Journal of Women's Health Care
ISSN: 2167-0420

Igwebueze, J Women's Health Care 2015, 4:6
DOI: 10.4172/2167-0420.1000266

Research Article Open Access

Mother's Experiences with Cut380a Postpartum Intrauterine Contraceptive Device in Enugu, Southeast, Nigeria

Okafor Innocent Igwebueze*

Department of Obstetrics and Gynecology, Enugu State University Teaching Hospital, Enugu

Abstract

Objective: To assess mother's experiences with CuT380A Postpartum Intrauterine Contraceptive Device (PPIUD).

Subjects and methods: Mothers who accepted PPIUD in three centers in Enugu from August 1, 2013 to July 31, 2014 were the subjects of the study. Mother's experiences with PPIUD were assessed with structured questionnaires. Data was analyzed using excel 2007 software, and presented using percentages and graphs.

Results: Fifteen PPIUD were inserted during caesarean deliveries while 66 were inserted vaginally. Majority of the mothers were of ages 31-40 years 43(53%), married 76(93.8%), secondary educated 46(56.8) and para 2-4 68(84%). PPIUD was mostly accepted because it was convenient after childbirth 81(100%). Few women experienced missing PPIUD strings 8(9.9%) and spontaneous expulsions 2(2.5%). There was no failed PPIUD. Seventy four (91.4%) mothers were satisfied with PPIUD. The major sources of the satisfactions were convenient time of insertion 81(100%), few complications 78(96.30%), and the safety of CuT380A PPIUD during breast feeding 78(96.30%). Sixty two (76.5%) mothers wanted to continue to use PPIUD while 25(30.9%) recommended the method to friends. Eight (9.9%) mothers removed their PPIUD to achieve pregnancy.

Conclusion: PPIUD is a safe and effective contraceptive method. Missing PPIUD strings and expulsions were the few complications experienced in this study. Most mothers were satisfied with the method. Convenient time of insertion, few complications, and PPIUD safety during breast feeding were the major sources of satisfactions. Many mothers wanted to continue to use PPIUD, and recommended the method to friends. The desire to achieve pregnancy was the commonest cause of discontinuation of PPIUD.

Keywords: PPIUD; Mothers; Experiences; Enugu; Nigeria

Introduction

CuT380A postpartum intrauterine contraceptive device (PPIUD) is the insertion of CuT380A into the fundus of the uterine cavity within the first 48 hr of childbirth. It is a safe, cheap, long-acting, reversible, and non-hormonal contraceptive method that is highly effective for prevention of unwanted pregnancies and the abortion-related complications [1-5]. PPIUD can promote the health of mothers and children by preventing financial, psychological, obstetric, and other health complications associated with short-interval pregnancies [2].

It increases mother's opportunities of starting effective contraceptive methods before being discharged after facility childbirths because the time of commencement of postpartum ovulation is unpredictable and may occur as early as 25 days in non-breast feeding mothers. It can be commenced on most mothers who are not at risk of sexual transmitted infections irrespective of their breastfeeding, hypertension and obesity status, and it can be continued up to 12 years as a long-acting contraceptive method to limit childbirths. It is an alternative option to sterilization. PPIUD is cheap because the mothers do not incur extra costs and inconveniences of coming back to the facility for contraceptive methods [6]. The time of facility childbirth is a great opportunity for PPIUD service providers to counsel and provide the method to large numbers of women that need contraception to space or limit childbirths especially in settings where there are cultural or geographical limitations of women's mobility and access to healthcare. Such unique opportunities were missed in Southeast, Nigeria where high facility childbirth rate of 78.1% have been documented [7]. Out of 133,375 family planning clients seen in University of Nigeria Teaching Hospital, Enugu between 1999 and 2007, 6,947 were on IUD, but none of the clients received PPIUD [8].

Poor perception of the complications of unwanted pregnancies and unsafe abortions by families, lack of awareness, poor access to services, socio-cultural issues, provider bias, limited availability of contraceptive methods, and poor educational status of women, medico-legal restrictions, and fear of complications were known barriers to the uptakes of postpartum family planning [9-12]. None involvement of the husbands during PPIUD counseling was identified as the most common barrier to PPIUD uptake in India [12].

