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THE EFFECT OF TWO LEVELS OF COUNSELLING ON ACCEPTANCE, UPTAKE AND EARLY OUTCOMES OF POST-PLACENTAL INTRA-UTERINE CONTRACEPTIVE DEVICE

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S.W. NDEGWA, J. W. GICHUHI, Z. QURESHI and K. LUBANO

ABSTRACT

Objective: To determine the effect of two levels of counselling on the provision of Intrauterine Contraceptive Device (IUCD) at six weeks post-partum of the post-placental intrauterine device

Setting: Embu Provincial General Hospital, Kenya.

Subjects: One hundred and thirty seven pregnant women at the gestation of 36 weeks to term, who attended Antenatal clinic and were followed until delivery and at six weeks post-partum.

Design: A randomised "open-label" clinical trial.

Results: One hundred and twenty seven study participants were enrolled and randomised to intensive (64 women) or routine FP counselling (63 women). Seventy eight per cent of women in the intensive FP counselled group and 66% in the routine FP counselled group accepted to have the post-placental IUCD inserted. There was no significant difference in uptake in the two-randomisation arms (p-value 0.232). Complications included expulsion (3.7%), allergic reaction (1.8%), pelvic infection (1.8%) and abdominal pain (1.8%). The post-placental IUCD is a favourable method with continuation rates (91%), client (88%) and reported partner (77%) satisfaction were notably high at six weeks. The most critical barrier to uptake was lack of trained medical personnel to insert the post-placental IUCD, which occurred in (60%) clients who had consented.

Conclusion: The post-placental IUCD is an acceptable method among women irrespective of level of counselling. Intensive counselling did not significantly increase acceptance and uptake rates of post-placental IUCD insertion in comparison to routine counselling.

INTRODUCTION

Contraceptive prevalence in Kenya is low at 46% (Kenya Health Demographic Survey 2008/9). There is a notable steady decline in the use of Long Acting and Permanent Method's (LAPM's) especially the IUCD. Current national IUCD use rates are 1.6% compared to 2.4% in 2003 (KDHS 2003). Post-placental IUCD use has been known to be safe and effective. Use of this method may increase contraceptive prevalence rates as it provides contraception at a time when the woman is highly motivated to use a method.

Counselling plays a vital role in educating women, ensuring they make informed choices on the family planning method that best suits them.

Improving the quality of antenatal counselling on family planning methods may increase the uptake of post-placental IUCD insertion.

Access to contraception is a basic right for every woman (1). As of 2005, approximately 60.5 % of women worldwide (who were between the ages of 15-49, married or in union) used a contraceptive method. In Africa, the contraceptive prevalence rates as of 2005 were estimated to be 27.4 % (2). In Kenya slightly less than half of currently married women (46%) are using some method of contraception, with modern method use at 39% (KDHS 2008-09).

The importance of contraception cannot be over-emphasised as evidenced by its role as a major agenda in global reproductive and developmental forums

such as the Millennium Development Goals, The Safe Motherhood Initiative Plus and The International Conference on Population and Development plus 5 Goals (3).

Family planning benefits the health of men, women and children. Contraceptive use reduces maternal mortality and improves women's health by preventing unwanted and high-risk pregnancies and reducing the need for unsafe abortions (4). Neo-natal and infant deaths are prevented through adequate birth spacing (5, 6), prevention of births among very young women, and prevention of births among multiparous mothers. The couple benefits by freedom to decide timing of/ and desired family size therefore providing less emotional and financial strain, increased economic opportunities and more space for personal development (4).

Although fertility rates are declining and contraceptive prevalence is rising there is a notable decline in the utilisation of the long term (IUCD) and permanent methods (female and male sterilisation). The provision of these methods suffers most from deterioration in standards in clinical services, provider attitudes and skills (7). Revitalisation of long acting and permanent methods and post-partum contraception is important for effective contraceptive services. In resource limited settings where post-partum follow up visits are poorly attended, post-partum contraception may prove to be of great value. Women are highly motivated to use a contraceptive method in the post-partum period (8). Post-partum IUCD insertion encompasses post-placental, transceserean, immediate post-partum and postabortal timings. Post-partum IUCD was recommended more than 4 decades ago in 1967(9).

