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Study of prevalence of different contraceptive methods feasability of DMPA among married women in urban area of Rama Medical College, Kanpur

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Abstract

India's population has been steadily increasing at the rate of 16 million each year and is projected to reach 1.53 billion by the year 2050. The total contraceptive prevalence rate (CPR) in India among married woman is estimated at 56.3% as per NFHS-3 data. The family welfare programme is mainly based on a "Cafeteria approach"; where by a number of methods of contraception are offered to the eligible couples. Considering the improvement in prevalence of contraceptive users & privacy, safety and efficacy of long acting injectables, the study was undertaken to evaluate prevalence of contraceptive methods among married women of different ages in urban area of Kanpur & source of information & side effect of Injectable Contraceptive DMPA in study population.

Materials and Method: This is community based observational cross sectional study including randomly selected 350 Married women of reproductive age group(18-49 years) residing in urban field practice of Rama Medical College hospital and research center, Kanpur. Data was collected with the help of set proforma and then analysed with SPSS software version 21 & Chi square test was applied appropriately.

Results-Prevalence of contraceptive measures among eligible subject were, condom 27.23% followed by IUCD 22.77% & OCP 20.98%, Sterilization 13.54% & DMPA 9.8%. There is statistically significant association between different age groups & types of contraceptives used (chi square) $x^2 = 78.451$, d.f.= 30 , & p =.000. Educational status of middle or higher class passed were comparatively using more contraceptives. Majority 11(55%) had Husband/family member as the source of information for injectable contraception. Amenorrhoea (68.18%) was the main side effect of DMPA in study.

Conclusion: The prevalence of contraception use (63.14.%) is improving among urban dwellers. Middle or higher classes passed were utilizing more contraceptive measures. DMPA is a safe, effective, reversible but neglected long acting injectable contraceptive. Acceptance is highest when DMPA comes into the basket of contraceptives. There is a need to develop standardized protocols for counselling, training of ASHA and ANMs and strengthening of health system.

Keywords: Contraceptives, Injectable Depo Medroxy Progesterone Acetate, NFHS-3, Contraceptive prevalence rate

Introduction

India's population has been steadily increasing at the rate of 16 million each year. It crossed 1 billion mark on 11th May 2000, and is projected to reach 1.53 billion by the year 2050. India was the first country in the world to formulate the national family planning programme in the year 1952 with the objective of "reducing the birth rate to the extent necessary to stabilize Approximately13% of currently married women are not using any method of contraception but would still wait for 2 years before having a child. These women are described as having an "unmet need for family planning". The total contraceptive prevalence rate (CPR) in India among married woman is estimated at 56.3% as per NFHS-3 data.[1,2] This is comparatively lower than neighboring countries like Bhutan, Bangladesh and SriLanka whose CPR stands at 65.6%, 61.2% and 68.4% respectively.[3] The family welfare programme is mainly based on a "Cafeteria approach"; where by a number of methods of contraception are offered to the eligible couples. In India primary method of family planning is female sterilization at 65.7% which is the highest in the world. India gives only four options in basket of contraceptive methods in the public sector condom, sterilization, pills and intrauterine device.[4] Indeed, only 0.1% of married women were using injectable in 2005-2006.[5] They are not included in Government of India family planning program because of fears expressed by many authorities about their appropriateness and quality of services.[6] Injectable, need to be considered to expand the basket of family planning choices in the NFWP and reduce unmet need.

Aims and Objectives

1. To study prevalence of different contraceptive methods among married women of different ages in urban area of Rama Medical College Hospital & Research Centre, Kanpur.
2. To study source of information & side effects of Injectable Contraceptive DMPA in study population

Materials and Method

The study was carried out among married women of reproductive age group (18-49 years) in the UHTC (urban health training centre, Kalyanpur) field area of

Rama medical college hospital and research centre, Kanpur.

Type of the study: community based descriptive, cross-sectional study

Area of the study: Urban field practice area (U.H.T.C, Kalyanpur) of Rama Medical College hospital and research center, Mandhana, Kanpur.

Study Population: Married women of reproductive age group(18-49 years), residing in urban field practice area

Inclusion Criteria: Women who are married at age of 18 – 49 yrs. and presumed to be sexually active.

