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RESEARCH ARTICLE

PREVALENCE OF COMPLICATIONS AND DEGREE OF SATISFACTION IN CURRENT IUD USERS

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Abstract

Background: Satisfaction rate for Copper Intra uterine device (Cu-IUD) is still under research because of the complications related to IUD. Cu-IUD is very effective means of contraception but only 1.5% of married women between age 15-49 years use it owing to the myths associated with IUD. The aim of the study is to find the satisfaction rate among IUD users and assess the prevalence of complications in currently IUD using women in low resource settings.

Material and Methods: It was a cross sectional observational study conducted in Department of Obstetrics and Gynaecology. Total 200 IUD users were interviewed for the complications and satisfaction associated with IUD usage, using predesigned performaover two months period. Wilcoxon Mann Whitney U test and Chi-Squared test were used for continuous and categorical variables.

Results: Out of 200 women, 179 (89.5%) were satisfied and 21(10.5%) were unsatisfied with IUD use. Total 87 (43.5%) women had complications which were present in 70/179 (39.1%) women who were satisfied versus 17/21(81%) women in non-satisfied group (p value<0.001). Majority of women (61/80) had bleeding related complications only for initial 6 months. 26/87(29.9%) women opted for treatment for IUD related complications and 14(53.8%) got relief. The women who wanted removal of IUD were 18/200 (9%) out of which there were only 8 women who opted for IUD removal because of complications.

Conclusion: Majority of the women were satisfied with their IUD. Although, the overall complication rate seems high in IUD users but it was significantly less in "satisfied" group.

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Introduction:-

Long acting reversible contraceptive (LARC) are an integral part of the armamentarium of contraceptive methods used in a developing nation like India. They include Copper intrauterine device(Cu-IUD), LNG-IUD, injection depot medroxyprogesterone acetate (DMPA) and subdermal implants. LARC have advantages of low failure rate, better compliance, longer action and cost effectiveness. Since LARC is not user dependent, it reduces the gap between 'typical use' and 'perfect use' failure rate.¹ Amongst the LARC, Cu-IUD appears to be very effective because of its long duration of action and the fact that it is non hormonal so it can be used in many situations where hormonal contraceptives are contraindicated. It is reversible, does not interfere with sexual intercourse and can be used during

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lactation.²Cu- IUD is the only non-hormonal LARC approved by the US FDA.³But , only 1.5% of currently married women between 15-49 years of age opt for the IUD amongst the available methods of contraception according to National Family Health Survey of Government of India.⁴This is because of improper selection of client, inadequate counseling and incomplete women's knowledge towards the contraceptive method and also the myths and fears associated with its use, which leads to discontinuation of such an effective and affordable method of contraception.⁵⁻
⁹The side effects are generally distressing but are not harmful and subside after few months.

There is a need for updated research on the prevalence of complications associated with IUD use and need for discontinuation of IUD from these complications to gather objective data to break the misconceptions associated with its use. The aim of this study is to find the satisfaction rate among IUD users and assess the prevalence of complications in currently IUD using women in low resource settings, thereby identifying the lacunae in family planning program.

Material and Methods:-

It was a cross-sectional, observational study conducted in the Department of Obstetrics and Gynecology in Delhi, India. Two hundred women who attended the Family Planning Out Patient Department (OPD) over the period of two months were interviewed by predesigned and pretested performa. The mode of the study was questionnaire based. Women who were currently using Cu T380A (CuT 380A, HLL life Care, Thiruvananthapuram, India), were included in the study and those not willing for interview were excluded.

The pre designed performa was the survey tool for the study. It consisted of comprehensive information and questions pertaining to demography, reproductive history, duration of IUD use, complications, treatment taken, need for removal and satisfaction level. Satisfaction level was assessed by four points Likert's scale.¹⁰ The Likert's scale was graded from 1 for dissatisfied, 2 for neutral, 3 for satisfied and 4 for very satisfied. For further evaluation dissatisfied and neutral were considered as dissatisfied and satisfied and very satisfied were considered as satisfied. The questionnaire was administered through interpersonal interview following which counseling was done. Informed consent was taken from all the participants. Ethical clearance was obtained from the institutional ethical committee.

Data was analyzed using statistical software SPSS 23. Normality was assessed by evaluating histogram of continuous variables. Wilcoxon Mann Whitney U test and Chi-Squared test were used for continuous and categorical variables, respectively. P value <0.05 was taken as statistically significant.

