International Journal of Reproduction, Contraception, Obstetrics and Gynecology
Mude S et al. Int J Reprod Contracept Obstet Gynecol. 2024 May;13(5):1179-1185
www.ijrcog.org
pISSN 2320-1770 | eISSN 2320-1789

DOI: https://dx.doi.org/10.18203/2320-1770.ijrcog20241062

Original Research Article

Acceptability of contraceptive methods in lactating mothers in a tertiary centre

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Received: 01 March 2024
Accepted: 11 April 2024

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ABSTRACT

Background: High fertility rate, high maternal mortality and high infant mortality rates are the shared problems of the all the developing countries of the world. According to Directorate of Health Services surveys, 40% of women who intend to use a family planning method in the first year postpartum are not using one. Contraceptive use is negligible among postpartum women, particularly young mothers. We aimed to determine the reasons for acceptability, non-acceptability, side effects and continuation of four contraceptive methods condoms, Depotmedroxyprogesterone acetate, (DMPA), copper intrauterine contraceptive devices (IUCD), progesterone only pills (POPs) in lactating mother after 6 weeks of delivery.
Methods: A total of 200 healthy nursing mothers, who needed contraception were enrolled in this prospective observational study. Women were explained about all four contraceptive methods used for the study. The reason for accepting a particular method was sought. The study participant were followed up at third and sixth month and side effects, failure rate, continuation rates, reasons for discontinuation of method were assessed.
Results: The most acceptable method was condom (40.5%) followed by DMPA (31%), IUCD (20.5%) and POPs (8%). The most common reason for selection of condom was fear of side effects with other methods (66%). Long acting method like DMPA and IUCD has good continuation rate of 87% and 85% respectively. Failure of contraception was seen only with condoms (2.8%).
Conclusions: This study showed condoms was most acceptable method but had failure whereas DMPA and Cu-IUCD have high continuation rate with no failure.

Keywords: Condom, Contraception, Intrauterine contraceptive device, Progesterone only pill

INTRODUCTION

India shares one sixth of the total burden of the global population of around 7.6 billion. High fertility rate, high maternal mortality and high infant mortality rates are the shared problems of the all the developing countries of the world. Population can only be controlled by effective and compliant methods of contraception. Birth spacing not only reduces the fertility but also improves the health of the mother.

India was the first country in the world to launch a family planning program, as early as 1952, with the main aim of controlling its population. Over the years India's Family Planning Program has evolved with the shift in focus from merely population control to more critical issues of saving the lives and improving the health of mothers and newborns. However, the unmet need for contraception at the national level has been 20.5% according to District Level Household Survey (DLHS-3, 2007-08). Contraceptive usage rose from 13% in 1970 to 48% by

2009. In 2015, there was an average 58% of women who used contraceptives.[1]

As per National Family Health Survey (NFHS)-IV (2015-2016) total fertility rate (TFR) for India is 2.2. The NFHS survey shows 53.5% use of contraceptives among married women (aged 15-49 years) and prevalence of modern method 47.8%.[2]

According to DLHS surveys: 92-97% of women do not want another child within 2 years after giving birth, but 35% of women had their children spaced at 2 years apart or less. 40% of women who intend to use a FP method in the first year postpartum are not using one.[3]

Contraceptive use is negligible among postpartum women, particularly young mothers. The unmet need has also been calculated dependent on economic strata and has been estimated to be 9.5% among poor women in India and 5.9% among women with better economic means. While, the contraceptive unmet needs led to unplanned pregnancies and unsafe abortion, maternal mortality ratios remain high in India at 300 deaths per 100,000 live births. In addition the neonatal and infant mortality rates are high at 49.0 and 57.0 per 100 live births respectively according to NFHS-3.[4]

Availability and uptake of methods for spacing births therefore, remains critically important relative to the overall maternal child health challenges confronting India as a whole and impacting adversely on quality of life for women and their families.

Postpartum contraception is the initiation and use of family planning methods during the first year after delivery.

Both Non-hormonal and hormonal method can be used. Non hormonal method include lactational ammenorrhoea method, barrier methods, peroidic abstinence, copper intrauterine device (IUCD), male and female sterilization. Hormonal method includes progestin only pills, (POPs), Depot Medroxyprogesterone acetate (DMPA), progesterone IUCD, oral contraceptive pills (OCP).

