

Frequency of Expulsion of Post-Placental Intrauterine Device

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ABSTRACT

Objective: To determine the frequency to expulsion of post placental intrauterine contraceptive device in women delivering in a tertiary care hospital.

Study Design: Cross sectional study

Place and Duration of Study: Department of Obstetrics and Gynecology, Patel Hospital, Karachi from 1st July 2018 to 31st December 2018.

Methodology: Two hundred and eighty one women with intrauterine contraceptive device placed at the time of delivery were included in this study. Brief history was taken about intrauterine contraceptive device status at the end of 6 weeks. If there was any history of expulsion then ultrasound was done and absence of intrauterine contraceptive device on ultrasound was labeled as expulsion positive.

Results: Rate of expulsion of post placental intra uterine contraceptive device in women was 15.3 percent.

Conclusion: The evidence from this study suggests that immediate post placental intrauterine contraceptive device is an effective, useful, safe, convenient and low-cost procedure for the purpose of family planning.

Key words: Family planning, Intrauterine contraceptive device, Expulsion rate

INTRODUCTION

Intrauterine devices are used as a measure of family planning. Due to different reasons these devices are expelled. Family planning is basically to optimize the number of children through contraception. Globally there are 1.9 billion women of reproductive age (15-49 years) in 2019. Out of these 1.1 billion needs family planning and 270 million have an unmet need.^{1,2} Use of contraception helps the couple to manage the spacing and number of children in the family. Family planning has helped to reduce the infant mortality as well. During the last two decades the increase in contraception has been 2.1 percent. The reason for this slow increase may be limited availability of choice of methods and services particularly in less privileged population.³ If taken within five days of intercourse, pregnancies can be prevented as high as 95%.⁴

Post-placental intrauterine contraceptive device insertion is cost effective long acting, quickly reversible method of family planning. Fundal placement of an Intra uterine contraceptive device within 10min of delivery of placenta is a valuable alternative to the interval insertion as most of time woman may not come for interval insertion because of lack of awareness and limitation on women's mobility due to cultural and geographic factors.⁷ IUDs did not produce any adverse reaction. The risk of (pelvic inflammatory diseases (PID) and endometrial and ovarian cancer is decreased in IUD users. Complications are rare and occur mostly in adults making it safe in teenagers.⁸

Post placental intra Uterine contraception device is more appealing as the woman is not pregnant, her motivation for contraception may be high and setting may be convenient for both the women and her provider. It is feared that the involuting uterus might expel the intra Uterine Contraceptive device and expulsion rates are higher for post placental Intrauterine device as compared to interval insertion. A randomized controlled study found that

expulsion of delayed insertion was 4.4% while expulsion of Post Placental Intrauterine Contraceptive device was 24% during the six months follow up.⁹

Risk factors for IUD expulsion include: failure of the device (age adjusted), disproportion of IUD size and uterine cavity length, device's position in the intrauterine cavity which has an association of the contraceptive's effectiveness. It is therefore recommended that these women should undergo regular echographical surveillance.¹⁰ Data about nulliparity and young ages are insufficient to include them as risk factors. Authors recommend contraceptive counseling for adolescent girls. It was found that expulsion is more likely in parous women when compared with nulliparous women (11.4/100 vs. 8.4/100; $P < 0.001$). Sounding of uterine cavity prior to IUD insertion was considered by some clinicians. Sounding assesses the cavity's dimensions for appropriate placement of IUD. Among other factors heavy menstrual bleeding, post abortion placement and obesity were mentioned.¹¹ Women with multiple past expulsions are at a high risk for subsequent IUD failure.¹² We conducted present study to examine the frequency of expulsion of post placental intrauterine contraceptive device in women delivering in a tertiary care hospital.