Results:-

Total 200 women participated in our study. Mean age of the women in our study was 27.59±5.09 years with youngest being 20 and oldest 45 years of age. Majority of women belonged to 20-30 years of age, were educated up to secondary school, belonged to the middle socioeconomic status, had a parity of 2 or more and were housewives. (Table 1)

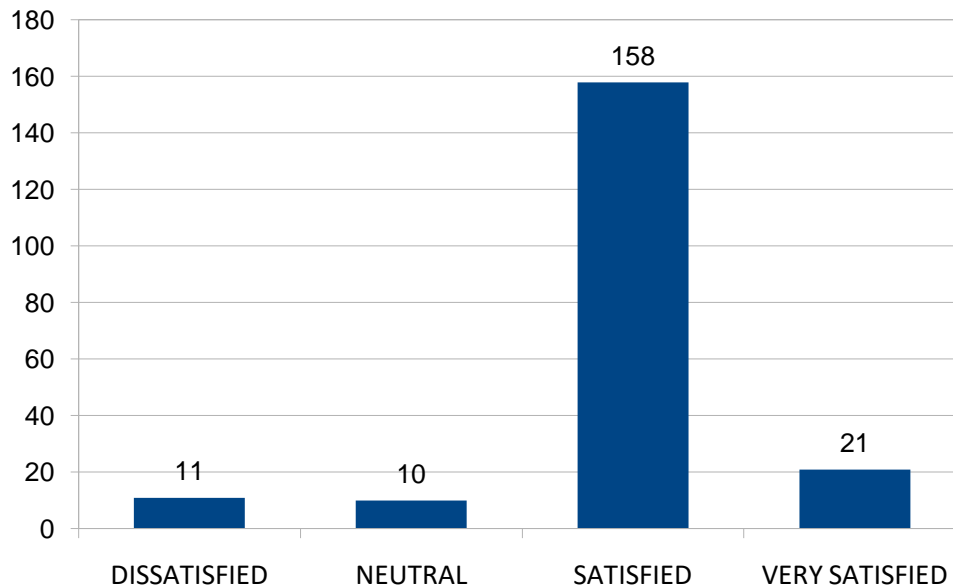
Parameters	n=200	%
Age		
20-30	161	80.5
31-40	38	19
>40	1	0.5
Education		
Illiterate	56	28
Upto 12 th	130	65
Graduate and above	14	7
Socioeconomic status		
Lower	93	46.5
Middle	103	51.5
Upper	4	2
Parity		
1	54	27
2	104	52
>2	42	21

Occupation	N=200	%
House wife	174	87
Unskilled	17	8.5
Skilled and professional	9	4.5

Table 1:- Socio-demographic parameters in the study population.

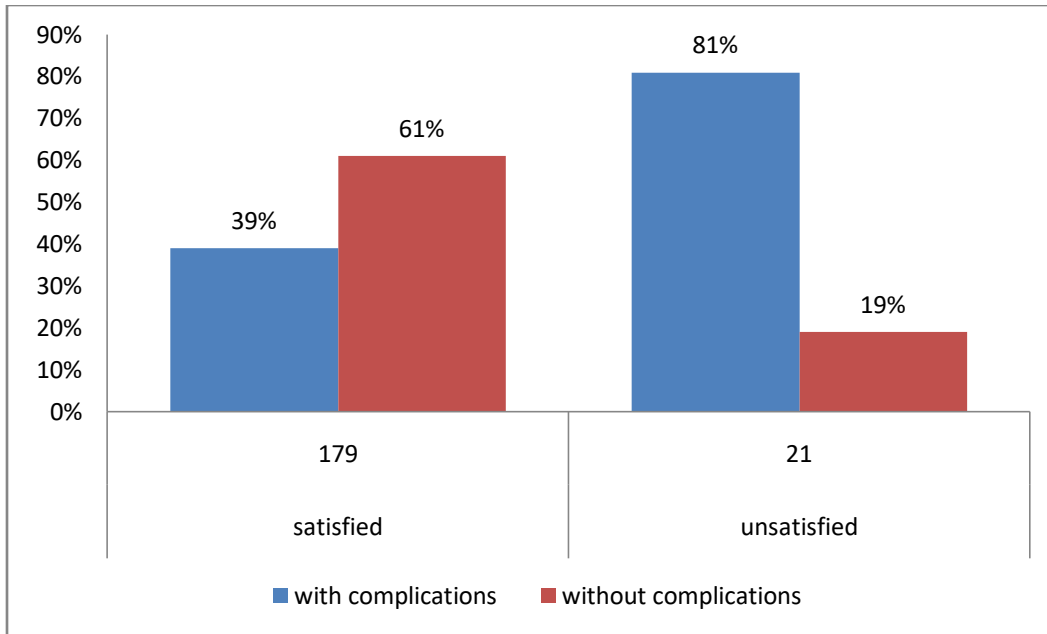
Cu-T 380a was used by 181(90.5%) women in the study and 19(9.5%) used Multiload 375. Post partum insertion 90(45%) was the most preferred followed by interval 87(43.5%) and post abortal 23 (11.5%) time for IUD insertion. The mean duration of IUD use in our study was 27.96 ± 35.89 months. The duration of IUD use ranged from 3 -18 years. Figure 1 depicts the degree of satisfaction as graded by Likert's scale. Overall, 179 (89.5%) women were satisfied and 21 (10.5%) were unsatisfied with IUD.

