

Research Article

Study of pattern related to side effects and removal of IUCD usage

Dhruvendra Pandey^{1*}, Smriti Tiwari²

¹Department of Community Medicine, MGM Medical College, Indore, Madhya Pradesh, India

²Department of Pathology, Gandhi Medical College (GMC), Bhopal, Madhya Pradesh, India

Received: 17 March 2015

Accepted: 16 April 2015

***Correspondence:**

Dr. Dhruvendra Pandey,

E-mail: pandit.dhruv06@gmail.com

Copyright: © the author(s), publisher and licensee Medip Academy. This is an open-access article distributed under the terms of the Creative Commons Attribution Non-Commercial License, which permits unrestricted non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

ABSTRACT

Background: An effective contraception is the only way to stop this population explosion. There are too advantages and side effects associated with the IUCD, But most of side effects are effectively controlled by proper selection of clients and counseling process. Objective: To know the pattern of side effects and reason for removal among beneficiaries.

Methods: A cross sectional study was conducted in 400 beneficiaries selected using systematic random sampling. Study sites included both urban and rural area. Data was entered and analyzed using MS excel sheet.

Results: In this study maximum client 348 (87%) belonged to age group of 21 to 30 years. 47 (11.8%) clients were illiterate and 285 (71.3%) clients were unemployed/housewife. Most common side effect was pain with heavy bleeding in 30.6% clients, pain in 23.8% clients and pain with light spotting in 18.4% clients. Most common reasons for removal were pain with heavy bleeding in 42.6% clients while 10 (12.8%) clients removed due to husband's insistence.

Conclusions: After ICUD insertion 36.8% clients had side effect. Pain with heavy bleeding, pain with light spotting and only pain are the most common type of side effects. Removal of ICUD was 19.25%. Most common reason for removal was pain with heavy bleeding.

Keywords: IUCD, Contraception, Side effects, Removal, Family planning

INTRODUCTION

The population problem has gained prominence both in the developed as well as developing countries¹. The only way to stop population explosion is family Planning¹. The current approach in Family Planning emphasizes on offering high quality contraceptive services among eligible clients on a voluntary basis.¹ The intrauterine device (IUCD) is the world's most widely used spacing method of reversible birth control, currently used by nearly 120 million women (about 10-15% of women in reproductive life).¹

There are many advantages associated with the IUCD use as it a long-acting and safe contraceptive, does not interfere with intercourse, immediately reversible and can

be used during lactation. Main advantage with the IUCD is that it can be inserted by trained providers at any clinic or peripheral centre without requirement of trained professional. This is especially attractive for those couples who need terminal methods but do not want to adopt a permanent surgical methods.²⁻³

Still IUCD is not free from adverse effects. Most commonly associated adverse effects that leads to early removal are bleeding, pain, discomfort during sexual intercourse, Pelvic Inflammatory Disease (PID), vaginal discharge, expulsion etc.⁴⁻⁹ It was seen that most of side effects occurred within a month of IUCD insertion. Also most of women had previous history of menstruation irregularity or vaginal discharge.¹⁰⁻¹²

It is often found that the advantages are understated, the disadvantages tend to be exaggerated and many myths and misconceptions are prevalent in the community and among the providers too. This study principally aims to assess pattern of side effects and reasons for removal among beneficiaries.

METHODS

A cross sectional study was conducted in Indore district of Madhya Pradesh in between November 2013 to October 2014. All the beneficiaries who had undergone IUCD insertion in past 5 years before the onset of study and at least 3 months prior to data collection were included in study irrespective of their history of the IUCD removal. The sample size was calculated using formula $N = Z^2 [P (1-P)]/d^2$, Z = Z value (e.g. 1.96 for 95% confidence level and 5% precision) P = percentage of occurrence of event, expressed as decimal (0.5 used for sample size needed) d = confidence interval (error), expressed as decimal = 0.05. With considering the fact that 50% clients were experienced the event sample size comes out to be 384 rounded as 400.