MATERIALS AND METHODS

This cross sectional study was conducted Department of Obstetrics and Gynecology, Patel Hospital, Karachi for the duration of six months from 1st July 2018 to 31st December 2018. A total of 281 women with intrauterine contraceptive device placed at the time of delivery, age 25-35 and parity 2 or more were included. Women with prolonged rupture of membranes for more than 24hours, prolonged labour for more than 24hours, fever $>38^{\circ}\text{C}$ or 100°F or other signs of abdominal or pelvic infection, extensive genital trauma, post partum hemorrhage (after delivery blood loss more than 1,000ml) and gestational trophoblastic disease

(benign or malignant) were excluded. Brief history was taken about intrauterine contraceptive device status at the end of 6 weeks. If there was a history of expulsion then ultrasound was done and absence of intrauterine contraceptive device on ultrasound was labeled as expulsion positive. The data was entered and analyzed through SPSS-22. Chi-square test was applied and $P < 0.05$ considered as significant.

RESULTS

Eighty (28.47%) were ages 25 to 27 years, 84 (29.89%) had ages 28 to 30 years and 117 (41.64%) were ages above 30 years. 160 (56.94%) patients had parity 2-3, 105 (37.37%) had parity 4-5 and 5.69% had parity >5. Previous history of contraception was found in 36 (12.82%) patients (Table 1). Post placental IUD expulsion was observed in 43 (15.3%) while 238 (84.71%) patients had no IUD expulsion (Fig. 1). The expulsion by age: 3.6% belonged to the 25–27 years age group, 5% belonged to 28–30 age group while 6.8% belonged to more than 30 years age group. The Chi square sig value (also called p value) of zero indicates that the result is significant (Table 2)

Table 1: Demographic information of the women

Variable	No.	%
Age (years)		
25 – 27	80	28.47
28 – 30	84	29.89
>30	117	41.64
Parity		
2 -3	160	56.94
4 – 5	105	37.37
>5	16	5.69
Previous history of contraception		
Yes	36	12.82
No	245	87.18

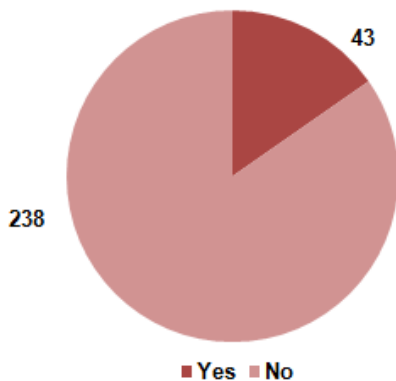


Fig. 1: Frequency of Expulsion of Post Placental IUD

Table 2: Expulsion of post placental intra uterine contraceptive device according to age

Age	Expulsion of post placental intra uterine contraceptive device				P value
	Yes			No	
	25-27	28-30	>30		
25-27	10	14	19	37	<0.05
28-30	-	-	-	84	
>30	-	-	-	117	

DISCUSSION

Postpartum IUD insertion has been in practice for decades. In recent years the trend has increased, mainly due to its convenience and high success rates. Immediate insertion of an IUD after the delivery of placenta satisfies the basic requirements of any contraceptive methods. Some author has recommended that as a precautionary measure after insertion of the IUD the women should be educated to recognize the expulsion. She should not pull the protruded strings through the vaginal introitus.^{13,14} In the developing countries an estimated 214 million reproductive age women in 2017 seeking contraception were unable to do so due to a number of reasons.¹⁵

The present study indicates rate of expulsion of post placental intra uterine contraceptive device in women was 15.3% which is higher than most other studies (16-18). A randomized controlled study by Beatrice shows that expulsion of delayed insertion was 4.4% while expulsion of post placental intrauterine contraceptive device was 24% during the six months follow up which is higher than our study.¹⁹ The experience of the clinician performing the insertion may influence expulsion rates. The observational data of several reports suggest that the rate of expulsion after postplacental insertion may be governed more by the insertion techniques than by the shape and size and/or the use of suspension technique.²⁰

CONCLUSION

The frequency of post placental IUD expulsion was observed in 15.3% of all respondent women taken in this study. The frequency of expulsion increased with age. Women having 2–3 parity had more number of expulsions as compared to high parity women. In conclusion we may say that there is a strong positive relationship between the variables (previous history of contraception, parity, age) and dependent variable (expulsion).

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