Pregnant and Postpartum amenorrhoeic women

Exclusion Criteria: Those who were not willing to participate.

Widow women

Study Period: January 2014 to December2014.

Sampling Design: Random sampling method.

Sample Size: The sample size is calculated by taking the prevalence rate of contraceptive use (56.3%) at 5% significance level and 10% error as follows –

$$3$$

q = 43.7% (100-56.3)

L=10% allowable error of Prevalence

~ 310 = (~ 350 About 10% more than sample size interviewed)

UHTC provides health care to 12 mohallas of ward 18 & 42 of urban area of kalyanpur, out of which 03 mohallas namely Kalyanpur Khurd, Janakipuram and R.K puram having population of 3000+1500+1000 respectively = 5500, were selected randomly.

Thus total female population of 18-49 years of above three mohallas = 5500x220/1000 =1210 (As population of females aged 18-49 is 220 per thousand). So, 1210/310 = 3.90 rounded off to ~ 4, thus eligible females of every 4th house which was selected by systemic random sampling method from all 03 study mohallas. After taking informed consent, the Pre-designed and Pre-tested questionnaire based proforma which included the subject's socio -demographic details, obstetric history, menstrual history, weight, blood pressure and questions related to their contraceptives status and compliance , was filled. Three monthly follow up was done & benefits and the adverse effects were noted at every visit. The subjects were thus followed up for one year at this centre. Socio - demographic variables for different contraceptive measures opted by urban dwellers &various adverse effects for injectable DMPA were studied using SPSS software version 21& Chi-square test was applied.

Results

The above Table 1 showing eligible females of different age groups using different contraceptive devices viz. OCP by 47(13,4%), IUCD by 51(14.6%), condom by 61(17.4%), DMPA by 22 (6.3%), sterilization by 31(8.9%) and practicing natural method by 12 (3.4%) and those not using any type of contraception were 126(36%). Maximum contraceptives 128(36.57%) were utilized by the eligible couples of 26-33 years age group. Overall prevalence of contraceptive measures was 63.14% & non-users were 36.86%.

In present study, Table 2 shows study subjects of different educational status according to the Type of contraceptive used, among illiterate group, maximum 13(37.1%) were using condom, in primary education group, maximum 14(38.9%)were using condom, in middle education group, maximum 13(18.8%) were using condom, in secondary education group, maximum 13(12.4%) were using IUCD, in higher secondary group, maximum 12(21.1%) were using pills, In graduate group, maximum 10(20.8%) were using sterilization as contraceptive method. The association between eligible females of different educational status & Types of contraceptive used, was found to be statistically significant chi-square $\mathbf{x}^2 =$ 78.451, d.f.= 30**,** & p =.000.

In the above Table 3, it was observed that majority 11(55%) had Husband/family member as the source of information for contraception, 6(27.27%) from health worker, 4 (18.18%) from doctors/ASHA.

In the above table 4 maximum women 15(68.18%) had only amenorrhea as side effect, 4(18.18%) had Irregular spotting per vaginum, 1(4.54%) had heavy bleeding per vaginum and 01(4.54%) had amenorrhea with Mood change & Change in sex drive (Anxiety).

Discussion

The Drugs Controller General of India (DCGI) has approved use of inject able contraceptives in 1994 from the private sector, but still it is not part of the national program. Depot medroxyprogesterone acetate (DMPA) is a long acting injectable contraceptive that works by inhibiting pituitary gonadotropins resulting in an ovulation. It exists as an effective, safe and convenient method for birth spacing since 1994 in the private sector of the country.