Pre-designed, pre-tested, semi-structured questionnaire was used as study tool for assessment of side effect and removal of Intra uterine device. The study was approved by Institutional review board and informed consent was obtained from all the participants.

Data was analyzed using appropriate statistical software (Microsoft office excel sheets).

RESULTS

In this study total 400 beneficiaries were participated. 253 (63.3%) were belong to rural area and 147 (36.8%) belong to urban area. Maximum clients 348 (87%) belonged to 21 to 30 years age group, 47 (11.8%) clients were illiterate, 285 (71.3%) clients were unemployed/housewife, and 53.5% belonged to lower socioeconomic class (Table 1). 234 (58.5%) had regular menstruation, 219 (54.8%) had moderate bleeding and 210 (52.5%) had menstruation associated with pain. 364 (90%) female participants had two children or less. 102 (25.5%) had previous history of abortion (Table 2).

Out of 400 females, 188 (47%) IUCD insertions were done by Doctor, 131 (32.8%) by ANM and 81 (20.3) by nurses. 236 (59%) clients had interval IUCD insertion, 94 (23.4%) clients had post abortive and 70 (17.5%) postpartum/post puerperal insertion (Table 3).

147 (36.8%) females had side effects after insertion. Out of 147 females, 45 (30.6%) were having pain with heavy bleeding, 35 (23.8%) having pain only, 2 (1.4%) and 1 (0.7%) had uterine perforation and pregnancy respectively. 77 (19.25%) had IUCD removal (Table 4).

Table 1: Demographic variable distribution among the clients.

Variables	No. of clients (n=400)	%
Age group		
Less than 20 years	28	7
21 to 30 years	348	87
31 to 40 years	24	6
Education status		
Illiterate	47	11.8
Primary	64	16
Secondary (8 th)	102	25.5
High school	89	22.2
Higher secondary	56	14
Graduate	34	8.5
Postgraduate	8	2
Occupation status		
Professional	5	1.3
Semi-professional	22	5.5
Clerical shop owner farmer	20	5.0
Skilled worker	13	3.3
Semi-skilled worker	14	3.5
Unskilled worker	41	10.2
Unemployed housewife	285	71.2
Socio economic status		
Lower socioeconomic	12	3
Upper lower socioeconomic	202	50.5
Lower middle socioeconomic	109	27.2
Upper middle socioeconomic	72	18
Upper socioeconomic	5	1.3

Table 2: Menstruation and gravid history of clients.

History of menstruation	No. of clients (n=400)	%	
Age of menarche	<12 years	56	14.0
	12-15 years	273	68.3
	>15 years	71	17.7
Regularity	Regular	234	58.5
	Irregular	166	41.5
Bleeding	Light/Spotting	156	39.0
	Moderate	219	54.7
	Heavy	25	6.3
Pain	With pain	210	52.5
	Without pain	190	47.5
Number of pregnancies	<2	312	78
	>2	88	22
Number of living children	<2	364	91
	>2	36	9
Age of youngest living child	Less than 1 year	225	56.3
	1-2 years	127	31.7
	2-5 years	34	8.5
	More than 5 years	14	3.5
History of abortion	Yes	102	25.5
	No	298	74.5

Table 3: IUCD Insertion mode and Health care provider for insertion.

	No. of clients (n=400)	%
Type of IUCD insertion		
Interval insertion	236	59.0
Post abortion	94	23.5
Post-partum	70	17.5
Health care provider		
Doctor	188	47.0
ANM	131	32.7
Nurses (LHV/Staff nurse)	81	20.3

Table 4: Pattern of side effects observed among beneficiaries.

Pattern of side effects observed among beneficiaries		
Side effects	No. of clients (n=400)	%
Yes	147	36.7
No	253	63.3
Type of side effects	No. of clients (n=147)	%
Pain	35	23.8
Heavy bleeding	7	4.8
Light bleeding	12	8.2
Pain during coitus	11	7.5
Uterine perforation	2	1.4
Pregnancy	1	0.7
Pain and light spots	27	18.4
Pain with heavy bleeding	45	30.5
Light spotting with pain during coitus	7	4.7

Table 5: Removal of IUCD and its reasons.

