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ACCEPTABILITY AND EFFICACY OF INTRACAESAREAN IUCD

Community Medicine

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ABSTRACT

Introduction: The present study was done to determine acceptability of intra-operative placement of IUCD among women undergoing caesarean section and to observe its efficacy.

Materials & Methods: A descriptive cohort study was conducted with 100 women undergoing caesarean section. Routine hematological, urine investigation and USG was done for all cases. The IUCD was introduced through the uterine incision during caesarean section and placed at the uterine fundus. The participants were asked to return for scheduled follow up visits at 3rd Post-op day, 2nd week & 6th week or earlier in case of any adverse event like pelvic pain, foul smelling vaginal discharge or excessive bleeding. Data was analyzed using SPSS ver 20.0.

Results: Total 100 patients were counseled for IUCD out of which 40 patients accepted insertion of intracesarean PPIUCD. Majority of the patients (58%) who accepted intracesarean PPIUCD were in the age group of ≤20-25 years ($p>0.05$). A significant association was observed between acceptance of IUCD with education, employment and parity. Out of 40 females, 36 (90%) were fully satisfied after 6 weeks. It was observed none of the patients with Intracesarean IUCD conceived in 1 year follow up.

Conclusion: Intra-operative placement of IUCD is an effective method of contraception with low expulsion rate and high continuation rate. Hence it is highly recommended as an effective method of postpartum contraception in developing countries.

KEYWORDS

Acceptability, Conception, Efficacy, Intracaesarean IUCD

INTRODUCTION

Contraception methods by definition mean to prevent unwanted pregnancy by temporary or permanently.[1] India is second largest populated country in the world accounting for 17.5% of world's population by adding around 25 million births every year, 65% of women in the first year postpartum have an unmet need for family planning.[2,3]

Most women do not desire a pregnancy immediately after a delivery but are unclear about contraceptive usage in postpartum period. This results in unplanned and undesired pregnancies, which in turn increases induced abortion rates and consequently maternal morbidity and mortality. In a recent study of postpartum unintended pregnancies 86% resulted from nonuse of contraception and 88% ended in induced abortions.[4] Continuation of these pregnancies is also associated with greater maternal complications and adverse perinatal outcomes. In India, 65% women in the first year postpartum have an unmet need for family planning.[3] Hence, providing contraception in this sensitive period is important.

In India, as in many other countries, postpartum family planning is usually initiated after 6 weeks postpartum. Early resumption of sexual activity coupled with early and unpredictable ovulation leads to many unwanted pregnancies in the first year postpartum. Moreover, in developing countries particularly, women who once go back home after delivery do not return for even a routine postpartum check-up, leave aside contraception. This is may be due to lack of education and awareness, social pressure, and nonaccess to facilities nearby.

Thus, immediate postpartum family planning services need to be emphasized wherein the woman leaves the hospital with an effective contraception in place. Increase in hospital deliveries provides an excellent opportunity to sensitize women and provide effective contraception along with delivery services. An intrauterine contraceptive device (IUCD) has several advantages for use in postpartum period as it is an effective, long term reversible contraception, is coitus independent, and does not interfere with breast feeding.

Short interconception period after caesarean section puts a woman at increased risk of morbidity, mortality and surgical interventions.[5] Immediate postplacental intracaesarean intrauterine contraceptive device (IUCD) insertion could fulfil a long standing need for a reversible and effective, long term contraception, which does not interfere with breast feeding.[3,6] In India, Copper T 380A is being supplied free of cost by the government, to all health centres and private practitioners. This device is a proven highly effective and reversible spacing method of interval contraception, with effective protection for 10 years.[3] However, the device has not attained much popularity due to the myths and misconceptions amongst the general public and health care personnel. Besides, due to the fear of perforation and infection, and also, lack of proper training, most health care providers are reluctant in performing interval IUCD insertion in women with previous caesarean delivery.[7]

The efficacy of intracaesarean IUCD insertion without any added risk of infectious morbidity has also been reported by various studies.[8-10] This technique offers the obstetrician an opportunity to insert the IUCD into the uterus under vision, thus obviating the fear of perforating the uterus during the procedure. However, despite the reported safety and efficacy, obstetricians are still hesitant to implement the advantages of Copper T 380A IUCD to women undergoing operative delivery.[8] Initiating IUCD use during caesarean has the added advantage of eliminating a six week postpartum waiting period and an additional hospital visit.

