

Use of the Postpartum Intrauterine Device in a Communal Medical Center in Guinea-Conakry: A Cross-Sectional Study

Bah O.H¹, Soumah AFM¹, Diallo BA¹, Conte I¹, Sidibe M², Kaba F³, Sy T¹ and Hyjazi Y¹

¹Chair of Obstetric Gynecology, Faculty of Health Sciences and Techniques; Gamal Abdel Nasser University of Conakry, Guinea.

²Pan African University master's student from Guinea, Conakry, Commune of Ratoma.

³Obstetrical Gynecology Service of the Matam Communal Medical Center, Conakry.

*Correspondence:

Dr. Oumou Hawa BAH, Department of Obstetrics and Gynecology, Donka National Hospital, CHU Conakry, Tel: +224622185568.

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ABSTRACT

Background: In Guinea, family planning (FP) use remains low and unmet need among postpartum women is high despite the sustainable development goal of increasing the contraceptive prevalence rate by 2030. An intrauterine device placed immediately after childbirth can be an effective and safe contraceptive strategy for women who want to space or limit their births in the postpartum period.

The objectives of this study were to describe the sociodemographic, epidemiologic, and supply characteristics among users of the postpartum intrauterine device (IUD) and to assess the continuity rate at one year of use.

Material and Methods: This study is descriptive, retrospective conducted at the gynecology-obstetrics department of the Medical Center of Matam - Conakry over a period from January 1, 2013 to November 30, 2015. All clients who chose the IUD as a postpartum contraceptive method and who did not present contraindications according to WHO medical eligibility criteria were included.

Results: The study included 536 clients who received the IUD out of a total of 1,297 women counseled, or 41.33%. The age range most represented was 24-28 years (27.32%) with extremes of 14-45 years. More than two-thirds of the women (82.58%) received immediate postpartum counseling. The majority (71.78%) of the insertions were in the immediate postpartum period. Follow-up was carried out in the majority of cases (88.8%) during post-insertion consultations. Satisfaction was recorded in almost all users (96.83%). The one-year continuity rate was 96.27%.

Conclusion: The IUDIP is a long-acting contraceptive method that is safe, acceptable, and feasible in an African context and could improve unmet need in Guinea.

Keywords

Continuity, Postpartum intrauterine device, Satisfaction.

Introduction

Family planning is one of the most effective strategies to combat maternal and neonatal mortality, preventing more than 30% of maternal deaths and 10% of infant deaths if couples allow more than two years between pregnancies [1]. Reproductive health implies the right of men and women to be informed and to have access to safe, effective, affordable and accessible FP methods of their choice.

In Guinea, despite the benefits of FP for maternal and newborn health, contraceptive prevalence remains low and the prevalence of close pregnancies remains high [2]. Maternal and neonatal morbidity and mortality are major concerns for health systems in developing countries, particularly in sub-Saharan Africa [2].

The situation in Guinea is among the most alarming in the world, with a maternal mortality rate of 550/100,000 NV [3]. The main causes of maternal mortality are complications of pregnancy and childbirth, because every pregnancy is accompanied by risk, and this risk is all the higher if pregnancies are too close together, too

numerous, too early and too late [3,4]. For this reason, PPPP is a very timely intervention to enable women/couples with limited access to health care to meet their need for contraception when delivery takes place in a health facility by a skilled provider [5,6].

This strategy also enables women/couples to comply with the WHO recommendation to space a birth and a new pregnancy by at least two years to reduce maternal and infant mortality [2]. The period before and immediately after childbirth represents a valuable opportunity for the woman/couple to learn and enjoy the benefits of FP services. These are times when women are more likely to have access to formal health care, through antenatal care and assisted childbirth; they are sensitized to space or limit births [4,7].

In the months following childbirth, all modern methods can be used, but the choice of a contraceptive method in the first days postpartum must take into account the various physiological changes, in particular the hormonal variation observed according to the breastfeeding method chosen by the woman.

It is important that women not only have access to contraceptive methods in the postpartum period, but also that they continue to use them long after delivery, because contraception is effective if used continuously and regularly. Because discontinuation of a method is most often observed in the first year of use, the one-year continuity rate can be used to estimate the likelihood that a person will continue using a contraceptive method [8].

The IUD inserted immediately after delivery of the placenta or within 48 hours of delivery is a good choice for both postpartum breastfeeding and non-breastfeeding women, preferably with prenatal counseling [8]. Worldwide, the prevalence of IUD use is 14%. In developed countries the prevalence of IUD use is 8% and 15% in developing countries. In sub-Saharan Africa it is 0.4% [9]. In Guinea the prevalence is 0.2%. [3].

