



## IUCD; EXPULSION RATE OF PPIUCD (POSTPARTUM INTRAUTERINE CONTRACEPTIVE DEVICE) AFTER VAGINAL DELIVERY.

Aysha Khudija<sup>1</sup>, Attia Rabbani<sup>2</sup>, Huma Zafar Dar<sup>3</sup>

1. MBBS, FCPS  
Consultant  
Department of Gynaecology,  
Govt General Hospital Samanabad  
Faisalabad, Pakistan.
2. MBBS, FCPS  
Consultant  
Department of Gynaecology  
Children Hospital, Multan.
3. MBBS, FCPS  
Consultant  
Department of Gynaecology,  
Rafique Anwar Memorial Hospital  
Gujranwala.

**Correspondence Address:**  
Dr. Aysha Khudija  
Department of Gynaecology  
Govt General Hospital Samanabad,  
Faisalabad, Pakistan.  
ayshabuttar@gmail.com

**Article received on:**  
19/10/2018

**Accepted for publication:**  
30/01/2019

**Received after proof reading:**  
23/02/2019

**ABSTRACT... Objectives:** To determine the frequency of expulsion of post PPIUCD after spontaneous vaginal delivery. **Study Design:** Cross sectional study. **Setting:** Department of Obstetrics & Gynaecology Unit-II, Lady Willingdon Hospital, Lahore. **Period:** October 2013 to October 2014. **Methodology:** In this study the pregnant females delivering vaginally at any age of gestation were included. The cases were selected irrespective of gravida, parity and having age range of 18 years or more. The cases undergoing any instrumentation or surgical intervention were excluded. Then these cases were followed for 6 weeks postpartum and X ray was done to confirm the position of IUCD and absence of the radio opaque shadow reveal its expulsion. **Results:** In this study 150 pregnant females were selected. The mean age of the subjects was  $29.13 \pm 4.46$  years. PPIUCD expulsion was seen in 11 (7.33%) of cases. PPIUCD expulsion was more commonly seen in age group more than 30 years affecting 7 (8.33%) of cases with  $p=0.24$ . PPIUCD was also more often seen in cases with multiparous women where it was observed in 08 (7.55%) cases with  $p= 0.78$ . **Conclusion:** Expulsion of PPIUCD is not uncommon and is more common in cases with age more than 30 years and multiparous women.

**Key words:** Expulsion, Multiparous PPIUCD, Uterine Perforation.

**Article Citation:** Khudija A, Rabbani A, Dar HZ. IUCD; expulsion rate of PPIUCD (postpartum intrauterine contraceptive device) after vaginal delivery. Professional Med J 2019; 26(3):371-374. DOI: 10.29309/TPMJ/2019.26.03.240

### INTRODUCTION

The world's population is on the rise and a number of campaigns are made across the globe to control this and an immense work has been done regarding the development of different contraceptive devices. There is a good control in the developed countries and major steps are taken in the developed ones as well.<sup>1-4</sup>

Post partum intra uterine device insertion is a common practice and is more convenient to insert and has also shown good outcome in terms of fertility control. World Health Organization (WHO) has also backed up this practice of PPIUCD as this is the time of high degree of motivation and support for further contraception. Its safe, cheap and easy to perform procedure with high degree of efficacy.<sup>5-7</sup>

PPIUCD is relatively safer procedure and there are two main fears regarding this and these included uterine perforation, its dislodgment and

expulsion. According to a study by Ryuji L et al<sup>10</sup> immediate expulsion of IUCD after insertion was seen in 9% of the cases. The major risk factors include multi parity and higher age group.<sup>8-10</sup>

### Objective

To determine the frequency of expulsion of PPIUCD after spontaneous vaginal delivery.

### Study Design

Cross sectional.

### Study Setting

Department of Obstetrics & Gynaecology Unit-II, Lady Willingdon Hospital, Lahore.

### Sampling Technique

Non probability consecutive sampling.

### Duration of Study

October 2013 to October 2014.

## Material and Methods

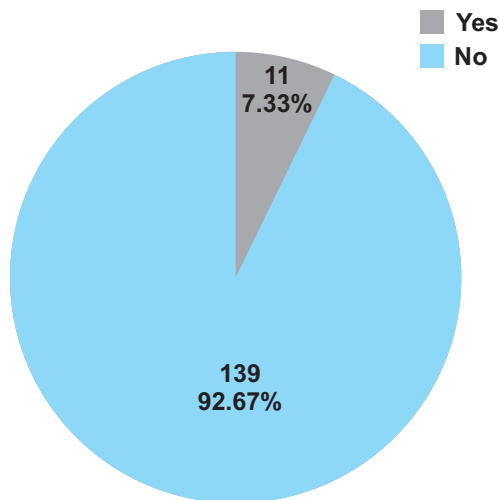
In this study the pregnant females delivering vaginally at any age of gestation were included. The cases were selected irrespective of gravida, parity and having age range of 18 years or more. The cases undergoing any instrumentation or surgical intervention were excluded. Then these cases were followed for 6 weeks post partum and X ray was done to confirm the position of IUCD and absence of the radio opaque shadow reveal its expulsion.