Post-partum IUCD insertion has shown to be a safe and feasible method of contraception (11). Insertion immediately after delivery (post-placental) provides a time when there is minimal discomfort to the patient as the cervix is still open, unlike in interval insertion. The demand on hospital resources and expense to the patient is limited to the cost of the IUCD, as the device is inserted using the same equipment and by the same professional attending to the delivery. The mother leaves hospital with a contraceptive method that provides immediate protection from future pregnancy without interfering with lactation or causing concern about hormonal transfer to the infant (12). Provider bias and potential user misconceptions remains a major obstacle to IUCD use (15). Counselling is a key component of family planning services and has been used to improve the care clients receive in family planning programmes and help ensure clients make voluntary, informed and well considered choices (16). Studies have shown that women demand improved privacy, a wider choice of contraceptive methods and accurate and more comprehensive information about methods

and side effects (17). An improvement in the quality of counselling may lead to increased uptake of these methods, especially post-placental and early post-partum methods, bridging the 26% unmet need for family planning among our Kenyan women.

MATERIALS AND METHODS

The study was conducted at Embu Provincial General Hospital, Kenya. This was a randomised "open-label" clinical trial. The selection criteria were pregnant women between the gestational ages 36 weeks and term who attended the ANC clinic. The trial was non-blinded and sought to determine the effect of two levels of counselling on the acceptance, uptake and early outcomes of post-placental IUCD insertion in clients who received intensive family planning counselling as compared to clients who received routine counselling. Routine family planning counselling was the normal given to patients at the antenatal clinics and while intensive counselling was an extra effort in order to enhance informed decision-making.

The sample size was 127 clients and the eligible clients who consented to take part in the study were randomised to either routine or intensive FP counselling. The recruited clients were 63 in the intensive FP counselled group and 64 in the routine FP counselled group. Subsequently, a trained counsellor did the counselling. Women in both family planning counselling groups were allowed to consult their partner before consenting. Those who did not consent for the method were asked to fill in their reasons for decline and this was the exit point for them. In anticipation of delivery all medical records were counter checked to ensure the patient opted for the method and was still eligible. Those who accepted were followed up intrapartum and had the IUCD inserted within ten minutes of placental delivery. A pre-discharge review and a follow up visit at six weeks (exit point) were then carried out. During the follow up visit section of Questionnaire 2 was filled to obtain data on the outcomes. The principal investigator or research assistant to verify the presence of the IUCD and check for signs of infection performed physical and pelvic examination. Expulsion was verified physically by visual inspection

This was the final exit point from the study; however, they were advised to return to the family planning clinic at three months post-partum for a follow up visit or before then if any complications arose. Patients who wished to discontinue use of this method due to any side effects or dissatisfaction were allowed to do so. Study participants who had had the post-placental IUCD and failed to return for the follow up visit were called via telephone and advised to return. Those who were unable to return were interviewed via telephone and the data entered.

This was the final point of the study. Data from the questionnaire forms was transferred to a specifically designed database on Microsoft Access. SPSS version 17.0 was then used for data processing and analysis. The data were validated and analysed with assistance from a biostatistician.

RESULTS

In this study one hundred and twenty seven eligible antenatal mothers were approached and all accepted to participate in the study.