Removal of IUCD and its reasons		
Removal	No. of clients (n=400)	%
Yes	77	19.25
No	323	80.75
	No. of clients (n=77)	%
Reasons for removal		
Pain during coitus	4	5.1
Fear of not to pregnant if long use	5	6.4
Due to husband order	10	12.8
Uterine perforation	2	2.5
Pregnancy	1	1.2
Plan for baby	4	5.1
Pain and plan for baby	5	6.4
Permanent sterilization	4	5.1
Pain with light spotting	10	12.8
Pain with heavy bleeding	33	42.6
Alternate family planning method after removal		
Oral pills	35	45.5
Condom	18	23.4
TT	10	12.9
No	14	18.2

Main reason for IUCD removal was pain with heavy bleeding (42.6%), pain with light bleeding (12.8%) and due to husband insist (12.8%). Mean duration of IUCD usage was 11.53 months. Most (63.6%) of removal was within one year of usage. Only 4 (5.2%) participants had problem during IUCD removal. After IUCD removal 63 (81.8%) participants choose alternative contraceptive. Oral pills (55.5%) and Condom (28.6%) was most common choice as alternative contraceptive after IUCD removal (Table 5).

DISCUSSION

In this study out of 400 voluntarily participants, maximum clients 87% belonged to 21 to 30 years age group. These finding denotes that IUCD was contraceptive of choice for women for most potential reproductive age group. Most of the clients were illiterate or educated up to primary, housewife and belonged to lower socioeconomic class according to modified Kuppaswamy scale. These findings were in concurrent with study of Van Zijl et al. (2010)¹³ done in South Africa.

In this study 59% clients had interval IUCD insertion, 23.4% clients had post abortive and 17.5% postpartum/post puerperal insertion. This finding states that scenario was changed now interval mode of contraceptive selection is increases. According to Ceylan A et al. (2009),¹⁴ contraceptive usage was increased in post abortive females if they received proper post abortive counseling and IUCD was the most preferred choice in them. As finding of this study suggested that most of the clients (52.8%) choose IUCD after their first child as spacing method While 38.3% clients were choose this method after their second child as terminal method of contraception. These were in contrast to finding of Muzammil K. et al. (2011)⁶ stated that 21% respondents had one child, 34% had two children.

In this study, 147 (36.8%) clients experienced side effect after the insertion. Most common side effect was pain with heavy bleeding in 30.6% clients, pain in 23.8% clients and pain with light spotting in 18.4% clients. 2 clients experienced uterine perforation and 1 client became pregnant after IUCD insertion. These were slightly more than finding of Azmat K. Syed et al. (2012)⁴ (22.7%) in the Pakistan but less than Alam ME et. al (2007)¹⁰ (46.4%) done in Bangladesh.

Overall removal rate among study population was 19.25%. Most common reasons for removal were pain with heavy bleeding in 42.6% clients while 12.8% clients removed due to husband insist. 11.5% were planned for baby. 5.1% clients were chose permanent sterilization. These were in comparable to study of Azmat K. Syed et al. (2012)⁴, Nguyen TH et al. (2011)⁵ and Muzammil K. et al. (2011).⁶

Observation of this study reiterates that high discontinuation rate is due to problems related to health provider's knowledge and skills leading to improper selection of clients, poor counseling and lack of follow up, all resulting in poor quality of services. There is an urgent need to address these programmatic concerns. Newer modern IUCDs made available at each and every center, which required less skills and also had more compliance of beneficiaries. IEC material should be made available in each and every center in the form of pamphlets, flex, booklets for creating awareness among women of reproductive age group about the Intra uterine devices.

The finding of this study revealed that trend of interval IUCD insertion was increasing. But along with it, need for proper counseling and selection of the appropriate candidate also increases. Some clients chose IUCD after second child as terminal method. In the study most of the insertion was done by health worker female (ANM). This finding showed that implementation of effective contraceptive measure solely depends on basic level workers so there is strong need of strengthening of knowledge and skills of basic level workers. In this study, 36.8% clients had side effect and 19.25% had removal. Pain with heavy bleeding, pain with light spotting and only pain are the most common type of side effects and also commonest reason for removal.