Figure 1:- Degree of satisfaction by Likert's scale in women under study.



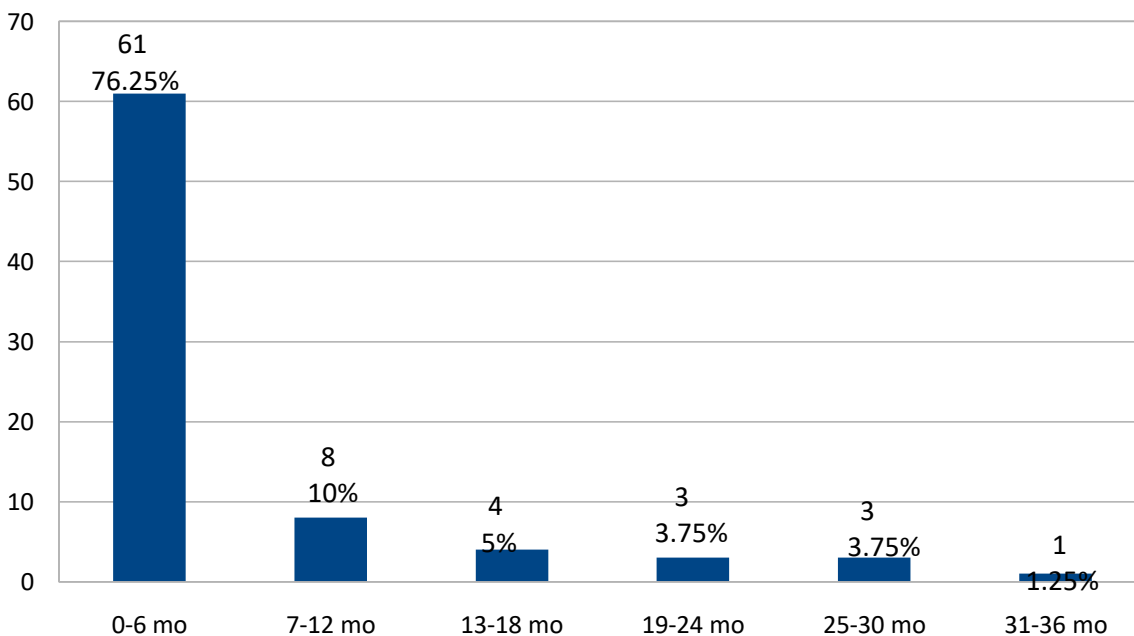
Total 87(43.5%) IUD users had bleeding and pain related complications. Most common complication observed in our study was cramping pain, which was seen in all 87 women. Abnormal uterine bleeding (AUB) was the second most common complication and present in 80(40%) IUD users followed by inter-menstrual bleeding (IMB) in 49(24.5%) and dyspareunia in 48 (24%) women. Figure 2 depicts the incidence of complications in women who were satisfied and not satisfied with IUD. IUD related complications were more significantly present in unsatisfied group than the satisfied group ($p < 0.001$). The complications like abnormal uterine bleeding (AUB) and cramping pain were also significantly less in the satisfied group ($p < 0.001$).

Figure 2- Incidence of complications in study groups



The mean duration of AUB was only 2.54 ± 5.93 months. The duration of AUB in IUD users in our study is presented in figure 3. Only 26/87(29.9%) women with complications required treatment and the most common complication for seeking treatment was AUB which was managed with non steroidal anti inflammatory drugs (NSAIDs) and oral antifibrinolytics. Additionally, repeated counseling sessions were conducted for continuing IUD. Intermenstrual bleeding and dyspareunia was treated with antifibrinolytics and antibiotics after local examination and cramping pain was treated with NSAIDs. 14 out of 26 (53.8%) women had relief with treatment.

Figure 3:- Duration of Abnormal uterine bleeding in IUD users.



Overall discontinuation rate was 18/200(9%) in our study. Most common reason for discontinuation was desire to conceive in eight women, one completed her time of IUD and one had family pressure. There were only eight women (8/200,4%) who opted for IUD discontinuation due to complications. The cause for IUD discontinuation was AUB in all these women.