Many women also find the Intrauterine Contraceptive Devices (IUCD) to be very convenient; because it requires little attention once it is inserted.[11]Provision of IUCD in the immediate postpartum period (PP) offers an effective and safe method for spacing and limiting births. A good counseling cannot be overlooked in this regard. Many of these women welcome the opportunity to delay their next pregnancy when are counseled well. Opportunity for a success is excellent, because delivery provides a convenient opportunity for the woman to receive IUCD services. This is particularly important for women who have limited access to medical care. A new mother is likely to be motivated to consider long- acting methods.[11,12]

Despite the many advantages of the IUCD as a method of family planning, it generally suffers from unpopularity in India. The age old myths are the biggest hindrance in choosing this as a contraceptive method. The Ministry of Health and Family Welfare, Govt. of India introduced PPIUCD service in 19 states of India in 2010, in collaboration with Jhpiego, India.[13] PPIUCD has been recognized as a promising tool in answering the unmet need for contraception in the country by the health authorities and strong steps has been taken to strengthen it.

Hence the present study was done to determine acceptability and efficacy of intra-operative placement of IUCD among women undergoing caesarean section.

MATERIALS AND METHODS

A descriptive cohort study was conducted under Department of

Community Medicine, NIMS Medical College and Hospital, Jaipur with 100 women undergoing caesarean section. All patients admitted at our hospital for caesarean section, who meets the eligibility criteria were included in the study. Following are the exclusion criteria for study:

1. Fever during labour or delivery.
2. Known to have ruptured membrane for more than 24 hours prior to delivery.
3. Known allergy to copper.
4. History of pelvic inflammatory disease, or complication of IUCD use.
5. HIV/AIDS stage 4 diseases.
6. Women with pelvic cancers (endometrial, cervical or ovarian cancer).
7. Women known to have pelvic TB.
8. Women with anatomic abnormalities of the uterus or the cervix which interferes with insertion, retention of removal of the IUCD.
9. Women with fibroids distorting the uterine cavity.

Routine hematological, urine investigation and USG was done for all cases. The IUCD was introduced through the uterine incision during caesarean section and placed at the uterine fundus. This was done manually or using a regular ring forceps.

The participants were asked to return for scheduled follow up visits at 3rd Post-op day, 2nd week & 6th week or earlier in case of any adverse event like pelvic pain, foul smelling vaginal discharge or excessive bleeding. At each visit, a detailed history regarding excessive bleeding, symptoms of infection, abdominal cramps or any other complaint was taken, along with general physical and pelvic examination. If vaginal discharge was present, a wet smear was performed; ultrasonography was done at first visit to ascertain the location of IUCD and at subsequent visits if the IUCD thread was not visible.

Statistical Analysis

Quantitative data was presented with the help of Mean and Standard deviation. Comparison among the study group was done with the help of unpaired 't' test as per results of normalcy test. Qualitative data was presented with the help of frequency and percentage table. Association among the study groups is assessed with the help of Fisher's test or Chi square test. 'p' value less than 0.05 was taken as significant. SPSS version 20 was used for statistical analysis.

RESULTS

Total 100 patients were counseled for IUCD out of which 40 patients accepted insertion of intracesarean PPIUCD. Majority of the patients (60%) who accepted intracesarean PPIUCD were in the age group of 20-25 years (Table 1). Majority of patients in both the groups were from middle class (70% and 75% respectively; p>0.05) (Table 2). Our results showed that education was a significant parameter in selection of placement of IUCD (p<0.05) (Table 3). We also observed that employment and parity as a significant parameter in selection of placement of IUCD (p<0.05) (Table 4 & 5). A total of 58% patients selected placement of IUCD as it was long term while 25% patients accepted it as it was safe (Table 6). A total of 63% patients refused placement of IUCD due to family refusal while 17% patients refused it as they preferred another method (Table 7). Expulsion was noted in 1 cases while 3 patients removed IUCD for the following reasons: family pressure (2 cases) and bleeding (1 case). Out of 40 females, 36 (90%) patients were fully satisfied after 6 weeks while 4 (10%) patients were not satisfied including 3 patients that removed IUCD. None of the patients with Intracesarean IUCD conceived in 1 year follow up.