The provision of the IUD, after well-conducted counseling that would highlight the advantages of the method (effective, long-acting, reversible, safe, does not interfere with breast milk, with a rapid return to fertility), and its popularization could not only improve the use of this contraceptive method, but also help reduce maternal and infant morbidity and mortality.

Experience demonstrates the need for special orientation for staff who provide contraceptive counseling and who introduce the IUD as a contraceptive option during the postpartum or immediate postpartum phase. Counseling should emphasize the safety and convenience of this method for women who do not have much contact with health facilities [6].

The objectives of this study were to describe the sociodemographic, epidemiologic and supply characteristics among users of the postpartum intrauterine device (IUD) and to assess the continuity rate of clients at one year of use.

Materials and Methods

This was a retrospective, descriptive and analytical study carried out during the period from January 1, 2013 to November 30, 2015 (36 months) in the Gynecology and Obstetrics department of the Communal Medical Center of Matam (CMC), in the prefecture of Conakry, which has 5 CMCs. This is a level II public health establishment in the country's health pyramid, with responsibility for urban health centers and a medical staff composed of: hospital practitioners; medical students, nurse anesthetists; midwives and state nurses; nurses' aides and chambermaids.

In this study, we included all women who, after postpartum family planning counseling, chose to adopt the postpartum intrauterine device (IUD) as a contraceptive method. All clients included met the requirements for postpartum IUD insertion.

Clients who chose the IUD but had contraindications to the method according to WHO medical eligibility criteria were excluded from the study. The parameters studied were epidemiological-socio-demographic characteristics, IUD provision, and client follow-up. The minimum sample size was 536. Data were entered and analyzed using EPI INFO version 6 software. The statistical test used was Chi-square 2, with a significance level of $P < 0.05$. The statistical test used was Chi-square 2, with a significance level of $P < 0.05$.

Results

Counseling and FP acceptance

During our study period, 1297 clients agreed to adopt a family planning method out of a total of 10536 deliveries and counseling. Of these, 41.33% (n=536) chose the IUD.

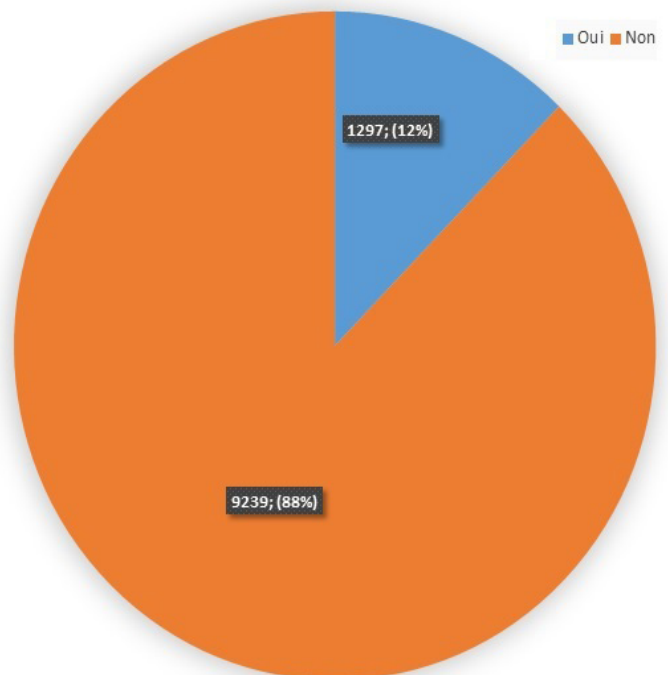


Figure 1: Proportion of births that received counseling and chose a family planning method.