Discussion:-

The mean age of women in the study was 27.59 ± 5.09 years and 80.5% women were from the reproductive age group of 20-30 years. It indicates that IUD is one of the most common contraceptive choice among the reproductive women who belong to maximum fecundity. Most of the study population was educated upto secondary school, belonged to middle socioeconomic status and were housewives. This is in accordance with the findings by Pandey D, Tiwari S in 2015 and Van Zijl S et al in 2010^{2,11} although the slight difference was that the study population of Pandey et al belonged to the lower socioeconomic scale as compared to middle socioeconomic scale of our study population. This might be because the study was conducted in a tertiary care centre which catered to a population belonging to lower strata, with less education and consequently low social status and unemployment.

This study suggests that 79% of the women using IUD were upto second parity and only 21 % of the population were para three and above (Table 1). This was similar to the findings by Pandey D et al² where 91% who used IUD had less than two children and 9% had more than two children and was a reflection that IUD was used more as a spacing method in our subjects and less commonly as a terminal method of contraception. The contraception of choice in our study was CuT380A (90.5%) than Multiload 375 (9.5%) suggesting that longer duration of action is preferable and convenient. The majority of women (45%) had post partum insertion of IUD which is in contrast to the findings by Pandey D et al² who found that 59% IUD users had interval IUD insertion. This shows the popularity of post partum contraception in our study population. The mean duration of IUD use in our study was 27.96 ± 35.89 months thereby fulfilling its objective of spacing between two children as laid out by WHO (2 years spacing between pregnancies).

The complication rate of 43.5% was observed in our study which was more than the study by Pandey D et al (37.8%) and Azmat K. Syed et al in Pakistan (22.7%).^{2,12} The frequency of complications was significantly more in unsatisfied IUD users (81%) than satisfied ones (39%). Cramping pain was the commonest complication followed by AUB. These sub group of complications were also significantly less in the satisfied group as compared to the unsatisfied group ($p < 0.001$). In the study by Pandey et al the most common complication was pain with heavy bleeding in 30.6% followed by pain in 23.8% of the women which mirrored the findings of our study. Of the 80 women who had AUB, more than 75% had duration of complains only for first 6 months and the complaints decreased as the time period increased, with only one woman having AUB lasting till 36 months. This is in accordance with the finding by Sanders NJ et al in 2018³ who followed up new IUD users for a 6-month period and found that bleeding and cramping pain decreased significantly over 6 months and satisfaction with the IUD increased accordingly over time. So, it can be interpreted that it is wiser for the women to wait for atleast 6 months before thinking of discontinuation considering the fact that the contraceptive safety which it provides is for a much longer period but the side-effects decrease significantly after 6 months. In our study women had volunteered for reinsertion of IUD even for upto 12 and 18 years. These women were using IUD as a terminal method of contraception instead of a spacing method because of their comfort level with the IUD.

Although the complication rate of 43.5% seemed high but only 13% opted for treatment for those complications. This means that in the rest complications were not significant enough to warrant treatment and only 6% of women did not get any relief from complications after treatment. As pointed out in other studies the most common reasons for IUD discontinuation are change in bleeding pattern and pain,^{2,3,13-15} in our study also the most common reason for seeking treatment was AUB followed by cramping pain.

The removal rate of 8% in our study was very low compared to the complication rate of 43.5%. On close examination it was seen that only 4% wanted removal due to the complications. Peipert et al¹⁶ also found a low removal rate and a high 12-month continuation rate of 84% for the Cu-IUD. So, we can safely assume that Cu-IUD is very effective and even though it has some complications, they are not significant enough to warrant removal and many complications get treated with medical management or decrease spontaneously over time. All this accounts for the high satisfaction rate of 89.5% in our study. The study by Peipert et al¹⁶ also showed a high satisfaction rate of 80% with IUD and Wong et al found a satisfaction rate of 74%¹⁷. It has been proven time and again that if women are pre-informed about the changes in menstrual patterns and a patient driven decision in contraceptive selection then they are more satisfied with their choice of contraceptive¹⁸. Similarly, those who feel that provider bias played a role in their method selection report lesser satisfaction rates¹⁹. Additionally, practitioners should do post insertion follow up and treat the side-effects of change in bleeding patterns by simple medications for the first 3-6 months as these medications accelerate the return to baseline^{20,21}.