Table 1
Social Demographic Characteristics of the Study Population

Characteristic	Level of Counselling		P-value
	Intensive N = 63 (%)	Routine N = 64 (%)	
Age			
<30 years	48 (76.2%)	38 (60.3%)	0.056
>=30 years	15 (23.8%)	25 (39.7%)	
Marital Status			
Married	55 (87.3%)	62 (98.4%)	0.033*
Others	8 (12.7%)	1 (1.6%)	
Educational Attainment			
Primary	24 (38.1%)	26 (41.3%)	0.304
Secondary	33 (52.4%)	26 (41.3%)	
College/University	6 (9.5%)	11 (17.5%)	
Employment			
Unemployed	45 (71.4%)	35 (55.6%)	0.064
Employed	18 (28.6%)	28 (44.4%)	
Parity			
0+0	34 (54.8%)	24 (38.1%)	0.166
1+	16 (25.8%)	21 (33.3%)	
>=2+	12 (19.4%)	18 (28.6%)	
Number of additional children wanted			
None	19 (30.2%)	29 (45.3%)	0.288
One	14 (22.2%)	12 (18.8%)	
Two and more	28 (44.4%)	20 (31.3%)	
Not sure	2 (3.2%)	3 (4.7%)	
Duration before next pregnancy			
<=3	6 (13.3%)	4 (10.8%)	0.728
>3	39 (86.7%)	33 (89.2%)	

*Fishers exact test

The routine FP counselled group were more likely, than the intensive FP counselled group, to be over 30 years of age and employed but being married (98%; p-value 0.03) was the only variable that showed

statistically significant difference. There was no statistical significant difference in parity, family size required and pregnancy interval between the two-randomisation arms.

Table 2
Background contraceptive knowledge and use of the study population

Characteristic	Level of Counselling		P-value
	Intensive N = 63 (%)	Routine N = 64 (%)	
Would leave after delivery with an FP method	59 (93.7%)	64 (100%)	0.058
Prior contraceptive use	33 (53.2%)	47 (75.8%)	0.009
Prior IUCD use	2 (3.2%)	5 (7.8%)	0.440
Have IUCD misconceptions			
Lost inside the body	21 (33.3%)	16 (25.0%)	0.301
Move to the heart	7 (11.1%)	16 (25.0%)	0.042
Fail and will be in babies head	25 (39.7%)	24 (37.5%)	0.801
Be felt by partner (pinching)	20 (31.7%)	22(34.4%)	0.753
Fall out	12 (19.0%)	18(28.1%)	0.229
Causes cancer	8 (12.7%)	13(20.3%)	0.248
Causes abortion	3 (4.8%)	6(9.4%)	0.492
Knowledge on IUCD			
IUCD is more than 97% effective	22 (34.9%)	26(40.6%)	0.507
IUCD functions by preventing implantation	11 (17.5%)	5(7.8%)	0.101
Copper T IUCD protects for 10 years	18 (28.6)	17(26.6%)	0.800
IUCD side effects	22 (34.9%)	28(43.8%)	0.309
Painful periods	3 (4.8%)	6(9.4%)	0.492*
Heavy bleeding	18 (28.6%)	23(35.9%)	0.375
Expulsion	1 (1.6%)	0	0.496
Pregnancy	3 (4.8%)	6(9.4%)	0.492
Know benefits of IUCD	36 (57.1%)	41(64.1%)	0.496
Protects against pregnancy	28 (44.4%)	38(59.4%)	0.092
Long duration of protection	18 (28.6%)	14(21.9%)	0.385
Safe	4 (6.3%)	5(7.8%)	1.000*
Easily reverses fertility	1 (1.6%)	2(3.1%)	1.000*
Minimal side effects	5 (7.9%)	1(1.6%)	0.115
IUCD protects against STI/STDs	61 (98.4%)	58(96.7%)	0.616*
Prior knowledge on PPIUCD			
Yes	21 (33.3%)	18(28.1%)	0.525
No	44 (67.7%)	47(72.3%)	

*Fishers exact test

The routine family planning counselled group were more likely to accept an immediate post-partum method and had more previous contraceptive use (75.8%; p-value 0.009).

The majority of women had at least one misconception about the IUCD. More women in the routine FP counselled group thought it could move to the heart (25%; p-value 0.042).