ACKNOWLEDGEMENTS

We are especially thanks to ANMs and ASHAs who accompany the investigator during their field visit and also thankful to the participants without them this study could not be completed.

Funding: The study was self-funded

Conflict of interest: None declared

Ethical approval: The study was approved by the institutional ethics committee

REFERENCES

1. Ministry of Health and Family Welfare. IUCD Reference manual for nursing personnel. In: Government of India, eds. A Manual. 2nd ed. New Delhi: USAID; 2007: 1-9.
2. Salem R. New attention to the IUD: Expanding women's contraceptive options to meet their needs. In: Salem R, eds. Population Reports, Series B, No. 7. The INFO Project. Baltimore: Johns Hopkins Bloomberg School of Public Health; February 2006.
3. Hatcher Robert A, Rinehart Ward, Blackburn Richard, Geller Judith S, Shelton James D; WHO. Population information program. In: Hatcher Robert A, Rinehart Ward, Blackburn Richard, Geller Judith S, Shelton James D; WHO, eds. The Essentials of Contraceptive Technology. Baltimore: The Johns Hopkins School of Public Health; 1997.
4. Azmat SK, Shaikh BT, Hammed W, Bilgrami M, Mustafa G, Ali M, et al. Prevalence of IUCD discontinuation and its associated factors: Findings from a retrospective study with clients of a social franchising network in Pakistan. *BMC Women's Health*. 2012;12:8.
5. Nguyen TH, Park MH, Le MH, Ngo TD. The dynamics of intrauterine device (IUD) use among Vietnamese women: a retrospective study. London: Marie Stopes International; 2011. Available at: <http://www.mariestopes.org/documents/publications/The-dynamics-of-IUD-use-among-Vietnamese-women-FINAL.pdf>.
6. Muzammil Khursheed, Kishore Surekha, Garg BS. Study of factors related to the discontinuation of IUCD usage. *Indian J Community Health*. 2011 Jun;S.I.:8-10.
7. Ambadekar NN, Rathod KZ, Zodpey SP. Study of Cu T utilization status and some of the factors associated with discontinuation of Cu T in rural part of Yavatmal district. *Indian J Community Med*. 2011;36:54-6.
8. Ambadekar NN, Rathod KZ, Zodpey SP. Health care delivery practices in the rural part of the Yavatmal district regarding IUD insertion. *Indian J Med Res*. 2010;54:201-4.
9. Patel SK, Lal D. Quality of services, retention and causes of discontinuation of IUD contraception in Rural India. In: Patel SK, Lal D, eds. Annual Meeting Programme. America: Population Association of America; 2012
10. Alam ME, Bradley J, Shabnam F. IUD use and discontinuation in Bangladesh. In: Alam ME, Bradley J, Shabnam F, eds. E&R Study. New York: Engender Health/The ACQUIRE Project; 2007.
11. Tripathi V, Nandan D, Salhan S. Determinants of early discontinuation of IUCD use in rural northern district of India: a multivariate analysis and its validation. *J Biosoc Sci*. 2005 May;37(3):319.
12. Arias DR. Compelling reasons for recommending IUDs to any women of reproductive age. *Int J Fertil*. 2002;47(2):87-93.
13. Van Zijl S, Morroni C, Van Der Spuy ZM. A survey to assess knowledge and acceptability of the intrauterine device in the family planning services in Cape Town, South Africa. *J Fam Plann Reprod Health Care*. 2010;36:73-8.
14. Ceylan A, Ertem M, Saka G, Akdeniz N. Post abortion family planning counseling as a tool to increase contraception use. *BMC Public Health*. 2009;15(9):20.

DOI: 10.5455/2394-6040.ijcmph20150520

Cite this article as: Pandey D, Tiwari S. Study of pattern related to side effects and removal of IUCD usage. *Int J Community Med Public Health* 2015;2:172-5.