Conclusion:-

From our study we can conclude that even though IUD has certain complications, ultimately the user's satisfaction rate is very high. This may be because of its various advantages, like need for only one time hospital visit and its long-lasting effect. Since the most common reason for IUD discontinuation is due to side effects, it is very important for the providers to have accurate information about those side effects and the changes over time. Also, the importance of client counseling cannot be undermined because unbiased provider's counseling about expected changes in bleeding patterns prior to insertion correlates with the satisfaction and continuation rates. It may help women anticipate the likelihood, duration, and intensity of side effects.

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References:-

1. Bolarinwa OA and Olagunju OS. Knowledge and factors influencing long-acting reversible contraceptives use among women of reproductive age in Nigeria [version 3; peer review: 1 approved, 2 approved with reservations]. *Gates Open Res* 2020, **3**:7
2. Pandey D, Tiwari S. Study of pattern related to side effects and removal of IUCD usage. *International Journal Of Community Medicine And Public Health*, [S.l.], v. 2, n. 2, p. 172-175, feb. 2017.
3. Sanders JN, Adkins DE, Kaur S, Storck K, Gawron LM, Turok DK. Bleeding, cramping, and satisfaction among new copper IUD users: A prospective study. *PLoS One*. 2018 Nov 7;13(11):e0199724.
4. International Institute for Population Sciences(IIPS) and ICF. 2017. National Family Health Survey(NFHS-4), 2015-16:India. Mumbai: IIPS.
5. Fleming KL, Sokoloff A, Raine TR. Attitudes and beliefs about the intrauterine device among teenagers and young women. *Contraception*. 2010; 82:178–182.
6. Madden T, Allsworth JE, Hladky KJ, Secura GM, Peipert JF. Intrauterine contraception in St. Louis: a survey of obstetrician and gynecologists' knowledge and attitudes. *Contraception*. 2010; 81(2): 112–116.
7. Hladky KJ, Allsworth JE, Madden T, Secura GM, Peipert JF. Women's knowledge about intrauterinecontraception. *Obstet Gynecol*. 2011 Jan;117(1):48-54.
8. Dehlendorf C, Ruskin R, Grumbach K, Vittinghoff E, Bibbins-Domingo K, Schillinger D, Steinauer J. Recommendations for intrauterine contraception: a randomized trial of the effects of patients' race/ethnicity and socioeconomic status. *Am J Obstet Gynecol*. 2010; 203:319.e1– 8.
9. Foster DG, Rostovtseva DP, Brindis CD, Biggs MA, Hulett D, Darney PD. Cost savings from the provision of specific methods of contraception in a publicly funded program. *Am J Public Health*. 2009 Mar;99(3):446-51.
10. Sullivan GM, Artino AR Jr. Analyzing and interpreting data from likert-type scales. *J Grad Med Educ*. 2013;5(4):541-542.
11. VanZijl 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 PlannReprod Health Care*. 2010;Apr36(2):73-8.
12. Azmat SK, Shaikh BT, Hamed 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
13. Sharma M, Joshi S, Nagar O, Sharma A. Determinants of intrauterine contraceptive device discontinuation among Indian women. *J ObstetGynaecol India*. 2014 Jun;64(3):208-11.
14. ESHRE Capri Workshop Group. Intrauterine devices and intrauterine systems. *Hum Reprod Update*. 2008 May-Jun;14(3):197-208.
15. Hubacher D. Copper intrauterine device use by nulliparous women: review of side effects. *Contraception*. 2007 Jun;75(6 Suppl):S8-11.
16. Peipert JF, Zhao Q, Allsworth JE, et al. Continuation and satisfaction of reversible contraception. *Obstet Gynecol*. 2011;117(5):1105-1113.
17. Wong RC, Bell RJ, Thunuguntla K, McNamee K, Vollenhoven B. Implanon users are less likely to be satisfied with their contraception after 6 months than IUD users. *Contraception*. 2009 Nov; 80(5):452– 456.

18. Dehlendorf C, Grumbach K, Schmittiel JA, Steinauer J. Shared decision making in contraceptive counseling. *Contraception*. 2017 May;95(5):452-455.
19. Higgins JA, Kramer RD, Ryder KM. Provider Bias in Long-Acting Reversible Contraception (LARC) Promotion and Removal: Perceptions of Young Adult Women. *Am J public health*. 2016 Nov; 106 (11):1932–7.
20. Technology Hatcher R, Trussell J, Nelson A, Cates W, Stewart F, Kowal D. *Contraceptive*. 19th ed: Ardent Media, Inc; 2011.
21. Hubacher D, Reyes V, Lillo S, Pierre-Louis B, Zepeda A, Chen PL, et al. Preventing copper intrauterine device removals due to side effects among first-time users: randomized trial to study the effect of prophylactic ibuprofen. *Hum Reprod*. 2006 Jun; 21(6):1467–72.