There was no statistically significant difference in IUCD knowledge before counselling between the two groups. Both groups also had similar prior knowledge on post-placental IUCD (p-value 0.525) with only 30.7% having heard of the method prior to this intervention.

Figure 2
Antenatal acceptance rates of the post-placental IUCD by level of counselling

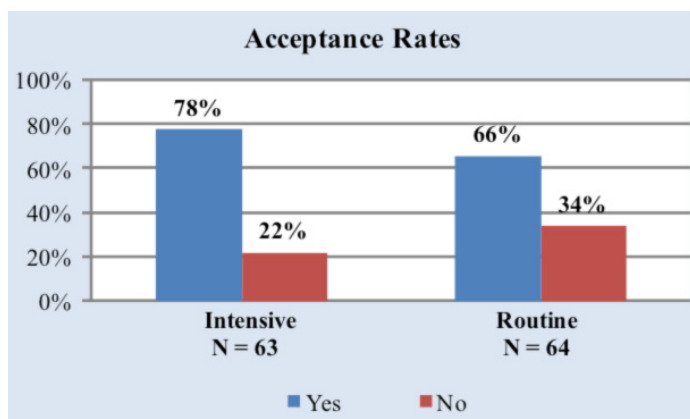


Figure 2 above, show the antenatal acceptance rates of the post-placental IUCD by level of counselling. Of these 91 women who accepted post-placental IUCD insertion, 49 women were from the intensive family planning counselled group and 42 women from the routine family planning counselled group. There was no statistically significant difference in acceptance rates between the two-randomisation arms (p-value 0.129)

Table 3
Univariate analysis for predictors of acceptance

Variable	OR	CI 95%	p – value
Prior contraceptive use	0.4	0.2 - 1.0	0.058
IUCD causes cancer	0.4	0.1 - 1.1	0.079
Copper T IUCD protects for 10 years	4.2	1.4 - 12.6	0.01
Protects against pregnancy	0.6	0.2 - 1.4	0.244

Table 3 above shows the univariate analysis to verify for statistically significant predictors of acceptance. The only true statistically significant predictor of acceptance was the knowledge that the IUCD is a long-term method. Women who knew, prior to counselling, that the IUCD is a long term method were 4.2 times more likely to accept the method. (p-value 0.01)

Figure 3
Barriers to acceptance of post-placental IUCD insertion

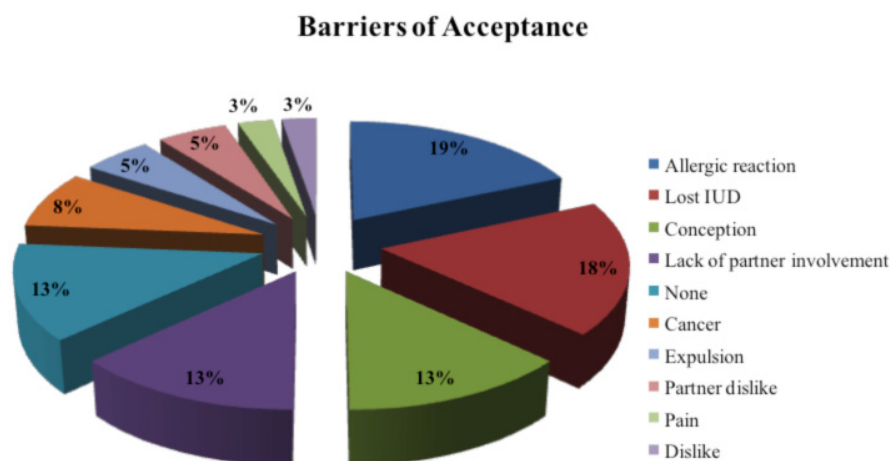


Figure 3 above shows reasons why women did not accept the post-placental IUCD method. The most common reasons why women did not accept to use the method were fear of foreign body causing an

allergic reaction (19%) and fear of lost IUCD (18%). A large number of women (13%) also reported lack of partner involvement in decision-making a reason to decline acceptance.

