregular bleeding. Two patients presented after self-medication of MTP pills without prior ultrasound confirmation of pregnancy. These patients presented with incomplete abortion and infection for which IV antibiotic were given and suction and evacuation were done. One patient developed severe anemia due to excessive bleeding and required blood transfusion. 80% (40/50) desired future methods of family planning. None of the patients in the study had any associated medical or surgical comorbidities. Of these 40 women, 16% (08/40) desired simultaneous insertion of IUCD after the procedure to avoid repeated OPD visits during the lockdown. 10% (05/40) received DMPA injection, 30% (15/40) were given oral contraceptive pills and 24% (12/40) received barrier method of contraception. It is pertinent to note that despite the unplanned pregnancy, 20% of the women did not accept any method of contraception to prevent future unplanned pregnancy. (Table no. 2)

Table no 1: Data obtained based on knowledge, attitude and practice questionnaire

Basic information		
Age group (in years)	No. of women	Percentage
18-24	14	28
25-34	36	72
Education		
Higher secondary	16	32
Graduate	22	44
Postgraduate	12	24
Parity		
Nulliparous	0	
Primipara	28	56
2	17	34
3	5	10
Knowledge and Attitude		
Aware of methods of contraception		
Barrier method*	46	92
Emergency pills*	15	30
Oral contraceptive pill*	09	18
IUCD*	31	62
DMPA*	05	10
Permanent sterilization*	30	60
Rhythm method [#]	16	32
Lactational amenorrhea [#]	07	14
No method	04	08
Basis of choice of contraception		
Effectivity	16	32
Affordability	04	08
Ease of availability	30	60
Knowledge of fertile period		
During menses	05	10
Few days before menses	29	58
14 before menses	10	20

Don't know	06	12
Effect of abortion on health		
Slight	21	42
Serious	11	22
No effect	09	18
Don't know	09	18
Practice		
Contraception used in the past		
Barrier method	20	40
Rhythm method	20	40
Oral contraceptive pills	15	30
Emergency contraception	10	20
IUCD	01	02
No method	10	20
Previous unplanned pregnancy		
Yes	13	26
No	37	74
Method used during current unplanned pregnancy		
Barrier method	14	28
Oral contraceptive pill	01	02
Emergency pill	03	06
Rhythm method	13	26
Lactational amenorrhea	05	10
No method	14	28

* Modern methods of contraception, # traditional methods of contraception

Table No. 2: Data obtained regarding the current pregnancy

Period of gestation at presentation (in weeks)	No. of women	Percentage
<07	37	74
07-12	11	22
>12	2	04
Mode of termination		
Medical	31	62
Surgical	15	30
Continued pregnancy	04	08
Complications after abortion		
Irregular bleeding	15	30
Infection	02	04
Future method of contraception		
Oral contraceptive pill	15	30
Barrier method	12	24
IUCD	08	16
DMPA injection	05	10
No method	08	16
Interval ligation	02	04

Table no. 3: Choice of contraception related to the level of education

Method of contraception	Less than higher secondary	Graduate/postgraduate	Total
No/traditional	15	16	31
Modern	1	18	19
Total	16	34	50

Table no. 4: Parity in relation to the past history of unplanned pregnancies

Unplanned pregnancy in the past	Primipara	Multipara	Total (n=50)
Yes	01	12	13
No	27	10	37
Total	28	22	50

V. Discussion

One third of the pregnancies culminate in an abortion, either spontaneous or induced. Nearly half of the pregnancies are unplanned. In 2016, a study published in *The Lancet* by the Guttmacher Institute and the World Health Organization estimated 56million abortions globally each year between 2010 and 2014.² Study by Kaye et al showed incidence of unplanned pregnancies to be 16.2% which was comparable to our incidence of 15.5% in the year 2019.³ The family planning services i.e., sterilization and IUCD were suspended a week before the nationwide stringent lockdown in Mar 2020. Ministry of Health and Family Welfare guided the states to withhold the sterilization and IUCD services till further order.¹ Furthermore, with the restricted number of OPD visits, many women were unable to make routine antenatal visits. This led to the sudden increase in the incidence of unplanned pregnancies to 40.9% during the lockdown period. This was comparable to the 40% rate in the study by Habib et al conducted in Pakistan, where the population was poor with low literacy rate and little knowledge of contraception where the first pregnancies occur at a young age.⁴ This increases our concern about the measures of family planning that are being promoted and followed in the general reproductive age group of our society.

