DOI: https://doi.org/10.53350/pjmhs221611141

ORIGINAL ARTICLE

Common Complications after Immediate Postpartem Intrauterine Contraceptive Device Insertion

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ABSTRACT

Introduction: Low contraceptive rates in poor nations are caused by numerous causes including a lack of information about contraceptives, the inability to get family planning methods, and cultural and geographic constraints on women's movement in these countries. If the birth takes place at a health care institution, women with limited access to medical care have a unique chance to address their contraception needs.

Objective: To determine the frequency of common complications in immediate postpartum intrauterine contraceptive device insertion.

Material and Methods: This study was conducted at Gynae and Obs department, QaziHussain Ahmed Medical Complex, Noshehra. This was a cross sectional descriptive study in which consecutive non probability sampling technique was used. Duration of the study was 6 months from 21st August 2020 to 20th February 2021,in which a total of 292 patients were studied. All multigravida females undergoing Normal Vaginal delivery and who gave consent for Immediate IUCD insertion were included, while patients with known history of pelvic inflammatory disease or sexually transmitted infection, patients having cavity distorting uterine fibroids, known uterine or cervical malignancy as seen through medical records and women with bleeding disorders as detected from past medical records were excluded.Data wascollected on a pre-designed proforma and analyzed by the SPSS version 20.

Results: In this study mean age was 27 years with standard deviation ±1.26. Two hundred and four patients had delivery of placenta and IUCD insertion in 1-5 hours and 88 patients had delivery of placenta and IUCD insertion in 5-10 hours. Regarding complications 44 patients had expulsion in which partial expulsion was found in 9 patients and complete expulsion was found in 35 patients, uterine perforation was found in 6 patients while pelvic inflammatory disease was found in 29 patients.

Conclusion: Despite the fact that IUCD's verbal approval was low, its real insertion was even less so. The only time these women have to learn about contraceptive options is during childbirth, when they are in direct touch with medical workers. That's why some people think family planning can help increase the uptake of contraceptives among women who otherwise wouldn't seek them out on their own.

Keywords: Common complications, Immediate postpartum, Intrauterine contraceptive device insertion.

INTRODUCTION

The low prevalence of contraception in poor nations is due to unmet contraceptive demands. There are several causes for this, including a lack of information, a lack of readily available family planning options, and restrictions on women's movement due mostly to cultural and geographic constraints. During childbirth, women with limited access to medical care have a rare opportunity to address their requirements for contraception.[1].

More than two-thirds of women in the WHO African area had unmet contraceptive needs.[2] Up to a third of Pakistanis lack access to contraception.[3]

Preventing unexpected and unwanted pregnancies, according to recent studies, might halt 20-35% of maternal deaths and up to 20% of infant mortality. A critical window of opportunity to offer family planning counselling and methods to women who might not otherwise have access to such services is provided by postpartum care. [4] 120 million people from developing nations are among the estimated 300 million people globally who lack access to family planning services.[5] At 30%, the contraceptive prevalence rate was analysed from the Pakistan Demographic and Health Surveys (PDHS) dataset between 1990 and 2018. 6.

There are many family planning methods which can be used immediately following child birth including condoms, intra uterine contraceptive devices, male and female sterilizations, pills and lactational amenorrhea method. Intrauterine contraceptive device prevalence rate in Pakistan is 26.9%[7].

Inserting an intrauterine contraceptive device right after childbirth is safe and effective with a failure rate of 3-8/1000 and is as good as bilateral tubal ligation. It is good for many reasons, the woman is not pregnant, may be thinking of birth control and the time and place are convenient for the women[8]. The timing for insertion can be post placental, immediate post partem, trans caesarian and interval insertion4. However, postpartum intrauterine insertion is associated with few complications and side effects8.The complication rate for immediate postplacental group is 40.4%, 74.4% of immediate group and 19.2% in interval insertion[9] and include expulsion (11.5%) for immediate postpartum[8]. It is dependent on level of provider skills and experience and timing and is highest in the first 3 months after insertion[10, 11], irregular bleeding or (5.5%)[12] and blood flow volumes are increased by 20-25%[13], pelvic inflammatory disease with rates of 5%. Its rates are highest in the first 20days after insertion, uterine perforation with rate of 3.4% is usually very rare and it is experience dependent and also depend on anatomy of the uterus[12].

The current study is designed to determine the common complications of immediate postpartum IUCD

insertion in our local population. As immediate postpartum IUCD insertion is effective method of immediate sterilization however its complications in our local populations are highly scarce and this study will generate the local and current data regarding such complications. The results of this study will be compared with already available national and international data and on the basis of results of this study we will suggest suggestions and recommendation regarding further modifications in the existing guidelines which will help us in reducing the morbidity associated with immediate postpartum IUCD insertion.