Many women in the first postpartum year who do not want to become pregnant have regular sexual intercourse without effective contraception (i.e. unmet need for effective family planning method) [9,13]. Darroch and Singh [14] reported very high unmet needs in sub-Saharan Africa (60%), south Asia (34%) and western Asia (50%). This unmet need reduced in India when there was increase in facility births [15,16]. Okafor et al. also documented tremendous increase in facility births when maternal and child healthcare services were free in this study population [17]. Making facility births free in Nigeria, involving husbands during counseling and expanding PPIUD services will have great impact on increasing contraceptive prevalence and in reducing maternal morbidity and mortality. PPIUD expulsion, missing strings, infection and its other complications are minimal when the IUD is inserted aseptically by a skilled provider with proper techniques and by

***Corresponding author:** Okafor Innocent Igwebueze, Department of Obstetrics and Gynecology, Enugu State University Teaching Hospital, Enugu, Part-time consultant to Semino Hospital and Maternity and Redeemer Maternity, Abakpa Nike, Enugu, Nigeria, Tel: 2348034006918; E-mail: okaforii@yahoo.com

Received August 25, 2015; **Accepted** August 26, 2015; **Published** September 03, 2015

Citation: Igwebueze OI (2015) Mother's Experiences with Cut380a Postpartum Intrauterine Contraceptive Device in Enugu, Southeast, Nigeria. J Women's Health Care 4: 266. doi:10.4172/2167-0420.1000266

placing the device in the uterine fundus [18]. The higher incidence of untreated reproductive tract infections in many developing countries is a serious concern in the provision of PPIUD [19,20]. The use of prophylactic antibiotics was suggested by Muthal-Rathore [21] in prolonged labour and prolonged rupture of membranes.

In 2013, Society for Family Health in Nigeria organized three sessions of PPIUD trainings in Enugu State University Teaching Hospital, Enugu with a total of 59 family planning providers from health facilities from Northern and Southern Nigeria as participants. As the provision of PPIUD is being rapidly scaled up in Nigeria, it is pertinent that its complications should be monitored. Data on mother's demographic profiles, complications, and satisfactions with PPIUD have not been documented in this study population in Nigeria. The aim of this study is therefore to fill this gap in knowledge by assessing the experiences of mothers who had PPIUD for one year in this study.

Subjects and Methods

The study subjects were the mothers who accepted PPIUD during caesarean deliveries or within 48 hr of vaginal deliveries in Semino Hospital and Maternity, and Redeemer Maternity both in Abakpa Nike, Enugu; and Enugu State University Teaching hospital, Enugu from August 1, 2013 to July 31, 2014. The health facilities were selected by convenience (where I have access to mothers' data). The mothers were counseled during antenatal care, intrapartum and postpartum periods, and oral consents were obtained before the PPIUD were inserted. Participants were followed up in the family planning clinics at 6 week postpartum, 3 months, 6 months and one year. At 6 week visit, vaginal examination was done to visualize the string at the cervix and to trim it. They were interviewed at one year with a questionnaire (Appendix A). Mothers who did not come after one year of PPIUD usage were tracked with mobile telephone calls. Data collected from clients during the interview included demographic information, complications and mother's satisfactions. Three trained nurse counselors administered the questionnaires in the three selected health facilities. Data was entered in excel 2007 software, analyzed and presented using percentages and graphs. Three mothers out 84 participants were lost to follow at six months and were not included in the study.

Inclusion Criteria

Mothers who are medical eligible and accepted PPIUD after counseling and within the first 48 hr of facility childbirths in the selected facilities were included. The mothers were followed up to one year in the family planning clinics and interviewed.

Exclusion Criteria

Mothers who opted out after counseling were excluded. Mothers who were bleeding, had evidence of pelvic infection or have multiple sexual partners and were at risks of sexual transmitted infections were also excluded. Mothers who failed to be tracked or evaluated after one year were not included.

