

Determinants of Intrauterine Contraceptive Device Discontinuation Among Indian Women

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Abstract

Objective To determine intrauterine contraceptive device (IUCD) discontinuation rate and its causes and related factors among women attending the OPD/family planning clinic in Mahila Chikitasalaya, SMS Medical College, Jaipur from January 2012 to December 2012.

Methods 387 women who had an intrauterine device (IUD) inserted during the last 1–5 years were interviewed during their visits to the OPD/family planning clinic. Sociodemographic characteristics for all women were described using frequency distribution. Life tables were used to describe the proportion of women who discontinued IUD at various time intervals. The main outcome measure was IUD discontinuation.

Results The incidence of IUD discontinuation in the first year following insertion was 16.79 %. Approximately 31 % of the study sample continued using their devices

after 5 years. The average duration of IUD use was 36 months. Of the 387 women, 56 % discontinued IUD use because of a desire to conceive, 27.7 % because of side effects, 15.36 % because of opposition from the woman's family, and 1.5 % because they were sexually inactive. The most common side effects reported as the reasons for discontinuation were bleeding, infection, and pain. Discontinuation was inversely related to the age at insertion, the number of living children, and the sex of children. Previous contraceptive users were significantly less likely to discontinue IUD use.

Conclusions The crude cumulative rate of IUD discontinuation was 16.79 % during the first year, suggesting a need to tackle the problem of discontinuation through effective educational strategies and counseling techniques. Desire to have a male child still predominates among Indian families. The average duration of IUD use in majority of the females was about 36 months (45 %), thereby fulfilling its objective of spacing between children as laid down by the WHO (2 years spacing between pregnancies). About 31 % of the women continued using IUCD even after 5 years. It is crucial to correct misconceptions and identify the lack of correct and complete information both among the providers and the acceptors, to improve the effectiveness of family planning programs.

Keywords IUCD · Discontinuation · Sociodemographic characteristics · Family planning

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Introduction

Intrauterine contraceptive device (IUCD) is the world's most widely used method of reversible birth control. It is currently used by nearly 163 million women worldwide accounting for about 15 % of the women in reproductive life [1]. About 1 out of 5 women in reproductive age all over the world use IUCD while in India, it corresponds to only about 3 in 100 women [2], copper devices being the most popular. Efforts to increase its effectiveness have led to advances and improvements in the original copper-releasing devices to such an extent that presently the failure rates for different models vary between 0.2 and 0.6 %. Although the Indian government offers IUCD services free of cost, it still remains largely underutilized. According to NFHS-3, IUCD account for only 1.2–1.6 % of the total contraceptive usage in the country [3], the main reason being the lack of accurate information. The advantages are understated, the disadvantages and side effects tend to be exaggerated, and there are numerous myths and misconceptions. The high discontinuation rate is due to problems related to provider's knowledge and skills leading to improper selection of clients, poor counseling, and lack of follow-up, all contributing to the decreased use and increasing discontinuation of such an easy, affordable, and effective method of contraception. The side effects of IUCD may be unpleasant but are not harmful, and in most women, subside within a few months of insertion. The discontinuation rate can be effectively decreased, and the acceptance increased by proper knowledge and up-to-date information of the provider, proper selection of cases, and the pre- and postinsertion counseling of the patients as well as the family members, regarding the potential side effects and the benign nature of the same.

Only a few studies have been conducted so far about the reasons of discontinuation of IUCD among the Indian population, and a handful all over the world.

The main purpose of this study was to assess the determinants of IUCD discontinuation among Indian women, thereby identifying strategies for an effective and efficient family planning program.

Materials and Methods

Three hundred and eighty seven women visiting OPD/family planning at Mahila Chikitalaya, SMS Medical College, Jaipur, who had an IUCD inserted during the last 1–5 years, at any government or private health facility, were recruited from January 2012 to December 2012. The type of IUCD inserted, the method of insertion, and the type of insertion were determined from the records/discharge tickets available with the patients. The exclusion criteria

included women with newly diagnosed medical or gynecologic disease; IUD other than Cu-T 380A; women with no documentation of the type and place of Cu-T insertion; women who refused to give consent for participation in the study; and cases with failure and suspected perforation. A questionnaire was prepared to be filled by the woman, and verbal interview and counseling was done subsequently in the same sitting, followed by the removal of IUD in those who refused to continue using the same. Routine antibiotic prophylaxis was not given, and capsule Doxycycline 100 mg BD for 7 days was prescribed for those with suspicion of infection. The information collected included marital age, age at IUD insertion, level of education, total number of pregnancies, number of living children, sex of living children, previous use of contraceptive methods, previous obstetric history, counseling, client satisfaction, reasons for IUD discontinuation, and side effects encountered. Sociodemographic characteristics for all women were described using frequency distribution. Life tables were used to describe the proportion of women who discontinued IUD at various time intervals. The main outcome measure was IUD discontinuation.