MATERIAL AND METHODS

Study Settings: Gynae and Obs department, QaziHussain Ahmed Medical Complex, Noshehra.

Study Design: Cross sectional descriptive study.

Sampling technique and sample size: Consecutive non probability sampling.Sample size was calculated using WHO sample size calculator and was 292, using 5% proportion of pelvic inflammatory diseases after IUCD insertion[12], 95% confidence interval and 2.5% margin of error.

Study Duration: 6 months, 21st August 2020 to 20th February 2021

Sample Selection:

Inclusion criteria:

1. All multigravida females (having more than one child) undergoing Normal Vaginal delivery (37-42 weeks of gestation) who gave consent for Immediate IUCD insertion.

Exclusion criteria:

1. Patients with known history of pelvic inflammatory disease or sexually transmitted infection.
2. Patients having cavity distorting uterine fibroids.
3. Known uterine or cervical malignancy as seen through medical records
4. Women with bleeding disorders as detected from past medical records.

Data Collection Procedure: The study was carried out only after receiving written consent from the hospital's ethics and scientific council. All pregnant women at term (37-42 completed weeks of pregnancy) who had a normal vaginal delivery and were willing to have an IUCD implanted immediately after delivery were enrolled in the study through the outpatient department and admitted to the maternity ward for further evaluation. The study's goal and benefits were described to all of the participants, and each woman signed a written informed permission form.

All of the ladies were submitted to a thorough medical history and clinical evaluation. A Copper-T IUCD was inserted immediately after delivery by a professional obstetrician with a minimum of 5 years of expertise in the field. All women were followed up until delivery. All of the women were followed up on a regular basis to rule out typical complications such as ejection, uterine perforation, and pelvic inflammatory disorders, among others.

Data Analysis Procedure: Data was analyzed by the SPSS version 20. Mean + SD was calculated for numerical variables like age of the women. Frequency and percentages were calculated for categorical variables like common complications {expulsion (partial or complete), uterine perforation and pelvic inflammatory diseases}. Common complications were stratified among age and duration between delivery of placenta and IUCD insertion to see the effect modifications.

RESULTS

A total of 292 patients were studied. Age of the patients ranged from 20 to 35 years. Twenty-nine (10%) patients were in age range of 20-25 years, 117(40%) patients were in age range of 26-30 years, 146(50%) patients 31-35 years. Mean age was 27±1.26 years. Time between placenta and IUCD insertion among 292 patients showed that majority of them i.e., 204(70%) patients had delivery of placenta and IUCD insertion in 1-5 hours (Table I). Common complications of immediate PPIUCD insertion were; 44(15%) patients had expulsion,of which partial expulsion was found in 9(20%) patients and complete expulsion was found in 35(80%) patients, uterine perforation was found in 6(2%) patients while pelvic inflammatory disease was found in 29(10%) patients.

Association of common complications with age distribution showed that in 44 cases of expulsion, 4 patients were in age range of 20-25 years, 20 patients were in age range 26-30 years, 20 were in age range of 31-35 years. In 6 cases of uterine perforation, 3 patients were in age range of 26-30 years and 31-35 years each. In 29 cases of pelvic inflammatory disease, 4 patients were in age range of 20-25 years, 10 patients were in age range of 26-30 years and 5 patients were in age range of 31-35 years (Table II). Association of common complications with time between delivery of placenta and IUCD insertion showed that in 44 cases of expulsion, the time duration of IUCD insertion was 1-5 hours in 38 cases and 5-10 hours in 6 cases. In 6 cases of uterine perforation, the time duration of IUCD insertion was 1-5 hours in 4 cases and 5-10 hours in 2 cases. In 29 cases of pelvic inflammatory disease, the time duration of IUCD insertion was 1-5 hours in 21 cases and 5-10 hours in 8 cases (Table III).

Table 1: Time Between Delivery Of Placenta And Iucd Insertion (N=292)

Time between Delivery of Placenta and IUCD insertion	Frequency	Percentage
1-5 hours	204	70%
5-10 hours	88	30%
Total	292	100%

"Mean duration was 4 hours with standard deviation ±1.81."

Table 2: Association Of Common Complications With Age Distribution (N=292)

Association of Common Complications with age		20-25 years	26-30 years	31-35 years	Total
Expulsion	Yes	4	20	20	44
	No	25	97	126	248
Uterine Perforation	Yes		3	3	6
	No	29	114	143	286
Pelvic inflammatory disease	Yes	4	10	15	29
	No	25	107	131	263
Total		29	117	146	292

"Chi Square Test was applied in which P value was 0.003"

Table 3: Association Of Common Complications With Time Between Delivery Of Placenta And Iucd Insertion (N=292)

Association of Common Complications with time between delivery of placenta and IUCD insertion		1-5 hours	5-10 hours	Total
Expulsion	Yes	38	6	44
	No	166	82	248
Uterine Perforation	Yes	4	2	6
	No	200	86	286
Pelvic inflammatory disease	Yes	21	8	29
	No	183	80	263
Total		204	88	292

"Chi Square Test was applied in which P value was 0.003"

DISCUSSION

The women in this study were primarily great multipara, parous women from a lower socioeconomic background. Approximately half of them were illiterate. Any future pregnancies posed a greater risk of obstetric complications for the women. Because of this, a greater emphasis was needed on promoting contraceptive use as a means of reducing maternal mortality and morbidity among this clientele. These women are most typically crisis-oriented, meaning they wait to seek medical attention until there is a problem.