	n= 536	Staff	Percentage
The method of PFP chosen	Condom	9	0,6
	IUD	536	41,33
	Implant	143	11,03
	LAM	380	29,30
	Pill	108	8,33
	Progestogens	121	9,33
41.33% of women chose the IUD postpartum			
Age range	14-18	38	7,08
	19-23	88	16,41
	24-28	146	27,23
Age range	29-33	134	25
	34-38	106	19,77
	39-43	22	4,10
	44 year and more	2	0,37
The most represented age group is that of 24-28 years with extremes of 14-45 years followed by 29-33 years			
Professional Occupation	Housewives	240	44,78
	Pupils/Students	85	15,86
	Employees	64	11,76
	Liberal profession	148	27,61
Housewives are more numerous with 44.78%.			
Marital Status	Married	482	89,93
	Unmarried	54	10,07
89.93% of women who chose the ICPD are married.			
Gestivity	Primigeste	82	15,30
	Paucigeste	195	36,38
	Multigeste	123	22,95
	Grande multigest	136	25,37
The paucigests represent 36,38%			
According to Parity	Nulliparous	5	0,93
	First seems	87	16,23
	Fears it seems	198	36,94
	Multipare	121	22,95
	Big multi pare	125	25,37
The paucipares are more numerous with 36,94%			
The time of counseling	EIC	165	30,78
	Latency phase	46	0,58
	Immediate post partum	325	60,63
Postpartum is the period when the greatest number of women who chose the IUD benefited from counseling, with 60.63%.			
When to insert the IUD	Immediate postpartum	385	71,78
	Per-Cesarean section	117	21,87
	Post-placing	34	6,36
71.78% of DUIPPs were inserted immediately postpartum.			

Table 1: Epidemiological, sociodemographic and supply characteristics of the Postpartum Planning (PPFP) / IUD approach.

Side effects/ Complications	(n=536)	staff	Percentage
None		519	96,83
Pelvic pain		2	0,37
Partial expulsion		5	0,94
Total expulsion		5	0,93
Haemorrhage		1	0,19
Hypermenorrhea		4	0,75
96.83% of women had no side effects or complications.			
Client Satisfaction	(n=536)		
No		11	2,05
Yes		519	96,83
Without notice		6	1,12
96.83% of women are satisfied with DUIPP			
Continuity at one year	No	20	20
	Yes	516	516
The one-year continuity rate of the DIUPP is 96.27%			

Table 2: Client Follow-up.

Discussion

During the study period, 1297 clients counselled out of 10536 deliveries, or 12.31%, adopted a postpartum contraceptive method.

Of the 1,297 clients who chose a PFP method, 536 preferred the IUD, a proportion of 41.33% compared to 58.67% for other postpartum FP methods, including 29.3% for LAM. This result is significantly higher than the 14.74% found in a sub-regional study conducted in 2014-2015 in West and Central Africa by Pleah T., Hyjazi Y. et al. [7] and S. Kumar et al. [8], which reported 20.3% of cases of early postpartum insertion (between 10 min and 48 h after delivery).

This could be related to under-notification of counselling activities and choice of other methods by the birth attendants. Indeed, LAM is under-reported at the Matam maternity hospital, because data on PFP indicate that prior to the introduction of the IUD, no other contraceptive method other than LAM was offered during the 48 hours after delivery [4]. This is because the implant was not yet accepted as a method for use in the immediate postpartum, and most of the available methods are associated with an increased risk of deep vein thrombosis and pulmonary embolism, a risk that is believed to be related to the dose of estrogen and type of progestin, but more importantly, fear that these methods may interfere with lactation [10,11].

The study shows that all age groups are affected by the use of the IUDPP with extremes of 14 and 45. The 24-28 age group was the most represented, with a proportion of 27.23%, which could be related to the decrease in fertility desire for these women, who most often have enough children at that age and are already thinking about limiting births. This result is superimposed on a study conducted in Nairobi, Kenya, by Dugma N et al. where the majority of women were aged 20-24 years and they linked this to the fact that girls were married early and that the sexual activity of these young mothers resumed quickly after giving birth, which is

also the case in our country [3].

The study results show that housewives account for 44.78% of clients who chose to use the IUD. This can be explained not only by the fact that housewives account for the majority of women in the general population and of clients at the Matam CMC, but also by the ease of use of the IUD, which does not require any client involvement.

Married women are the most likely to have chosen the IUD, with 89.93% of married women choosing the IUD, a result that may be explained by the fact that awareness campaigns are directed primarily at married people, considering that procreation is legal only when the woman is married, because of Guinea's socio-cultural considerations.

This result could be explained by the fact that these poor people are most often young women who have professional activities and who resume their sexual activities at an early age and are therefore very interested in the IUD, which protects them effectively and early from unwanted pregnancies and allows them to go about their professional activities. The paucipares were more represented with a proportion of 36.94%, the multiparas had a proportion of 22.57%. This could be related not only to the decrease in fertility desire for these paucipares who already plan to limit births but also and especially to the integration of the PFPP/UPPD into maternal care allowing them to have access to contraceptive methods at delivery but also and especially by the fact that these multiparous women are reluctant to the PFPP/UPPD because of rumors and misconceptions.