DISCUSSION

PPIUCD are the only post-partum family planning method for couples requesting a highly effective, reversible, yet long term contraceptive method that can be initiated during immediate post-partum period in lactating women. Advantages of immediate post-partum insertion are high motivation, assurance that she is not pregnant and convenience.

In our study, majority of the patients (60%) who accepted intracesarean PPIUCD were in the age group of ≤20-25 years followed by 23% in the age group of 26-30 years. We observed no significant association between age and rate of acceptance (p>0.05). Vilvapriya S et al. [14] in a prospective observational study also found most (58.6%) of the PPIUCD acceptors were in the age group of 20-24 years, followed by 25-29 years age group (26.6%), who are the active reproductive age women. Sudha CP et al. [15] in a prospective study found mean age of the patients who choose PPIUCD as a method of contraception was 24.22 years.

In the present study, it was observed that education was a significant parameter in selection of placement of IUCD (p<0.05). Yadav M et al.[16] in their study found that acceptance was more in those who completed their primary and secondary school level education. Kanhere A et al. [17] and Mishra S et al.[11] found high acceptance among women who completed their primary and secondary school education. Goswamy G et al. [18] also found more acceptors who had completed secondary school education (49%) followed by primary school (23%), compared to illiterates (13%). Vidyarama R et al. [19] found more literacy will lead to acceptance (15.7%) compared to illiteracy (5.3%). All these studies and our study reiterate that educational status has definitely high influence in acceptance of PPIUCD.

In the present study, it was observed that increased parity led to a significant acceptance of placement of IUCD (p<0.05). In a study done by VilvapriyaS et al. [14], most of the willing patients were multigravida (66.4%), who were the ideal candidates for this non hormonal reversible spacing method of contraception. Sudha CP et al. [15] found that majority of the patients who accepted IUCD placement were multigravida i.e. 63.3%. Goswamy G et al. [18] found that women with second gravida were high acceptors (48%). Similarly Shukla M et al. [9] found that multiparous women had high acceptance i.e. 68.33% compared to primiparous at 31.66%. Mishra S et al.[11], Maluchuru S et al.[20] and Janwadkar A et al. [21] also found women who had at least one delivery, preferred temporary methods.

In our study, the expulsion rate was observed as 2.5% within one year of follow up. Kittur S et al.[22], Anjum A et al.[23] and Gautam R et al.[24] found spontaneous expulsion rate as 3-5% with most of the expulsion were inside first year. In a study done by VilvapriyaS et al.[14] expulsion rate was 4.3% whereas in the study done by Fritz M et al. [25] expulsion rate was 5% at the end of first year of insertion. Yadav M et al. [16] found the expulsion rate at 4-6 wks interval as 3.12%. Mishra S et al. [11] found expulsion rate 6.4% at 6 weeks.

In present study, 90% subjects were fully satisfied after 6 weeks while 4 (10%) subjects were not satisfied including 3 patients that removed IUCD. In the study of Janwadkar A et al. [21] 90.9% women had no complaints while few experienced pain and bleeding. On providing medical assistance 75.3% women desired to continue whereas rest demand removal. About 73.9% women desired to use PPIUCD again in future as a contraceptive method. Sudha CP et al. [15] found that out of 60 cases followed up after 6 months, 53 patients were happy with PPIUCD as a method of contraception and continuation rate was 88.3%. Continuation rate in the present study is 90% similar to the studies by Celen S et al. [26] and Kittur S et al. [22].

In present study, a total of 58% patients selected placement of IUCD as it was long term while 25% patients accepted it as it was safe. Kanhere A et al. [17] found 28% accepted because people it is long acting, 20% accepted because IUCD needs few follow up visits, 17% because it is reversible, 10% accepted by stating that safe & non hormonal and 11% accepted because attention needed to check. In a study done by MaluchuruS et al. [20] the reasons for accepting IUCD by patients were long acting (55.28%) and 20.73% thought it is safe. In a study done by Yadav M et al. [16] majority of the patients (56.73%) accepted due to its long term effect, 19.55% patients accepted due its safety and 10.89% accepted it due to fewer clinic visits. Different views were found in different studies but majority of the studies stated that people accepted IUCD because it is long acting and safe.