Combined oral pills are not recommended in breast feeding mother due to diminished quantity of breast milk, decreased duration of lactation and possible adverse effects on infant growth. Methods DMPA, POPs, CONDOMS, IUCD (both hormonal and copper containing) are safe in lactating mothers less than 6 months postpartum as they have no effects on breast milk quality, quantity and infant growth.

This study was conducted with the aim to find the acceptability of four contraceptives method safe in lactating mother in a tertiary centre. The objectives was to find the reasons for acceptability and non-acceptability of particular method and their side effects and continuation for 6 months.

METHODS

After approval from the institute ethical committee, this prospective observational study was carried out in postpartum clinic of Post graduate Institute of Medical Education and Research, Chandigarh between July 2018 to December 2019. 200 healthy nursing mothers, attending postpartum clinic at 6 to 9 weeks postpartum who were exclusively breast feeding were enrolled. The exclusion criteria were non lactating mothers, already pregnant or using any contraceptive method.

Client were explained about all 4 contraceptive methods, their benefits and side effects and were selected after considering inclusion and exclusion.

The reason for accepting a particular method was sought. At the same time reasons for not selecting other method too was noted.

The clients were followed up at 3rd and 6th months after enrolment. During follow up visit, clients were asked for satisfaction, experiences, side effects. If the client wanted for discontinuation, points regarding this was noted and any misconceptions were clarified. The clients who had side effects, proper treatment was given.

RESULTS

Among 200 women, 81 (40.5%) chose condoms, followed by 62 (31%) DMPA, 41(20.5%) IUCD. The least selected method chosen by women was progestin only pills which was only 8% (Table 1).

Table 1: Different method of contraception selected by lactating mother.

Method	Frequency	Percentage
IUCD	41	20.5
DMPA	62	31.0
Condoms	81	40.5
POPs	16	8
Total	200	100

Table 2 shows the demographic profile of the clients. Among 200 women, maximum of 143 (71.5%) were between age 21 to 30 years followed by 25% between age 31 to 40 years. Among women of age group 21-30 years, 37% opted for condoms followed by 30.7% DMPA. In literacy 66 (33%) women were secondary educated and 58 (29%) were illiterate. Among illiterate women, 43 (74%) women has selected condoms. 29 (44%) secondary educated women had chosen for DMPA. IUCD and DMPA was accepted by women who were well educated. The standard of education is helpful for better understanding of a particular method and its benefits, side effects. Secondary and graduate women have chosen IUCD and DMPA.

Tale 2: Demographic characteristic of the subjects.

		Condom (%)	DMPA (%)	IUCD (%)	POP (%)
Age	**Total**				
=<20	6	4 (67)	2 (33)	-	-
21-30	143	53 (37)	44 (38.4)	31 (21.6)	15 (1.07)
31-40	50	24 (48)	15 (30)	10 (20)	1 (2)
41-50	1	-	1	-	-
Literacy	**Total**				
Illiterate	58	43 (74.4)	7 (12)	4 (6.8)	4 (6.8)
Primary	38	13 (34.2)	17 (44.7)	5 (13.1)	3 (7.8)
Secondary	66	17 (25.7)	299 (43.9)	179 (25.7)	3 (4.5)
Graduate	38	8 (21)	11 (29)	13 (34.2)	6 (15.8)
Parity	**Total**				
1	100	36 (36)	34 (34)	19 (19)	11 (11)
2	52	20 (38.4)	18 (34.6)	12 (23.1)	52 (26)
3 or >3	48	25 (52.1)	10 (20.8)	10 (20.8)	48 (24)
Location	**Total**				
Rural	82	49 (59.7)	28 (34.1)	4 (4.8)	1 (1.2)
Urban	118	32 (27.1)	34 (28.8)	37 (31.3)	15 (12.7)

About 50% women had 1 living child. Irrespective of parity condom (36%) was first preference followed by DMPA (34%), IUCD (19%) and POPs (11%).

Rural women opted more for condom (50.7%) followed by DMPA (34%) and IUCD (4.8%). Women living in urban area preferred IUCD (31.3%) followed by DMPA (28.8%) and condoms (27.1%) (Table 2).

Awareness of contraception

Out of 200 women, 139 (69.5%) women had awareness of contraception, but only 42.5% women had used contraception proior. The main reasons for not using contraception were "Want of child" which accounted for 36.5% followed by fear of side effects (29.6%). Other reasons were no knowledge of contraceptive method (8.7%), misbeliefs (7.8%), antireligious (4.3%), husband staying away (3.5%) and husband disapproval (2.6%). Wife (75%) was the main person involved in decision taking of contraception use.