The postpartum is the period when the greatest number of women who chose the IUD benefited from counseling, with 60.63%. This could be explained mainly by the poor quality of ANC consultations during which providers do not give enough time to FP counseling, but also by the fact that most parturients come in the active labor phase and therefore the most favorable time for counseling is during this period; only 8.58% of women were counseled during the latency phase and 30.78% were counseled during ANC. These results are different from those found in a sub-regional study on DUIPP conducted by Pleah T., Hyjazi Y. et al in 2014-2015, where only 19.65% of counseling was done in the immediate postpartum phase compared to 31.42% in the latent phase and 8.19% in ANC [7].

The most appropriate time to do FPPP/DIUPP counseling is during ANC. This is a weakness of the program in Matam. The majority of clients (71.78%), benefited from immediate postpartum insertion. This high proportion of insertions is related to the high proportion of counseling performed mostly in immediate postpartum, and the increasing frequency of deliveries in the service. The other modes of insertion were per cesarean section with 21.87% and post-placental insertion with 6.36%. This low proportion of post-placental insertion could be linked to a low rate of counselling during ANC. These results are different from those reported by Pleah T., Hyjazi Y. et al who found that 32.9% of insertions

were done per cesarean section, 20.36% were post-placental and 29.48% were immediate postpartum. This difference in the proportion of intra Caesarean IUD insertion is due to the high Caesarean section rates in these countries, where IUD insertions are performed primarily by physicians, unlike in our country, where non-physician clinicians, including midwives and nurses, provide the majority of PPF/UPUPID services [7].

Client follow-up

Most (88.8%) of the clients who received the IUDPPD were followed up through consultations at post-insertion appointments. Some patients were followed up by telephone (6.1%) and others were not followed up at all (5.1%).

In the majority of cases (96.83%), clients had no side effects or complications after IUD insertion. The rare side effects and complications were pelvic pain (0.37%), partial expulsion (0.94%), total expulsion (0.93%), hypermenorrhea (0.75%), and hemorrhage (0.19%). In a study conducted in Nigeria, ABASSIATAI. AM et al report: 11.2% abdominal pain, and 0.6% expulsion [12].

Previous studies reported higher expulsion rates because the instruments and method used were not the most effective (short forceps or manual insertion). A study conducted by USAID in 2006 reported an expulsion rate of 10-14%, but it should be noted that a good insertion technique reduces the expulsion rate to 4-5% and that the post-placental expulsion rates are lower than those in the postpartum [13].

The results of a study comparing IUDs and interval IUDs conducted in 2003 in Nigeria showed an expulsion rate of 10% for the interval IUD versus 19% for the IUD [12]. Nevertheless, the rates found in this series are similar to those found by Tsigue P and Yolande et al, Tang JH H et al. [7,14]. These rates could be reduced thanks to improvements in the instrument used (33 cm longer) and the proposed technique. If ANC counseling improved and the proportion of insertion in the post-placental period increased, the expulsion rate could be further reduced.

Satisfaction with the use of the IUDIP

Almost all users (96.83%) reported being satisfied, while 2.05% were dissatisfied because of side effects and/or complications and 1.12% had no idea whether they were satisfied or not. This high proportion of satisfaction could be due to the advantages of the method: long duration of action, reversibility, discretion, and few side effects, less expensive, does not interfere with lactation.

Continuity of use of the IUDPP at 1 year

Evaluation of continuity at 1 year showed that 96.27% of users had continued to use the method as a contraceptive method. This high rate of continuity at 1 year could be due to clients' satisfaction with the method. This 1-year continuity rate is superimposed on the 95.5% reported by Pleah T., Hyjazi Y. et al. [7].

Causes of shrinkage

Regarding Causes of withdrawal among clients who inserted the

IUD, there were 20 cases of withdrawal (3.73%) at less than 1 year, including 5 for desire of pregnancy (25%); 9(45%) because of side effects (pelvic pain, hypermenorrhea) and complications (expulsion and hemorrhage); 3 (15%) women withdrew because their husbands did not agree and the last 3(15%) did not give an explicit reason.

Involving husbands in education and counseling sessions to obtain their adherence could prevent 15% of early IUD removals.

Risks and benefits of the study

This study does not involve any invasive procedures because it was a non-experimental research. Therefore, the risk/benefit ratio is strongly in favour of participation because of the very limited risks involved in the study. This study offers the opportunity to learn about the epidemiological and clinical aspects of the postpartum IUD in the maternity ward of the CMC of Matam. These results will make it possible to formulate recommendations for the different actors involved in the implementation of the national strategic plan for repositioning FP.

Limitations and Difficulties of the Study

Underreporting of cases; incomplete information in data collection tools; and difficulty in reaching some patients by telephone.

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