Procedures for Caesarean PPIUD Insertions

Caesarean PPIUD insertion into the uterine fundus is simple and can be done during caesarean delivery with a sponge holding forceps or manually after removal of blood clots, placenta, and membranes also ensuring that there was no significant uterine bleeding (Figure 1). The uterine incision is then closed as in normal caesarean delivery.

Procedures for Vaginal PPIUD Insertion within 48 hr of Delivery

a. Ensure the mother is counseled and not pale. Palpate, and massage the uterus to assess the size and ensure the uterus is contracted.

b. Clean the external genital area with antiseptic solution and place sterile drapes over the mother's abdomen and underneath her buttocks. Insert the Graves vaginal speculum to visualize the cervix. Ensure there is no active bleeding. Evacuate blood clots if present. Liberally apply an antiseptic solution to the cervix and the vagina and allow time for it to act.

c. Gently grasp the anterior lip of the cervix with ring forceps. Grasp the CuT380A IUD by its vertical arm with Kelly's forceps and in the same direction of the strings as shown in Figure 2 to facilitate the placement of the IUD in the fundus and decrease the risk of pulling it out when removing the forceps.

d. Exert gentle traction on the cervix-holding forceps and insert the Kelly's forceps holding the IUD through the cervix and to the lower uterine cavity. Avoid touching the walls of the vagina with the IUD during this procedure.

e. Release the hand holding the cervix-holding forceps and move it to the top of the uterine fundus to stabilize the uterus, confirm that the uterus is contracted and then apply firm downward pressure on the fundus.

Figure 1: Caesarean PPIUD insertion with a sponge holding forceps.

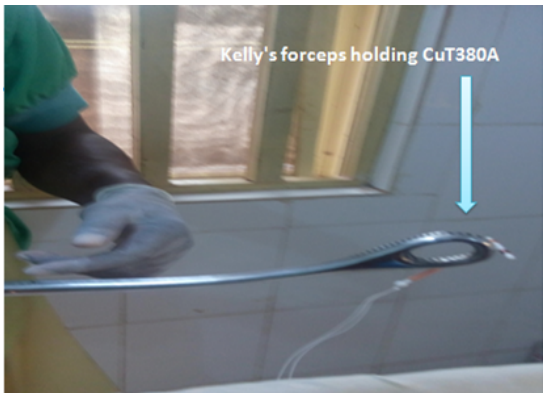

Figure 2: Kelly's forceps holding CuT380A IUD for insertion.

Figure 3: Confirmation of fundal placement of CuT380A IUD.

f. Move the Kelly's forceps with the IUD downwards and then in an upward motion toward the fundus with the wrist joint acting as pivot. Apply slight pressure to advance the IUD and achieve fundal placement Figure 3. Avoid placing the IUD through any defect in cases of previous caesarean delivery by maintaining the Kelly's forceps pressure against the posterior uterine wall.

g. Feel the tip of the Kelly's forceps with the abdominal hand to confirm the IUD has reached the fundus before opening the forceps to release the IUD. Slowly withdraw the forceps from the uterine cavity, keeping it slightly open and in upward letter C.

h. Examine the cervix to ensure that the strings are not visible at the cervix as an indication that the IUD has been placed at the uterine fundus. Sometimes, when the uterus is well contracted or small, the strings can be seen through the cervix even when the IUD is placed in the fundus. Remove the cervix-holding forceps from the anterior lip of the cervix and clean the woman and appreciate her for her cooperation.

Ethical Approved and Conflict of Interest

Enugu State University Teaching Hospital ethical committee approved the study before its commencement. The author funded the research and had no conflict of interest to declare.

Results

Table 1 showed 81 PPIUD were inserted in the three selected facilities. Fifteen were caesarean PPIUD while 66 were vaginal insertions. Majority of the clients were of ages 31-40 years 43 (53%), married 76 (93.8%), Para 2-4 68(84%), Christians 79 (97.5%), and had secondary education 46(56.8%). PPIUD was accepted because it was convenient after childbirth 81 (100%), and to limit childbirth 52(64.2%). The mother and her husband jointly decided to accept the method in 70 (86.4%). Other characteristics of the mothers were as shown in tables 1 and 2 and (Figures 4-6) showed that few clients experienced few complications like missing IUD strings 8 (9.9%) and spontaneous expulsions 2 (2.5%). Contraceptive failure, infection, excessive menstrual bleeding, IUD strings causing discomfort to sexual partners and uterine perforations were not experienced in this cohort as shown in Figure 4.