Reasons for selection of each method

In this study, the most acceptable method was condoms 81 (40.5%) followed by DMPA, IUCD and POPs. The most common reason for selection of condom was no side effects with condoms, which are present with other methods which accounted for maximum of 40 (49.5%). The other reasons for selection of condoms were previous use 15 (18.5%), husband or family refusal for other methods 10 (12.3%).

In case of DMPA, the most common reason for selection was "Every 3 monthly single injection" which was 34 (55%) followed by easy follow up dose and compliance10 (16%), and both 3 monthly injection and easy follow up in 10 (16%) clients .

Table 3: Reasons for selection of each method.

Method	Reason	Total (%)
Condom	No side effects	40 (49.5)
	Previous use	15 (18.5)
	Husband refusal for other methods	10 (12.3)
	Others	16 (19.7)
DMPA	3 monthly single injection	34 (55)
	Easy follow up dose and compliance	10 (16)
	Both	10 (16)
	Others	8 (13)
IUCD	Longer duration	22 (53.6)
	No interval or daily need of dose	10 (24.3)
	Both	6 (14.6)
	Previous use	3 (7.4)
POP	Reassurance with daily dose and return of fertility on stoppage	8 (50)
	Fear of side effects of other methods	5 (31.3)
	Previous use	3 (18.7)

Longer duration which is one time insertion 22 (53.6%) was main reason for selection of IUCD followed by no interval or daily need of dose 10 (24.3%) and both longer duration and no interval dosing 6 (14.6%).

Daily dose gives reassurance of contraception and return of fertility on stoppage 8 (50%) was main reason for POP selection followed by fear of side effects related to other methods 5 (31.3%) and previous use 3 (18.7%) (Table 3).

Reasons for non-acceptability of each method

The main reasons for non-acceptability of condoms were fear of failure 79 (66%) followed by not acceptance by sexual partners 22 (19%) whereas in DMPA fear of side effects 61 (42.2%), unwillingness of family members 26 (18.8%), every 3 months visit 24 (17%) were the reasons of non-acceptance. In case of IUCD fear of side effects 84 (52.8%), misconceptions 26 (16.5%), fear of insertion 12 (7.5%) whereas in POPs strict compliance 83 (45.1%) and fear of side effects 80 (43.4%) were main reasons for non-acceptability (Table 4).

Follow of each method

Follow up of all subjects were done at 3rd and 6th month of initiation. In case of condoms, at third month 4 discontinued and 3 were lost to follow up so 74 were followed at 6th month, which further decreased to 69 as 6 more discontinued. Pregnancy was noted in 2 women making failure rate of 2.8%. The continuation rate at sixth month from third month follow up was 89%.

The overall continuation rate was 81%. The reasons for discontinuation was lack of sexual pleasure experienced by partner, husband disapproval and non-availability of condom in few instances.

Out of 62 women who had selected DMPA continuation rate was 93.5% and 87% at end of 3rd and 6th months respectively. 4 were lost to follow up or discontinued the method in each follow up. The reason for discontinuation given by women was, they forget the scheduled injection date, could not reach the centre at the scheduled date or with in grace period due to distance of centre, far from the location of residence and few women due to personal reasons in family. Spotting was complained by 29.2% and 48.2% of women at 3rd and 6th month follow up respectively.

Table 4: Reasons for non-acceptability of each method.

Method	Reasons	Number (%)
Condom	Fear of failure	79 (66)
	Not accepted by sexual partner	22 (19)
	Lack of sexual pleasure	4 (3.3)
	Combined reasons	14 (11.7)
DMPA	Fear of side effects	61 (44.2)
	Unwillingness of family	26 (18.8)
	Every 3rd month visit for injection	24 (17.5)
	No immediate return of fertility	15 (10.8)
	Others	12 (8.75)
IUCD	Fear of side effects	84 (52.8)
	Misconceptions	26 (16.5)
	Fear of insertion	12 (7.5)
	Unwillingness from husband/family	13 (8.2)
	Ethical and religious issues	7 (4.4)
	Others	17 (10.6)
POP	Strict compliance for daily dose	83 (45.1)
	Fear of side effects	80 (43.4)
	Unwillingness of	14 (7.6)
	Husband/family	07 (3.8)

Table 5: Follow up of each method.