Because of the high volume of births (about 12,000 per year) and the limited number of available beds, postpartum stays are typically brief (less than one day). IUCD pre-discharge considerations may have been reduced by a brief hospital stay. [14] About 28.9% of the patients advised to have a PPIUCD or interval insertions accepted the IUCD following the index delivery. Because they had received adequate family planning counselling and because around 45% of the individuals had previously used the IUCD for family planning, this number is lower than predicted. It's not entirely clear why the IUCD inclusion isn't being accepted as well as it could be. The 'newness' of IUCD in the community could be a possible explanation. Lactation as a contraception after delivery (LAM), which is viewed as safe, free of charge, and does not interfere with sex, is a common practise in this type of tradition. In addition, as previously documented, Egyptian mothers breastfeed for an extended period of time (often 2 years). [15]

There may also be a preference for large families in rural Upper Egypt, which may explain why the IUCD is not widely accepted in the region. There was no correlation between the position of the counsellors, whether they were medical professionals or HIN graduates, and the lower-than-expected rate of acceptance.[16]

In our study most of the patients 50% were in age ranged 20-25 years followed by 40% patients were in age range of 26-30 years. Mean age was 27 ±1.26 years. Similar results were found in another study done by Grimes D et al86 in which 45% patients were in age ranged 20-25 years followed by 40% patients were in age ranged 26-30 years. Mean age was 30 ±2.12 years.

Our study shows that 70% patients had delivery of placenta and IUCD insertion in 1-5 hours and 30% patients had delivery of placenta and IUCD insertion in 5-10 hours. Similar results were found in study done by Eroglu K et al[16] in which 80% patients had delivery of placenta and IUCD insertion in 1-5 hours and 20% patients had delivery of placenta and IUCD insertion in 5-10 hours.

In our study 15% patients had Expulsion in which partial expulsion was found in 20% patients and complete expulsion was found in 80%, uterine perforation was found in 2% patients while pelvic inflammatory disease was found in 10% patients. Similar results were found in study done by Grimes D et al[15], 20% patients had expulsion of which partial expulsion was found in 25% patients and complete expulsion was found in 75%, uterine perforation was found in 1% patientwhile pelvic inflammatory disease was found in 8% patients. Eroglu K et al,[16] in which 12% patients had expulsion of which partial expulsion was found in 10% patients and complete expulsion was found in 90% patients, uterine perforation was found in 1% patients while pelvic inflammatory disease was found in 10% patients.

A study by Makins A et al [17] reported that PPIUDs were inserted in 36766 women. Among them 53% vaginal and 47% were C-section. Expulsion rate among them was 2.5%. Diallo M et al [18] reported in their study that the overall expulsion rate was 5.3%.

Acceptance rates were not affected by whether the counselling occurred during the antenatal or postnatal visit. Only women aged 40–44 years showed a greater acceptance rate during postnatal counselling. It's possible that the disparity was caused by the higher rate of labour complications that come along with enhanced parity. [19]

PPIUCD's acceptability has not been the primary focus of most academics since the 1970s. We found a similar acceptance rate of 12–25% in 1975 in the International Postpartum Family Planning Program (28.9 percent).[20] It is envisaged that continued efforts to promote adoption of PPIUCD will 'convince the community' of its viability, safety and other specific benefits.

The actual insertion rate of IUCDs was 4.2 times lower than the acceptance rate reported verbally. The interval IUCD was poorer by a factor of 13.8. (a) Some of the women had IUCD inserted at different medical services; (b) Some of them might have forgotten all about contraception; (c) Some were overburdened by other obligations in the home that included childcare; or (d) Some believed in the contraceptive impact of lactation. This shows the advantage of PPIUD over interval IUCD, since there were more real insertions with PPIUCD than interval IUCD.[21]

CONCLUSION

Despite the fact that IUCD received just a low level of verbal acceptance, its actual implantation was considerably lower. Because they are in direct contact with medical personnel during labour, the only time these women have the opportunity to learn about contraception choices is during childbirth. So some individuals believe that family planning can aid in increasing the uptake of contraceptives among women who would otherwise not seek them out on their own initiative.

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