It was observed that all patients with Intracesarean IUCD in our study had not conceived in 1 year. Majority of the studies[20-26] including current study observed high success rate with Intracesarean IUCD.

CONCLUSION

Intra-operative placement of IUCD is safe and effective method of contraception with low expulsion rate and high continuation rate. Also the rates of expulsion are low enough so that the benefits of contraceptive protection outweigh the potential inconvenience of needing to return for care for that subset of women. We can find a bright future of IUCD as effective choice in postpartum family planning by making it available at all health facilities with active participation of private health care facilities. This will ignite a chain reaction such that

all women who accept it shall motivate other neighboring women to use IUCD without any second thought. Hence it can be highly recommended as an effective method of postpartum contraception in developing countries.

TABLES

Table 1: Distribution of patients according to Age

Age (yrs)	Accepted		Declined		p-value
	N	%	N	%	
20-25	24	60%	32	53%	0.92
26-30	9	23%	16	27%	
31-35	5	13%	8	13%	
≥35	2	5%	4	7%	
Total	40	100%	60	100%	

Table 2: Distribution of patients according to Socio-economic Status

Socio-economic Status	Accepted		Declined		p-value
	N	%	N	%	
Lower	5	13%	11	18%	0.82
Middle	28	70%	45	75%	
Upper	7	18%	14	23%	
Total	40	100%	70	117%	

Table 3. Distribution of patients according to Education

Education	Accepted		Declined		p-value
	N	%	N	%	
Primary	5	13%	22	37%	<0.05
SSC	14	35%	16	27%	
HSC	10	25%	6	10%	
Graduation	6	15%	3	5%	
Uneducated	5	13%	13	22%	
Total	40	100%	60	100%	

Table 4. Distribution of patients according to Employment Status

Employment Status	Accepted		Declined		p-value
	N	%	N	%	
Housewife	20	50%	51	85%	<0.05
Service	11	28%	8	13%	
Business	2	5%	0	0%	
Self-employed	7	18%	1	2%	
Total	40	100%	60	100%	

Table 5. Distribution of patients according to Parity

Parity	Accepted		Declined		p-value
	N	%	N	%	
Primi gravida	12	30%	42	70%	<0.05
Multi gravida	28	70%	18	30%	
Total	40	100%	60	100%	

Table 6. Reasons for Acceptance by patients

Reasons for Acceptance	N	%
Long term	23	58%
Safe	10	25%
Fewer clinic visit	3	8%
No action required	2	5%
Reversible	2	5%
Total	40	100%

Table 7. Reasons for Refusal by patients

Reasons for Refusal	N	%
Family refusal	38	63%
Prefer to use another method	10	17%
Fear of pain	6	10%
Fear of complications	4	7%
Don't want contraception immediately	2	3%
Total	60	100%