Figure 4
Uptake rates of the post-placental IUCD by level of counselling

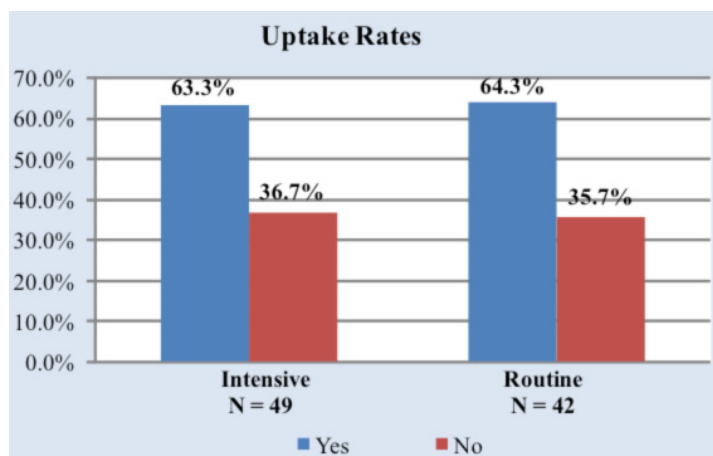


Figure 4 above show the uptake rates of post-placental IUCD insertion by level of counselling. Fifty-eight parturient (44% of study subjects) out of the ninety-one antenatal acceptors had the IUCD inserted post-placental. This consisted of 31 (63.3%) women in the intensive FP counselled group and 27 (64.3%) women in the routine FP counselled group. There was no statistically significant difference in uptake between the two-randomisation arms (p-value 0.232)

The results show that women who had prior knowledge that the IUCD protected against pregnancy (p-value 0.001), was 97% effective (p-value 0.01) and whom reported knowing benefits of the IUCD (p-value 0.001) were less likely to take up the method.

Women who had the misconception that the IUCD could move to the heart were more likely to take up the method (p-value 0.009).

Figure 5
Barriers to uptake of the post-placental IUCD

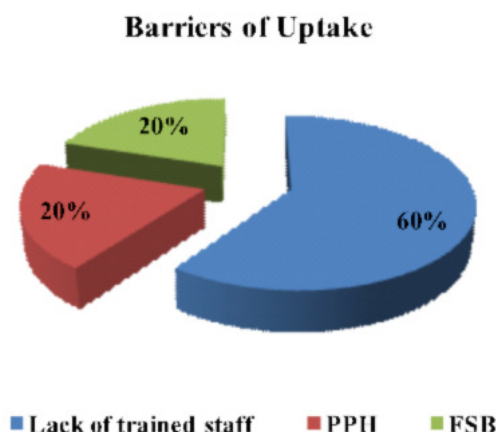


Figure 5 above shows barriers to uptake of the post-placental IUCD. Out of the sixty-three women who accepted to use the post-placental IUCD intrapartum, five did not have the IUCD inserted.

The figure above shows that for three patients

(60%), the unavailability of trained staff to insert the IUCD was the barrier to uptake. The reasons the two other patients did not have the post-placental IUCD inserted were post-partum haemorrhage and the neo-natal outcome of a fresh stillbirth.

Table 4
Outcomes of post-placental IUCD insertion at six weeks by level of counselling

Outcomes	Level of Counselling		p-value
	Intensive N = 31 (%)	Routine N = 27 (%)	
Expulsion	2 (4.1%)	–	–
Pelvic Infection	–	1 (1.8%)	–
Allergic Reaction	–	1 (1.8%)	–
Abdominal Pain	1 (1.8%)	–	–
Discontinuation	1 (1.8%)	–	–
Continuation	23 (92%)	24 (89%)	0.235*
Client Satisfaction	23 (92%)	25 (93%)	1.00*
Partner Satisfaction	22 (85%)	23 (86%)	0.77

*Fishers exact test

Table 4 above shows the outcomes at six weeks of post-placental IUCD insertion by level of counselling.