Over 74 (91.4%) of the mothers were satisfied with PPIUD and sources of their satisfactions were as shown in figure 5. The method was convenient after childbirth 81(100%), few complication 78(96.30%), effective and safe during breast feeding 78 (96.30%), frequent sex 63(77.8%), and family happiness 64(79.0%) were sources of satisfactions in this study. Other sources of satisfaction include husbands preference of PPIUD to condom 72(88.9%), 62 mothers (76.5%) wanted to continue to use PPIUD while 25 mothers (30.9%) recommended the method to friends. Seven 7/81 mothers acted as PPIUD peer counselors during their recommendations. Eight (9.9%)

Age (in years):	**Number**	**Percentage**
< 20	2	2.5
20—30	34	42
31—40	43	53
>40	2	2.5
Total	81	100
Marital status:		
Married	76	93.8
Single	3	3.7
Widowed	2	2.5
Total	81	100
Parity:		
1	1	1.2
2 --4	68	84
>5	12	14.8
Total	81	100
Level of education		
Primary	25	31
Secondary	46	56.8
Tertiary	10	12.2
Total	81	100
Religion:		
Christianity	79	97.5
Islam	2	2.5
Total	81	100
Residence		
Urban	65	80.2
Rural	16	19.8
Total	81	100
Tribe:		
Igbo	76	93.8
Yoruba	3	3.7
Hausa	2	2.5
Total	81	100
Reasons for accepting PPIUD		
Child spacing	29	35.8
Convenient after childbirth	81	100
Limit childbirth	52	64.2
Others reasons	0	0
Total	81	100
Previous family planning method used		
No method	63	77.8
Interval IUD	2	2.5
Injectable	1	1.2
Implants	0	0
Others (Condom)	15	18.5
Total	81	100
Decision to use PPIUD was made by:		
Client alone	6	7.4
Client and husband	70	86.4
Clients mother-in law	5	6.2
Total	81	100

Table 1: Characteristics of the Mothers.

	Number	Percentage
1.Complications associated with PPIUD		
Missing string (Caesarean PPIUD)	8	9.9
Spontaneous expulsion (Vaginal PPIUD)	2	2.5
Infection	0	0
Excessive menstrual bleeding	0	0
String discomfort to sexual partner	0	0
Uterine perforation	0	0
2. Sources of satisfaction with PPIUD		
Overall you were happy and satisfied	74	91.4
Convenient after childbirth	81	100
There was no serious complications	78	6.3
Earlier resumption of spontaneous sex	45	55.6
Frequent sex (no fears of pregnancy/abortion)	63	77.8
Effective and safe method during breast feeding	78	96.3
Family cohesion, understanding and happiness	64	79
Husband preferred PPIUD to condom	72	88.9
Want to continue to this method	62	76.5
Recommended PPIUD to friends	25	30.9
Acted as peer counselor during recommendation	7	8.6
3. Reasons for discontinuing PPIUD:		
Achieve pregnancy	8	9.9
Prevent excessive menstrual bleeding	0	0
Change to another method e.g. implanon	1	1.2
Prevent infection	0	0
Fear of cancer	0	0
Others e.g. menopause	0	0

Table 2: Client's experiences with CuT380A PPIUD.

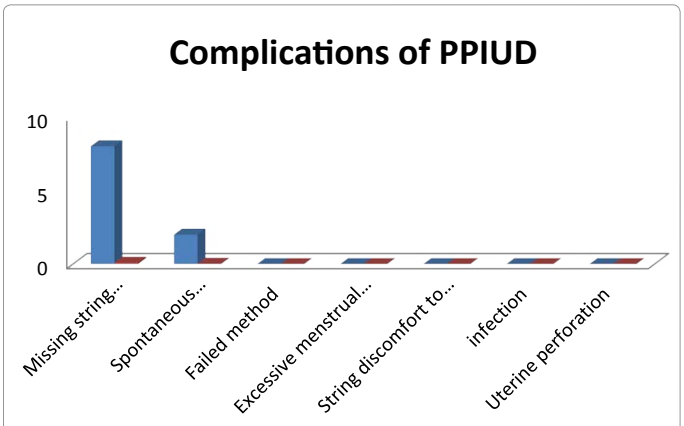

Figure 4: Complications associated with PPIUD.

of the clients removed their PPIUD to achieve pregnancy while 1/81 switched from PPIUD to implanon as shown in Figure 6.