The contraceptive prevalence of injectable is 3.5%worldwide.It is 15% for Sri Lanka, 10% for Nepal, 7%[7] for Bangladesh, 5.9% for Bhutan and 2.7% for Pakistan whereas nationally the current use of DMPA is 0.1%. 4 It has a very low failure rate compared to condoms and implants if used as recommended. The failure rate is 0.3%, if correctly and consistently use and 3% in typical use.[8,9]

The present study (Table 1) showing a among different contraceptive methods used, male condom was used by 27.23% followed by IUCD by 22.77% & OCP by 20.98% sterilization by 13.54% & DMPA by 9.8%. Findings were opposite to study conducted by Taklikar et al,[10] tubectomy was the most common method (75.9%) of contraception, followed by male condoms (11.15%), OC pills (9.4%), IUDs (1.43%), and vasectomy only among 0.35% & findings seen in NFHS-3[2] tubectomy (37%) was the most common method of contraception, followed by male condoms

(5%), OC Pills (3%), IUDs (2%), and vasectomy only among 1%. Tubectomy was the most common method of contraception as reported in a study conducted in slums of Bombay.[11]

Prevalence of contraceptive devices among eligible females was 63% in the present study. There is statistically significant association between different age groups & types of contraceptives used.Chi-Square =47.113, df =15, p =.000(Table 1). Taklikar et al.[10] A study conducted in Kanpur slums dwellers[12] the commonest method was condom (58.7%) while in Calcutta middle class respondents 80.5% were practicing natural methods of family planning. In Bombay[11] and Delhi[13] slum dwellers, the commonest method was permanent method (39-43% in different slums). Low use of vasectomy (4.3%) compared to tubectomy (27.5%) in our study has also been reported from Bombay.[11]

Maximum eligible females were utilizing condom as a contraceptive measure. Maximum contraceptives 126(36.57%) was utilized by the eligible couples of 26-33 years age group. A study conducted by Taklikar et al[10] prevalence of contraceptive methods in urban slum was 69.5%, which is higher than 64% by all methods, reported by NFHS-3.[2,10]

In a study conducted by Taklikar et al:[10] Doctors were the most common source of information regarding contraception (63.8%) among the users. Similar findings were observed in a study conducted in Jammu and Kashmir, where doctors (73%) were the source of information.[14] Contraceptive prevalence was found to be 58.57% in urban slum area. Tubal ligation was most common method of contraception (73.65%) followed by oral pills (14.15%), intrauterine device (6.82%), and condom (4.39%).[15]

Maximum contraceptives 36.57%was utilized by the eligible couples of 26-33 years age group. Overall prevalence of contraceptive measures was 63.14% & non-users were 36.86%.

Contraceptive use was higher between age group of 26-33 years (36.57%) followed by age group 18-25yrs (25.7%) & age group 34-41 yrs (22.9%). Findings were opposite to a study conducted by Bhasin et al as Contraceptive use was higher between age group of 30–34 years (14.57%) followed by age group 25–29yrs (13.71%).[15]

Table 1: Distribution of the study subjects according to the Type of contraception using currently in different age group

Age group (yrs.)	Type of contraceptive used							Total
	Condom	IUCD	Pills	(DMPA)	Sterilization	Natural method	Not using	
18-25	15	9	17	3	3	2	41	90 (25.7%)
26-33	19	22	20	12	18	4	33	128 (36.6%)
34-41	22	12	8	5	9	3	21	80 (22.9%)
42-49	5	8	2	2	1	3	31	52 (14.8%)
Total	61 (17.2%)	51 (14.5%)	47 13.3%	22 6.2%	31 8.6%	12 (3.4%)	126 (36.8%)	350 (100%)
Pearson (chi square) x^2 =47.113, df =15 , p = .000								

Table 2: Distribution of the study subjects of different educational status according to the Type of contraceptive used

Educational Status	Type of contraceptive used							Total
	Condom	IUCD	Pills	Injectable (DMPA)	Sterilization	Natural Method	Not Using	
Illiterate	13(37.1%)	8(22.9%)	6(17.1%)	2(5.7%)	4(11.4%)	1(2.9%)	1 (2.9%)	35 (10%)
Primary	14(38.9%)	3(8.3%)	1(2.8%)	1 (2.8%)	2(5.6%)	1(2.8%)	17 (47.2%)	36 (10.29%)
Middle	13(18.8%)	11(15.9%)	7(10.1%)	8(11.6%)	4(5.8%)	1(1.4%)	25 (36.2%)	69 (19.71%)
Secondary	11(10.5%)	13(12.4%)	12(11.4%)	4(3.8%)	6(5.7%)	2(1.9%)	57 (54.3%)	106 (30.29%)
Higher Secondary	7(12.3%)	10(17.5%)	12(21.1%)	3(6.3%)	5(8.8%)	2(3.6%)	18 (31.5%)	67 (19.14%)
Graduate	3(6.3%)	6(12.5%)	9(18.8%)	4(8.3%)	10(20.8%)	5(10.4%)	11 (22.9%)	48 (13.71%)
Total	61 (17.4%)	51 (14.5%)	47 (13,4%)	22 (6.3%)	31 (8.9%)	12 (3.4%)	129 (36.9%)	350 (100%)
(chi square) x^2 = 78.451, d.f.= 30, & p =.000.								