Method	Complain	3rd month (%)	6th month (%)
CONDOM	No side effects	59 (73)	55 74)
	Lack of pleasure	10 (12.3)	8 (10.8)
	Rupture	02 (2.4)	1 (1.4)
	Irritation	03 (3.7)	2 (2.8)
	Pregnancy	0	2 (2.8)
	Discontinuation	04 (4.9)	06 (8.2)
	Lost to follow up	03 (3.7)	0
DMPA	No side effect	35 (56.4)	22 (38.2)
	Spotting	18 (29.2)	28 (48.2)
	Headache	02 (3.2)	0
	Weight gain	01 (1.6)	02 (3.4)
	Combined	02 (3.2)	02 (3.4)
	Discontinuation	02 (3.2)	04 (6.8)
	Lost to follow up	02 (3.2)	0
IUCD	No side effects	20 (49)	22 (38.2)

Continued.

Method	Complain	3rd month (%)	6th month (%)
	Pain/discomfort	9 (22)	28 (48.2)
	Excessive bleeding	6 (14.6)	0
	Inter menst bleeding	2 (4.8)	02 (3.4)
	Expulsion	2 (4.8)	02 (3.4)
	Discontinuation of method	2 (4.8)	04 (6.8)
POPs	No side effects	9 (56.3)	6 (42.9)
	Nausea	03 (18.7)	02 (14.2)
	Headache	01 (6.25)	0
	Weight gain	01 (6.25)	02 (14.2)
	Discontinuation	2 (12.5)	4 (28.7)

Out of 41 women, who selected IUCD, there were 37 and 35 women at 3rd month and 6th month follow up respectively. 2 (4.8%) women had expulsion within 3 months and 2 women had discontinued the method in each follow up. The reason for discontinuation was pain and excessive bleeding. These women had IUCD removed at other centres. 49% and 59.5% had no complain at each visit respectively. Women who complained of pain and irregular menstrual bleeding were treated at the centre. The overall continuation rate of Cu-IUCD was 85%.

Among 16 women who opted POPs, 14 (87.5%) women continued the method at third month. 2 women (12.5%) had stopped taking pills. Women who continued the method were followed at the sixth month, 6 (42.9%) had no side effects, 4 (28.7%) women had stopped using the pills.

At the end of sixth month the continuation rate of POPs was 62.5%. The reason for discontinuation was not remembering to take pills daily, as busy with small babies and missing for 2-3 days (Table 5).

Continuation rates of each method

In our study at the end of 6th month, the continuation rate was maximum for DMPA (87%) followed by IUCD (81%). Condom was most acceptable method, was 81%. POPs had least continuation rate of 62.5% (Table 6).

Table 6: Continuation rate at the end of study.

Method	Continuation at end of 6th month	Percentage
CONDOMS (81)	66	81
DMPA (62)	54	87
IUCD (41)	35	85
POPs (16)	1 0	62.5

DISCUSSION

In this study 200 lactating mother between 6-9 weeks post-delivery were enrolled to assess the acceptability and non-acceptability of four contraceptive methods.

According to DLHS-3, 46% are non-users of any contraceptive method. Female sterilization (34%) was most common method used followed by any traditional method (7%), condoms (6%), pill (4%), IUCD (2%) and male sterilization (1%).[5]

In our study non users of contraceptive methods were 42.5% and reasons for not using contraceptive methods were desire of having children (36.5%) followed by fear of side effects (29.6%).

A study by Kinza et al, to assess the awareness and usage of various methods, concluded that despite having knowledge, there was a wide difference between awareness and practice of contraception. Majority (89%) of the women had awareness about contraception but was practiced by 51%. Barrier was the most commonest method practiced (37.8%) followed by pills (18%) and intra-uterine contraceptive device (17%).[6]

In our study 139 women (69.5%) had awareness of contraception but was practiced by 85 (42.5%).

Condoms

The main reasons for acceptability of condom 81 (40.5%) was no side effects which was present with other methods. Among 119 (59.5%) women who had not opted for condom, the reasons for non-acceptability was fear of failure which accounted 66% that is rupture and risk of pregnancy and non-acceptance by partner 19.5%, the continuation rate at third and sixth month was 91.3% and 89% respectively. 2 (2.8%) women had conceived due to contraception failure.

A study by Donta et al on acceptability of male condom showed that non acceptance by partner, perceived ineffectiveness, less comfort, lack of sexual satisfaction, husband's alcohol use, depression and anxiety was reasons for low acceptability.[7]

DMPA

In this study, 62 women who selected DMPA, most of them were given DMPA at 6 weeks postpartum. At the end

of third month, 58 (93%) women continued the method. The overall continuation rate was 87% at the end of sixth month.