Discussion

CuT380A PPIUD is a safe, effective, long-acting, reversible, and non-hormonal postpartum family planning method that are being introduced to mothers in Enugu, Nigeria since July 2013.

The characteristics of the mothers in this cohort showed that most of them were married (93.8%), para 2-4 (84%), had secondary education (56.8%), and most of them had no previous family planning experience. They were first-time PPIUD users, and the decisions to accept the method were reached jointly by the mothers and their husbands in 86.4% of cases for either child spacing (35.8%) or limiting childbirth (64.2%) intentions. These findings were in agreement with others studies [22-24]. The acceptance of PPIUD was also higher among educated women in India [22,23]. Grimes et al. [25] found high PPIUD acceptance rate of 65.1% in multiparous mothers as in this study. Maluchuru et al. [23] contrarily reported high acceptance rate of 31.4% among primigravida against 1.2% documented in this study.

The commonest side effect in this study was missing IUD strings in 9.9% of the mothers at 6 week postpartum, and all the missing strings occurred in caesarean PPIUD. This figure is lower than 16% and 24.76% missing strings reported by other authors [23,24]. Abdominal ultrasounds were used to confirmed that the IUDs were *in situ* in the uterine fundus. The women were reassured. I used manual vacuum aspirator to bring the strings down to the cervix in four clients who removed their IUD after one year use to achieve pregnancy. Alligator forceps could also be used to probe the cervical canal and uterine cavity to remove the IUD when the strings were not visible at the cervix.

The PPIUD expulsion rate in this study was 2.5%. This is higher

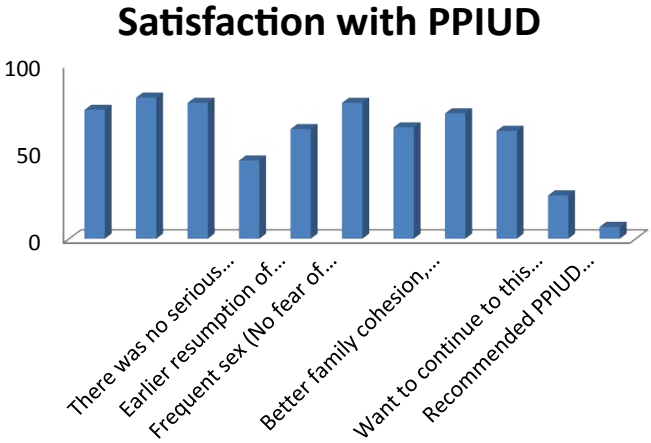

Figure 5: Assessment of the sources of client's satisfactions.

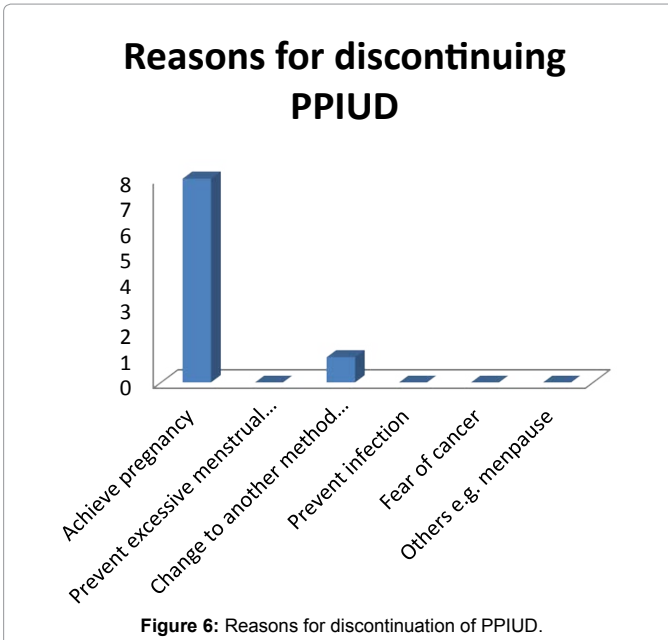

Figure 6: Reasons for discontinuation of PPIUD.