## RESULTS

In this study 150 pregnant females were selected. The mean age of the subjects was  $29.13 \pm 4.46$  years as shown in Table-I. There were 44 (29.33%) subjects with single parity and 106 (70.67%) multiparous women were included. PPIUCD expulsion was seen in 11 (7.33%) of cases as in Figure-1. PPIUCD expulsion was more commonly seen in age group more than 30 years affecting 7 (8.33%) of cases with  $p=0.24$  as in Table-II. PPIUCD expulsion was also more often seen in cases with multiparous women where it was observed in 08 (7.55%) cases with  $p=0.78$  (Table-III).

	Mean	Range
Age (years)	$29.13 \pm 4.46$	18-39
Duration of gestation (weeks)	$38.12 \pm 2.11$	34-39
BMI (kg/m <sup>2</sup> )	$28.15 \pm 2.57$	22-35

**Table-I. Demographics**



**Figure-1. Expulsion of PPIUCD**

Age Groups	Expulsion of PPIUCD		Total
	Yes	No	
>30 years	7 (8.33%)	77 (91.67%)	84
30 or less years	4 (6.06%)	62 (93.94%)	66
Total	11 (7.33%)	139 (92.67%)	150 (100%)

**Table-II. Expulsion of PPIUCD and age groups**  
 $pp=0.24$

Parity	Expulsion of PPIUCD		Total
	Yes	No	
Single	03 (6.81%)	41 (93.19%)	44
Multiparous	08 (7.55%)	98 (92.45%)	106
Total	11 (7.33%)	139 (92.67%)	150 (100%)

**Table-III. Expulsion of PPIUCD and parity**  
 $pp=0.78$

## DISCUSSION

World population is on the rise globally and is a great concern in the under developed countries due to socioeconomic burden and lack of both antenatal and post natal care facilities. There are a number of contraceptive methods tried in the past and intra uterine contraceptive devices (IUCD) are amongst the most popular and convenient method because of its short time needed and good effectiveness; however, dislodgment is a big issue.<sup>11-12</sup>

PPIUCD expulsion was seen in 11 (7.33%) of cases. The data has shown that the expulsion rate is usually less than 10% in the previous studies and also revealed that the rate of expulsion is lesser when the IUCD is inserted with a proper technique.<sup>13-15</sup> According to a survey conducted by NCMNH et the expulsion was seen in 2% of the subjects.<sup>16</sup> The other studies carried out by Celen S et al and Sucak et al the expulsion was seen in 5.1% and 5.3% of the cases respectively.<sup>9-17</sup>

PPIUCD expulsion was more commonly seen in age group more than 30 years affecting 7 (8.33%) of cases with  $p=0.24$ . PPIUCD expulsion was also more seen in cases with multiparous women where it was observed in 08 (7.55%) cases with  $p=0.78$ . This was similar to the studies done in the past regarding this context.<sup>18-20</sup> According to

a study done by Fraz K et al, it was seen that the over all expulsion was seen in 17 (8.1%) of the cases and majority of the cases were seen which were multiparous showing in 95.1% of cases.<sup>18</sup> The other studies conducted by Ryujin et al and Shukla et al also revealed that it was more common in multiparous women and those with higher age groups; though they did not use the same cut off values and over all expulsion rate was seen in 9% and 11.28% respectively.<sup>10,20</sup>

## CONCLUSION

Expulsion of PPIUCD is not uncommon and is more common in cases with age more than 30 years and multiparous women.

Copyright© 30 Jan, 2019.