Table 3: Distribution of study subjects using injectable contraceptive DMPA according to source of information

Source of information	Frequency	Percent
Doctor/ASHA	4	18.18
Health worker	6	27.27
Husband/Family member	11	55
Friends/Media	1	4.52
Total	22	100.0

Table 4: Distribution of study subjects according to Side effects among DMPA users(n=22)

Side effects among DMPA users	Frequency	Percent
Only amenorrhoea	15	68.18
Irregular spotting per vaginum	4	18.18
Heavy bleeding per vaginum	1	4.54
Amenorrhoea withMood change & Change in sex drive(Anxiety)	2	9.10
Total	22	100.0

According to NFHS-III, the current use of any modern method of family planning for India is 56.8%. In a study conducted in Kolkata, 45.83% women were contraceptive users. In another study conducted in an Urban Slum of Delhi, 34.6% of the study subjects were users.[16]

Present study (Table 2) shows educational status & types of contraceptive used, among illiterate group maximum 37.1% were using condom, in primary group maximum 38.9% were using condom, in middle maximum 18.8% were using condom, in secondary group maximum 12.4% were using IUCD, in higher secondary group maximum 21.1% were using pills, In graduate group maximum 20.8% were using sterilization as contraceptive method. The association between eligible females of different educational status & types of contraceptive used was found to be statistically significant (chi square) $x^2 = 78.451$, d.f.= 30**,** & p =.000

Education of women had influenced the contraceptive use. Contraceptive use was shown to be increased as education of women was higher.[15] It was highest in women educated up to higher secondary school (30%), followed by secondary (12.57%); whereas 16% of illiterate women were not using any method of contraception, these findings was observed by Ansuman et al.,[17] Taklikar et al.,[10] Kaushal et al.[18] These findings are similar to NFHS-3 study, which reveals that female sterilization is most popular method among all educational levels. Also use of IUD's, Condom, and traditional methods are more popular among women with at least middle school education than among those with less education.

Present study (Table 3) observed that majority 11(55%) had Husband/family member as the source of information for injectable contraception followed by 6 (27.27%) from health worker, 4(18.18%) from doctors/ASHA while in a study conducted by *Nautiyal R et al*, most of the patients were self motivated to come for repeat injections and only a few needed a reminder from their spouse or ASHA through SMS.

Compliance with DMPA is an issue mainly because of its menstrual side effects.[19] In present study (Table 4) Amenorrhoea (68.18%)was the main side effect in our study followed by spotting per vaginum(18.18%). Irregular bleeding and disruption of menstrual cycle has also been observed by Aktun et al and Rai et al in 65% -80% of women in their studies.[20, 21]

Conclusion and Recommendations

The prevalence of contraception use (63.14.%) was improving among urban dwellers. Educational status of middle or higher classes were utilizing comparatively more different types of contraceptive measures. In order to improve contraceptive use what we need today is multiple resources to educate couples, their parents, family members and society too, so what we can reach up to masses. Women must be made aware about their right i.e., protecting their own health. Good counseling practices along with clinical work are the need of time, for these women should be educated, be economical independent. If we work as a team and provide door step counseling and services irrespective of caste, religion and socio-status, we can definitely achieve our goal of population stabilization. DMPA is a safe, effective, reversible but neglected long acting injectable contraceptive. Acceptance is highest when DMPA comes into the basket of contraceptives & the injections are free but free services cannot sustain continued acceptance Indian women shall now have the right to choose a globally popular contraceptive once this becomes freely accessible through public sector. But there is a need to develop standardized protocols for counseling, training of ASHA and ANMs and strengthening of health system.

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