than 1.6% in Paraguay [26], but lower than 5.6% reported in India and Zambia. [24,27] and 10.7% at six months in North India [28]. All the expulsions in this study occurred in vaginal PPIUD. There was no expulsion in caesarean PPIUD in Enugu study. This is in contrary to 18% caesarean PPIUD expulsion rate reported in Turkey [29] other complications like PPIUD failure, infections, uterine perforation, IUD strings causing discomfort to sexual partners, and excessive menstrual bleeding were not experienced by the mothers at one year of PPIUD use in this study. PPIUD inserted by skilled providers with aseptic and correct techniques are associated with few complications as was reported in this study.

The desire to conceive (9.9%) and method switch to implanon (1.20%) were the reasons for the removal of IUD in this study. The rate of discontinuation of PPIUD in Enugu was higher than 7.6% reported in India [24], 3.4% in Paraguay [26], and 3% in Zambia [27]. Proper counseling of the clients, their husbands and other important members of their families on what to expect as normal side effects and complications of PPIUD will decrease the rate of discontinuation of the method and increase rate of satisfaction with PPIUD.

Over 90% of the mothers in Enugu were happy and satisfied with their choice of PPIUD. This finding is in agreement with the high satisfaction rates reported by other authors [22-24]. The major sources of satisfactions in this cohort were convenient time of insertions after childbirth (100%), its effectiveness and safety during breast feeding (96.30%), frequent sexual intercourse (77.80%), and family cohesion, understanding and happiness (79.00%). Some clients (8.60%) disclosed to mothers that they are on PPIUD (i.e. as peer counselors) when recommending the method to friends.

Limitations of the Study

This study was limited to three centers in Enugu, and only 81 mothers on PPIUD at one year were studied. The results cannot be generalized to entire study population.

Conclusion

The present study has shown that acceptors of PPIUD in Enugu were highly satisfied with the method at one year of use. Most of them were first-time users, educated and multiparous mothers. PPIUD has been shown to be safe, effective and with few side effects. The expulsion rate of 2.5% is low. The major sources of satisfactions in this study were convenient time of insertions after childbirth, few complications, and its safety during breast feeding. Some mothers acted as peer counselors when recommending the method. Increasing awareness of PPIUD among mothers and clinicians in the forms of counseling and training may remove some of the barriers to PPIUD.