Results and Discussion

The incidence of IUD discontinuation in the first year following insertion was 16.79 %. Maximum proportion of

Table 1 Life table analysis

Time (months)	No. of females who discontinued (<i>n</i>)	No. of women with IUCD at start of study	% of discontinuation
≤12	65	387	16.79 %
13–24	77	322	19.89 % (23.91 %)
25–36	70	245	18.08 % (28.57 %)
37–48	40	175	10.33 % (22.85 %)
49–60	15	135	3.8 % (11.11 %)
>60	–	120	–

Table 2 Reasons for discontinuation

Time (months)	Desire to conceive	Side effects	Sexually inactive	Family opposition
≤12	20	27	0	18
12–24	41	20	0	16
25–36	49	18	0	3
37–48	27	7	2	4
49–60	11	2	2	0
Total	148 (55.43 %)	74 (27.8 %)	4 (1.49 %)	41 (15.36 %)

Distribution of 267 women who had the IUCD removed for any reason other than device failure

Table 3 IUCD device discontinuation by variables

	No. who discontinued	Total no. of females included	Discontinuation rate (%)
Current age (years)			
<20	5	6	83.33
20–24	37	52	72.22
25–29	110	138	79.7
30–34	68	109	62.9
35–39	23	40	57.5
>40	24	42	57.14
Educational level			
Illiterate	58	62	94
Primary	94	125	75.2
Secondary	75	131	57.2
Graduate	36	69	52
Living children			
1–2	87	106	82
3–4	126	180	70
≥5	52	101	52
Male child			
Yes	161	267	60
No	107	120	89
Past use of contraceptive			
Yes	161	264	61
No	98	123	80

Table 4 Types of IUCD insertion done

Period of insertion	Total no. of insertions	No. of removal (%)
Post placental	74	51 68.9
Intra cesarean	82	62 75.6
Post partum	73	55 75.3
Interval	158	117 74.1
Total	387	267 68.99

women (28.57 %) had their IUDs removed after a period of 2–3 years of insertion. 120 women out of 387, i.e., 31 % of the study sample continued using their devices after 5 years. The average duration of IUD use was 36 months (Table 1). Of the 387 women, 56 % discontinued IUD use because of a desire to conceive, 27.7 % because of side effects, 15.36 % because of opposition from the woman's family, and 1.5 % because they were sexually inactive. The discontinuation in the first 12 months of use was mostly due to side effects, the most common being irregular bleeding and menorrhagia, followed by infection and pain. The higher discontinuation rates in the second and the third years were chiefly due to the desire of the women to conceive (Table 2). These findings were in agreement with the study conducted by Yousef et al. in Jordan [4]. In

contrast, IUD discontinuation rate was higher in Egypt at 28 % in the first year as reported by Mahdy and El-Zeiny [5]. Family opposition as a reason for discontinuation was found as a variable unique in India, opposition coming mainly from the in-laws. In other studies, this variable was not found to be very significant [4]. Women who had the IUD inserted at an age of <20 years had the highest discontinuation rate of 83.33 %. The rate decreased gradually with the increase in age at insertion, with the lowest discontinuation rate (57.14 %) at the age of >40 years, (Table 3) which corroborated well with the study by Okunlola et al. in Nigeria [6].

Discontinuation also varied inversely with the educational level of the women, with the highest discontinuation rate found in illiterate women (95 %) and the lowest among graduates (53.6 %), (Table 3) thereby indicating that an improvement in the level of education of women will definitely improve the family planning program. Perhaps, educated women have a better knowledge of the pros and cons, and are more easily motivated by counseling. They have a greater role in the decision making in the family and have a better say in matters of their own health and life. This was in contrast to the study in Jordan, where no statistical relationship was found between IUD discontinuation and women's education [4].

The rate was the highest (83 %) among those with 1–2 living issues, and decreased with the subsequently higher number of living children. About 89 % of women who had no male child discontinued, while only 60 % of those who had at least one male issue discontinued the use of IUCD (Table 3). This was a unique trend indicating that the desire to have a male child still predominates in the mentality of Indian society. This is conflicting with the results obtained in the study from Jordan [3], where the effect of sex preference on contraceptive use was never high, while similar results were obtained by Kawasar and Kabir [7] in Bangladesh, who concluded that the families who have one child of each sex are the most satisfied with their current family composition.

In the present study, previous contraceptive users were significantly less likely to discontinue IUD use. 62.5 % of the females using contraception in any form discontinued IUCD use as against 83 % among those who had not used the contraception in the past, indicating the motivated women's desire to have a safe and long-lasting contraceptive method (Table 3). This was in accordance with the results obtained in Pakistan by Azmat et al. [8].

The type of insertion was not found to be significantly related to the discontinuation rate. 51 out of 74 post-placental insertions (68.9 %), 62 out of 82 during cesarean section (75.6 %), 55 of 73 postpartum (75.3 %), and 117 out of 158 interval copper T insertions (74.1 %) were discontinued (Table 4).

Conclusion

The crude cumulative rate of IUD discontinuation was 16.79 % during the first year, suggesting a need to tackle the problem of discontinuation through effective educational strategies and counseling techniques. The most common reasons for voluntary IUD removal were the women's desire to conceive and the experience of side effects. The most common side effects reported as reasons for discontinuation were bleeding and pain. Discontinuation was inversely related to age at insertion, education of the female, and the number of living children. Previous contraceptive users were significantly less likely to discontinue IUD use. Desire for conceiving a male child still predominates in Indian women and families.

The average duration of IUD use in a majority of the females was about 36 months (45 %), thereby fulfilling its objective of spacing between children as laid down by the WHO (2 years spacing between pregnancies). About 31 % of the women continued using IUCD even after 5 years.

There is still a need for creating awareness among the Indian Population about the family planning and its significance, to tackle the problem of discontinuation through effective, educational strategies on the process of fertility and contraception. Such a policy will be crucial in correcting misconceptions and identifying the lack of correct and complete information both among the providers and the acceptors, which limits the effectiveness of family planning programs. Counseling IUD users about the potential side effects and their tendency for spontaneous resolution, careful screening of candidates to ensure that women who choose IUDs have a lower risk of side effects and complications, and the competency-based training and

appropriate infection-prevention procedures are needed. In addition, counseling must include husbands and other family members, and the policymakers must take into account the cultural and the social interactions between the family members and the society. Finally, further large-scale studies at a national level to define the underlying causes for IUD discontinuation in a developing country like India are needed.

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