From the table we observe that only five parturient had complications that included expulsion (2; 3.7%), allergic reaction (1; 1.8%), pelvic infection (1; 1.8%) and abdominal pain (1; 1.8%).

The continuation rates were 92% (23) for the intensive FP counselled group and 89% (24) for the routine FP counselled group. Client satisfaction rates were 92% (23) for the intensive FP counselled group and 93% (25) for the routine FP counselled group. Reported partner satisfaction rates were 85% (22) in the intensive FP counselled group and 86% (23) in the routine FP counselled group.

DISCUSSION

The purpose of this study was to evaluate the impact of intensive counselling on acceptance, uptake and early outcomes (expulsion, pelvic infection, continuation and couple satisfaction rates at six weeks post-partum) of the post-placental IUCD. The results indicate that there is no difference in post-placental IUCD acceptance and uptake rates between women who received more detailed intensive family planning counselling compared to those that received routine information about contraception. These findings are similar to other studies that have found, that it is possible to increase the quality of family planning counselling but that such an intervention is not associated with higher contraceptive use (18, 19).

The post-placental IUCD is an acceptable method among women in this region. Forty five per cent of women had the IUCD inserted post-placental. Randomisation to FP counselling whether intensive or routine did not have any impact on the acceptance (p-value 0.129) and uptake (p-value 0.92) rates of post-placental IUCD insertion.

Women in this region have a need for immediate post-partum methods and long acting methods. The only significant determinant for acceptance was that the IUCD was a long-term method. Women who were aware of this were 4.2 times more likely to accept this method. Notably, the majority of women (97%) interviewed reported they would leave the hospital with an immediate post-partum method if it were offered to them.

The results show that, the only significant determinant for uptake was that women who reported knowing the benefits of the IUCD prior to the FP counselling intervention were less likely to take up the method (p-value 0.005). Studies have shown that women get information on contraception from their peers before the health worker and most already have a post-partum method in mind during the antenatal period regardless of counselling, even those who are naïve to contraception (20). Choice of method is mainly based on a woman's prior perception of effectiveness and convenience of use (18). Nonetheless adequate information on all methods available, benefits and side effects should be offered and misconceptions corrected.

Barriers of acceptance included misconceptions, lost IUCD, fear of a foreign body giving an allergic reaction and lack of partner involvement to assist in decision-making. Barriers to uptake included lack of trained personal available to insert the post-placental IUCD. This highlights the need for training on Post-placental IUCD insertion for all staff working in labour ward.

The post-placental IUCD is a safe method with few side effects. The rates of expulsion were low; only two patients (3.7%) had the IUCD expelled by six weeks. Expulsion rates are comparable to a similar study done in Nyeri in 1990, which showed rates of 10% at six months (10). The other complications

experienced were pelvic infection, severe abdominal pain and allergic reaction occurring in one patient each. The study had inadequate power to assess for statistical significant differences in the outcomes for the two-randomisation arms.

Ninety one percent of patients were satisfied and opted to continue with the IUCD as their choice of contraception. There was no difference in satisfaction and continued in the two arms of the study. Most studies have shown that the post-placental IUCD is a highly effective method that gives the couple satisfaction and thus affords high continuation rates (10,13,14).

Few women were aware of the method (30.7%); only seven (5.5%) women had used an IUCD before and most had inadequate knowledge and had several misconceptions about the IUCD. Knowledge on the method was similar in both randomisation arms (p-value 0.52).

In conclusion, intensive FP counselling carried out on antenatal clients at did not result in a significant increase in acceptance and uptake rates of post-placental IUCD use in comparison to routine FP counselling. Routine counselling provides adequate information to allow a woman to make an informed choice on a contraceptive method, without adding extra burden to staff that already have time constraints.

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