References

1. Cleland J, Bernstein S, Ezeh A, Faundes A, Glasier A, et al. (2006) Family planning: the unfinished agenda. Lancet, 368: 1810-1827.
2. Rutstein S (2008) Further Evidence of the Effects of Preceding Birth Intervals on Neonatal, Infant, and Under-Five-Years Mortality and Nutritional Status in Developing Countries: Evidence from the Demographic and Health Surveys. DHS Working Papers No. 41 Macro International.
3. Vernon R (2009) "Meeting the family planning needs of postpartum women," Studies in Family Planning 40: 235–245.
4. Thapa S and Neupane S (2013) "Risk factors for repeat abortion in Nepal," International Journal of Gynecology and Obstetrics 120: 32-36.
5. Rocca CH, Puri M, Dulal B (2013) "Unsafe abortion after legalization in Nepal: a cross-sectional study of women presenting to hospitals," BJOG 120: 1075-1083.
6. Grimes D, Lopez LM, Schulz KF, Stanwood NL (2010) Immediate post-partum insertion of intrauterine devices. Cochrane Database Syst Rev 12: CD003036.
7. Nigeria Demographic and Health Survey (NDHS) (2013): 273-278.
8. Ezegwui HU, Nwogu Ikojo EE, Ikeako LC, Nweze S (2013) Trend in the use of intra-uterine contraceptive device (CuT 380A), in Enugu, Nigeria. Niger J Med 22: 193-197.
9. Adeyemi AB, Ijadunola KT, Orji EO, Kuti O, Alabi MM (2005) "The unmet need for contraception among Nigerian women in the first year post-partum," European Journal of Contraception and Reproductive Health Care 10: 229–234.
10. Foran T (2011) "Post- partum contraception," Australian Doctor 9: 35-37.
11. Campbell M, Sahin Hodoglugil NN, and Potts M (2006) "Barriers to fertility regulation: a review of the literature," Studies in Family Planning 37: 87-98.
12. Priya S, Tuteja A, Mittal P, Diwan R, Suri J, et al. (2011) Exploring reasons behind Low acceptance for PPIUCD in postnatal women. New Indian Journal of Surgery. 2: 246I.
13. Global Health Observatory. Unmet need for family planning. Geneva: World Health Organization.
14. Darroch JE and Singh S (2013) Trends in contraceptive need and use in developing countries in 2003, 2008, and 2012: an analysis of national surveys. Lancet 381: 1756-1762.
15. Lim SS, Dandona L, Hoisington JA, James SL, Hogan MC, et al. (2010) India's Janani Suraksha Yojana, conditional cash transfer programme to increase births in health facilities: an impact evaluation. Lancet 375: 2009–2023.
16. Government of India (2013) All India Summary of National Rural Health Mission Program, 2012.
17. Okafor II, Obi SN, Ugwu EO (2011) Impact of Free Maternal and Child Healthcare programme on maternal and neonatal healthcare outcome in Enugu State of Nigeria. Niger J Med 20: 441-443.
18. Thiery M, Van Kets H, Van Der Pas H (1985) immediate post placental IUD insertion: the expulsion problems. Contraception 31: 331-349.
19. Marai W (2001) Lower genital tract infections among pregnant women: a review. East Africa Medical Journal 78: 581-585.
20. Kurewa NE, Mapingure MP, Munjoma MW, Chirenje MZ, Rusakaniko S, et al. (2010) The burden and risk factors of sexually transmitted infections and reproductive tract infections among pregnant women in Zimbabwe. Biomed Central Infectious Diseases 10: 127.
21. Muthal Rathore A (2010) Immediate postpartum insertion for intrauterine devices: RHL commentary. The WHO Reproductive Health Library, Geneva: World Health Organization.
22. Kumar, et al. (2014) Women's experience with postpartum intrauterine contraceptive device use in India. Reproductive Health, 11: 32.
23. Maluchuru S, Aruna V, Prabhavathi N (2015) Post-Partum-Intrauterine Device Insertion-2yr Experience at a Tertiary Care Center in Guntur Medical College/ Govt General Hospital, Guntur IOSR Journal of Dental and Medical Sciences 14: 56-61.
24. Sahaja K, Kabadi YM (2012) Enhancing contraceptive usage by post-placental intrauterine contraceptive devices (PPIUCD) insertion with evaluation of safety, efficacy, and expulsion. Int J Reprod Contracept Obstet Gynecol 1: 26-32.
25. Grimes D, Schulz K, van Vliet H, et al. (2001) Immediate post-partum insertion of intrauterine devices: a Cochrane review. Hum Reprod 17: 549-554.
26. Araujo VB, Ortiz L, Smith J (2012) Postpartum IUD in Paraguay: a case series of 3000 cases. Contraception 86: 173-186.
27. Blumenthal P, Shiliya N, Neukom J, Chilambwe J, Vwalika B, et al. (2011) Expulsion rates and satisfaction levels among immediate postpartum IUD users in peri-urban Lusaka, Zambia. Contraception 84: 320.
28. Shukla M, Qureshi S, Chandrawati (2012) Post-placental intrauterine device insertion- a five year experience at a tertiary care centre in north India. Indian J Med Res 136: 432–435.
29. Celen S, Sucak A, Yildiz Y, Danisman N (2011) Immediate post-placental insertion of an intrauterine contraceptive device during cesarean section. Contraception 84: 240–243.