REFERENCES

1. Park K. social and preventive medicine. 23 rd ed. Jabalpur: Banarsidasbhanot; 2015.
2. India at Glance - Population census 2011. Census organization of India, 2011.Available at: http://censusindia.gov.in/2011-provresults/indiaatglance. html. Accessed 21st July 2015.
3. Post-partum. IUCD reference manual. New Delhi: Family Planning Division, Ministry of Health and Family Welfare, Government of India; 2010.
4. Huang YM, R. Merkatz, Kang JZ et al., "Postpartum unintended pregnancy and contraception practice among rural-to-urban migrant women in Shanghai," Contraception, vol. 86, no. 6, pp. 731–738, 2012.
5. Mishra N, Dalal N, Joshi V. Intrauterine Device Insertion during Caesarean Section- A Boon for Rural Women. IOSR-JDMS. 2013;8(3):21–3.
6. Barett G, Peacock J, Victor CR, Manyonda I. Caesarean section and postnatal sexual health. Birth. 2003;32:306–11.
7. Bhutta SZ, Butt IJ, Bano K. Insertion of intrauterine contraceptive device at caesarean section. J Coll Physicians Surg Pak. 2011;21(9):527–30.
8. Levi E, Cantillo E, Ades V, Banks E, Murthy A. Immediate postplacental IUCD insertion at caesarean delivery: a prospective cohort study. Contraception. 2012;86:102–05.
9. Shukla M, Qureshi S, Chandrawati Post-placental intrauterine device insertion--a five year experience at a tertiary care centre in north India. Indian J Med Res. 2012;136(3):432–35.
10. Kapp N, Curtis KM. Intrauterine device insertion during the postpartum period: a systematic review. Contraception. 2009;80(4):327–36.
11. Mishra S. Evaluation of Safety, Efficacy, and Expulsion of Post-Placental and Intra-Cesarean Insertion of Intrauterine Contraceptive Devices (PPIUCD). J ObstetGynaecol India. 2014;64(5):337–43.
12. Bedi PK, Guliani MS, Bala S. A prospective study to assess the safety and expulsion rate of copper T380A in immediate post-partum period during caesarean section. Int J ReprodContraceptObstet Gynecol. 2016;5(9):3195–9.
13. Sood B, Asif R, Charurat E, Das S, Kumar S, McKaig C, et al. Revitalization of postpartum IUCD (PPIUCD) services: experience from India. Contraception. 2012;86(2):184–5.
14. Vilvapriya S, Veeraragavan K. long term clinical outcome of post partum intra uterine contraceptive device (ppiucd) insertion. Int J Cur Res Rev. 2016, Vol 8, Issue 11.
15. Sudha CP, Priyanka HK, Nagaiah D. A study to evaluate safety and efficacy of immediate postpartum postplacental IUCD insertion. Int J ReprodContraceptObstet Gynecol. 2017 Jun;6(6):2284-2288.
16. Yadav M, Yadav K Choudhary S, Sharma A. Clinical Study of Acceptability And Safety of Postpartum Intrauterine Contraceptive Devices. IOSR Journal of Dental and Medical Sciences (IOSR-JDMS) 2279-0853, Volume 15, Issue 8 Ver. IV. 2016, PP 38-42
17. Kanhere A, Pateriya P, Jain M. Acceptability and Feasibility of Immediate post-partum IUCD insertion in a tertiary care centre in Central India. International Journal of Reproduction, Contraception, Obstetrics and Gynecology. [Internet]. 2015;4(1):1.
18. Goswami G et al. A Prospective Study to Evaluate Safety, Efficacy and Expulsion Rate of Post Placental Insertion of Intra Uterine Device. Journal of Evolution of Medical and Dental Sciences. 2015;4(56):9770-74.
19. Vidyarama R, Nagamani T, Ppiucd K. PpiucdAs A Long Acting Reversible Contraceptive (Larc) – an Experience at A Tertiary care Centre. 2015. pp. 5–7.
20. Maluchuru S, Aruna V. 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 Ver IV [Internet]. 2015;14(7):2279–861.
21. Janwadkar A, Shekhawat GS. Acceptance, perception, experience and satisfaction of the couple with postpartum intrauterine contraceptive devices (PPIUCD) insertion. Asian Pac. J. Health Sci., 2016; 3 (4):55-64
22. Kittur S, Kabadi YM. Enhancing contraceptive usage by post-placental intrauterine contraceptive devices (PPIUCD) insertion with evaluation of safety, efficacy, and expulsion. Int J ReprodContraceptObstet Gynecol. 2012;1(1):26-32.
23. Anjum A, Asim SS. Immediate Postpartum IUCD (PPIUCD) Insertion: An Opportunity Not to be Missed, Annals AbbasiShaheed Hospital & Karachi Medical & Dental College Volume No. 19 (1), June 2014.
24. Gautam R, Arya KN, Kharakwal S, et al. "Overview of Immediate PPIUCD application in Bundelkhand Region". Journal of Evolution of Medical and Dental Sciences 2014; Vol. 3, Issue 36, August 18; Page: 9518-9526
25. Fritz M, Speroff L. Clinical gynaecological endocrinology and infertility, 8th edn, 2011, 1104-1113.
26. Celen S, Mőröy P, Sucak A, Aktulay A, Danisman N. Clinical outcomes of early postplacental insertion of intrauterine contraceptive devices. Contraception. 2004;69:279–282.