A study conducted by Babre et al showed that there was good acceptance and continuation rate in the patients who had taken first dose of injection DMPA at 6 weeks of postpartum period against those who had taken injection DMPA between 6 weeks to one year. The most common reason for selection of this method was "Every 3 monthly single injection" which was 55%.[8]

Study by Chaudhuri et al showed that DMPA was used continuously (69%). The most sought after reason by users was easy to follow dose (30%) whereas difficulty with compliance (26%) with other methods remains the next important reason.[9]

The most common reason for non-acceptability in this study was "fear of side effects" (44.2%) followed by Unwillingness from husband or family from any injection (18.8%).

A study by Nirmalya et al showed that fear regarding side effects (66%) was the major determinant for non-acceptance of intra-muscular DMPA and in 57.6% husband were not willing.[10]

In our study the most common side effect at 3rd month (29.2%) and 6th month (48.2%) was spotting. 2 (3.4%) and 4 (6.8%) women discontinued the method at end of 3rd and 6th month respectively. The reason for discontinuation given by women was missed the injection, could not reach the centre.

Study by Fonseca et al and Divya et al showed spotting as most common side effect 63% and 33%; respectively.[11]

Cu-IUCD

In our study of 200 women, the acceptability of IUCD at 6 weeks was 20.5%. Among 41 women, 31 (75.6%) women were between age group 21-30 years and 7 (17%) women were between 31-40 years. IUCD was more accepted by women who had completed secondary level of education (41.5%) and graduation (36.5%). 19% women had 1 living child, among 41 women IUCD was more accepted by women living in urban area (90%) and 10% from rural area. The most common reason for selection of this method was 'longer duration of action which is one time insertion (53.6%), others are "no interval or daily need of dose (14.7%) and both longer duration of action and no interval dosing (24.3%) and previous use (7.4%).

The continuation rate of IUCD at the end of sixth month was 85%. The most common reason for non- selection was "fear of side effects" 52.8%. The other reasons were misconceptions with method (16.5%), unwillingness from husband or family (8.2%), fear of insertion and instrumentation (7.5%), ethical and religious issues (4.4%), combined reasons (8.1%).

A cross sectional study by Sangeetha et al on acceptability and safety of IUCD in postpartum mothers. Mean age of acceptance was 23.7, acceptance was more in those who completed secondary level of education. Main reason for acceptability was long-acting reversible contraception, the study showed acceptance was high in postpartum period.[12] In our study 75.6% women were between age 21-30 years, acceptance was more in women with secondary education and longer duration of action was main reason for selection.

A study by Sharma et al to study awareness and factors affecting acceptance of PPIUCD, the highest acceptance was seen in women in the age group ranging from 21-30 years (82.96%), those with secondary level of education (56.95%), women coming from urban areas (61.72%), Hindus (82.23%). The main reason for acceptance was awareness about its reversibility (73.62%) followed by awareness regarding safety and effectiveness of PPIUCD (69.96%). Refusal from partner/family member for PPIUCD insertion was most common (72.75%) reason for refusal followed by fear of complications (69.96%).[13]

Progestin only pills

In this study POPs was the least 16 (8%) accepted method by lactating mother .The continuation rate at the end of sixth month was 62.5%. Similar to study conducted by Espey et al to estimate the effect of progestin-only compared with combined hormonal contraceptive pills on rates of breastfeeding continuation in postpartum women.[14]

Among 8% women who selected POPs, there was not a single case of depression at follow up similar to study by Worly et al.[15]

The reasons for non-acceptability was strict compliance (45%), fear of side effects (43.6%), and unwillingness from husband and family (7.6%).

CONCLUSION

In this prospective study condoms were most acceptable method but t continuation rates with DMPA and Cu-IUCD was high. Failure of contraception was seen only with condom. To improve maternal and child health outcome, health professionals should be more focused to encourage, effective and high-quality contraceptive counselling during antepartum, intrapartum and postpartum period. Counselling should emphasize on long term methods and should focus on high failure rate with barrier methods which results in unintended abortions.

Funding: No funding sources
Conflict of interest: None declared
Ethical approval: The study was approved by the Institutional Ethics Committee

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Cite this article as: Mude S, Singh A, Suri V, Singla R, Bagga R, Jain V, et al. Acceptability of contraceptive methods in lactating mothers in a tertiary centre. Int J Reprod Contracept Obstet Gynecol 2024;13:1179-85.