Basic information: 28% women belonged to the age group of 18-24 years as compared to 27.2% in the study by Edward et al.⁵ 72% belonged to the age group of 25-34 years in our study comparable to 72% in the study by Teddy et al.⁶

32% had not pursued education beyond higher secondary comparable to 32.7% in study by Moges et al.⁷ Age and education in our study had no correlation to the increase in number of unplanned pregnancies. However, we saw a statistically significant preference for traditional or no method over modern methods of contraception among women with lesser education (p value <0.05). This has comparable results with the study by Pal et al.⁸ (Table no. 3)

There was no nulliparous woman in our study and majority were primipara (56%). But we found a statistically significant number of unplanned pregnancies in the past among the multiparas (p value <0.05). (Table no. 4)

Knowledge: The rate of awareness about barrier method, IUCD and permanent sterilization in our study was comparable to the results in the study by Kate et al.⁹ 30% in our study were aware about emergency contraception as compared to 29% in the study by Jamieson et al.¹⁰

42% in our study chose contraception based on lesser side effects associated with the method, comparable to 43.8% in the study by Ebenezer et al.¹¹

20% women in our study were aware about fertile period as compared to 15.3% in the study by Osmara et al.¹²

Practice: 33.9% in the study by Ebenezer et al had used condom in the past as compared to 40% in our study population.¹¹

26% in our study had undergone unintended pregnancy in the past as compared to 22.4% by Osmara et al.¹²

28% did not use any method of contraception to avoid the unplanned pregnancy in our study comparable to study by Jacqueline et al and Roy et al with percentage of 26.8% and 27.6% respectively.^{13,14}

35% in the study by Pal M et al used modern methods of contraception i.e. OCP, Condom, IUCD as compared to 40% in our study.⁸

96% women in our study presented before 12 weeks of gestation comparable to 96% in Sahoo et al study and 92.2% in the study by Isabelle et al.^{15,16}

08% women continued the pregnancy which was comparable to 5.7% in the Kaye et al study.³ Post-abortion bleeding seen in 30% was similar to 31% in study by Sahoo et al.¹⁵ Post-abortion bleeding was observed more in women who underwent medical abortion than those who underwent suction and evacuation. Larsson et al reported infection in 4.8% of the patients comparable to 4% in our study.¹⁷

We observed highest compliance to oral contraceptive pills (30%) among women after the abortion followed by condom (24%) and IUCD insertion (16%). According to National Family Health Survey there has been a decreasing trend in the use of IUCD users from 1992-93 to 2015-16 whereas an increase in the use of birth control pills and condoms between 1992-93 and 2015-16.¹⁸

Limitations of the study: With the nationwide lockdown, the possibility of increased period of cohabitation among the couples in our study would seem likely. This is where the need for knowledge of contraception and the education to choose a method of contraception is worth a mention. We also realized that the number of antenatal cases registered during the study period was comparable to the number of cases registered in the previous year i.e., 117 for the period of Apr-Jul 2019.

VI. Conclusion

Most of the population was aware about traditional methods as well as common modern methods but prioritized based on convenience of availability. This reflects on their contraceptive practices in the past as well as current pregnancy with majority practicing barrier method, traditional methods or no method of contraception. While the medical facilities and pharmacies continued to be exempted from the lockdown restrictions, the movement of general population was restricted leading to the reduction in purchase and utilization of modern methods of contraception. Not only does the fear of decline in use of family planning methods prevail, but many of the couples are forced to continue the unplanned pregnancy. This could lead to the estimated increase in number of live births to 5.5 lakhs and unsafe abortion to 6.8 lakhs in the best-case scenario, challenging the health care facilities even more.¹

In spite of India's family planning programme running for last fifty years over the diverse demographic strata, our country still has unmet needs for modern methods of family planning.²⁰ Family planning programmes have placed great emphasis on sterilization as a major method of family planning. This method has been widely accepted by high parity older women leaving the young fertile lower parity women uncovered under the programme. As per FP2020, global efforts are being taken to encourage the use of modern contraception which need to be encouraged strongly.²¹

The population in our study was an educated stratum of society. Yet there is a need to sensitize them at a younger age group and strengthen the health education with modern means of technology. Our focus in times of such pandemic needs to be on provision of essential and emergency care at its best and reduce the occurrence of untoward and simply avoidable incidents to an ascertainable level. With the promotion of telemedicine and telehealth facilities by MOHFW under the guidance of Hon'ble Supreme court during current COVID-19 scenarios, we could approach our population to a greater deal during this step wise lockdown.¹⁹ We need to maintain readiness for the sudden expectant increase in demands for permanent as well as long term methods of contraception as the pandemic comes under control globally.

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