## REFERENCES

1. WHO | **Unmet need for family planning**. [Last cited on 2018 Aug 07]. Available from: [http://www.who.int/reproductivehealth/topics/family\\_planning/unmet\\_need\\_fp/en/](http://www.who.int/reproductivehealth/topics/family_planning/unmet_need_fp/en/).
2. Azmat SK, Shaikh BT, Hameed W, Bilgrami M, Mustafa G, Ali M, et al. **Rates of IUCD discontinuation and its associated factors among the clients of a social franchising network in Pakistan**. BMC Womens Health. 2012; 12:8.
3. **IUD guidelines for family planning service programs**. [Last cited on 2018 Aug 07]. Available from: [http://www.jhpiego.org/files/IUD\\_Manual\\_0.pdf](http://www.jhpiego.org/files/IUD_Manual_0.pdf).
4. Kumar S, Sethi R, Balasubramaniam S, Charurat E, Lalchandani K, Semba R, et al. **Women's experience with postpartum intrauterine contraceptive device use in India**. Reprod Health. 2014; 11:32.
5. Grimes D, Lopez LM, Schulz KF, Van Vliet HAAM, Stanwood NL. **Immediate post-partum insertion of intrauterine devices**. Cochrane Database Syst Rev. 2010(5):CD003036.
6. Suri V. **Post placental insertion of intrauterine contraceptive device**. The Indian journal of medical research. 2012; 136(3):370.
7. Gujju RLB, Prasad U, Prasad U. **Study on the acceptance, complications and continuation rate of post-partum family planning using the post placental intrauterine contraceptive device among women delivering at a tertiary care hospital**. Int J Reprod Contracept Obstet Gynecol 2015; 4:388-91.
8. Stanek AM, Bednarek PH, Nichols MD, Jensen JT, Edelman AB. **Barriers associated with the failure to return for intrauterine device insertion following first-trimester abortion**. Contraception. 2009; 79(3):216-20.
9. Çelen Ş, Möröy P, Sucak A, Aktulay A, Danişman N. **Clinical outcomes of early postplacental insertion of intrauterine contraceptive devices**. Contraception. 2004; 69(4):279-82.
10. Ryujin L, Cosca A, Merchant M, Postlethwaite D. **Immediate Postplacental vs. Interval Postpartum Insertion of Intrauterine Contraception**. Northern California: Kaiser Permanente; 2017; Available from: [xnet.kp.org/residency/ncal/.../LisaRyujin\\_ResearchPoster EC.pdf](http://xnet.kp.org/residency/ncal/.../LisaRyujin_ResearchPoster EC.pdf).
11. Chauhan R, Sahni S, Hanumantaiya S. **Evaluation of acceptability, safety and expulsion rate of PPIUCD**. Int J Reprod Contracept Obstet Gynecol. 2018; 7(3):1083-89.
12. Mishra S. **Evaluation of safety, efficacy and expulsion of post placental and intra cesatean insertion of intrauterine contraceptive devices (PPIUCD)**. J Obstet Gynecol Ind. 2014; 64(5):37-43.
13. Gupta A, Verma A, Chauhan J. **Evaluation of PPIUCD versus interval IUCD (380A) insertion in a teaching hospital of Western UP**. Int J Reprod Contracept Obstet Gynecol. 2013; 2:204–8.
14. Gautam R, Arya KN, Kharakwal S, Singh S, Trivedi M. **Overview of immediate PPIUCD application in Bundelkhand region**. J Evol Med Dent Sci. 2014; 3:9518–26.
15. Katheith G, Agarwal J. **Evaluation of Post-placental Intrauterine Device (PPIUCD) in Terms of Awareness, Acceptance, and Expulsion in a Tertiary Care Centre**. [Last cited on 2018 Aug 7]. Available from: <http://www.ijrcog.org/?mno=44335>.
16. NCMNH. **Training for and Institutionalization of Post-Placental and Immediate Postpartum Insertion of Intrauterine Contraceptive Device (PPIUCD)**. 2013 [cited 2018]; Available from: <http://www.ncmnh.org.pk/introduction-ppiucd>.
17. Çelen Ş, Sucak A, Yıldız Y, Danişman N. **Immediate postplacental insertion of an intrauterine contraceptive device during cesarean section**. Contraception. 2011; 84(3):240-3.
18. Kiran F, Bano B, Nasir-d=ud-din A, Khanum Z. **Expulsion rate of postpartum intrauterine contraceptive device (PPIUCD) after spontaneous vaginal delivery in females and term**. JFJMC. 2016; 10(2):44-47.
19. Jairaj S, Dayyala S. **A cross sectional study on**

**acceptability and safety of IUCD among postpartum mothers at tertiary care hospital, Telangana.** J Clinic Diagnostic Res. JCDR. 2016; 10(1):LC01.

20. Shukla M, Qureshi S. **Post-placental intrauterine device insertion-A five year experience at a tertiary care centre in north India.** Indian Journal of Medical Research. 2012; 136(3).

““

A good surgeon operates with his **hand**,  
not with his **heart**.

””

*“Alexanda Dumas Pere”*

### AUTHORSHIP AND CONTRIBUTION DECLARATION

Sr. #	Author-s Full Name	Contribution to the paper	Author=s Signature
1	Aysha Khudija	Statistical analysis & referneces writing, Drafting of the article, Resultls and Final layout, Article Author.	<i>Aysha Khudija</i>
2	Attia Rabbani	Resultls, Statistical Analysis and Interpretation of Data, Co-Author.	<i>Attia</i>
3	Huma Zafar Dar	Literatlure Review, Data collection, Preparation / Tabulation of Results, Co-Author.	<i>Huma</i>