

A cross sectional study of follow up cases of ppiucd at tertiary care centre

¹Dr. Mukesh Mittal, Professor, Department of Radio Diagnosis, SMS Medical College, Jaipur.

²Dr. Sukrati Jain, Junior Resident, Department of Radio Diagnosis, SMS Medical College, Jaipur.

³Dr. Pankaj Kumar Nitharwal, Assistant Professor, Department of Radio Diagnosis, SMS Medical College, Jaipur.

⁴Dr. Kuldeep Kumar Mendiratta, Senior professor, Radio Diagnosis, SMS Medical College, Jaipur.

⁵Dr. Hariom Sharma, Resident, Radio Diagnosis, SMS Medical College, Jaipur.

⁶Dr. Monika Rathore, Senior Professor, Department of PSM, SMS Medical College, Jaipur.

⁷Dr. Abhinav Mathur, Senior Resident, Department of Radiodiagnosis, SMS Medical College, Jaipur.

Corresponding Author: Dr. Abhinav Mathur, Senior Resident, Department of Radio Diagnosis, SMS Medical College, Jaipur.

Citation this Article: Dr. Mukesh Mittal, Dr. Sukrati Jain, Dr. Pankaj Kumar Nitharwal, Dr. Kuldeep Kumar Mendiratta, Dr. Hariom Sharma, Dr. Monika Rathore, Dr. Abhinav Mathur, “A cross sectional study of follow up cases of ppiucd at tertiary care centre”, IJMSIR- August - 2022, Vol – 7, Issue - 4, P. No. 221 – 224.

Type of Publication: Original Research Article

Conflicts of Interest: Nil

Abstract

Background: This study was conducted on the follow up cases of PPIUCD at Zenana Hospital, Jaipur to assess the presence and position of PPIUCD and establish its acceptability and usefulness in comparison to interval IUCD as PPIUCD being convenient method of birth spacing and easily detectable on ultrasound

Methods: Cross Sectional Analytical type study was conducted at Department of Radiodiagnosis, Zenana hospital, SMS Medical College, Jaipur, Rajasthan

Results: Majority of mothers were in the 25-30 years age group. Malposition was seen in 39.6% cases. In 19.8% cases PPIUCD was displaced and in 8.8 % cases PPIUCD was inverted

Conclusion: PPIUCD is widely accepted, efficacious, safe method of contraception. This method of family planning can further improve women’s health and can reduce maternal morbidity and mortality.

Keywords: PPIUCD, Malposition, Family planning.

Introduction

Family planning and contraceptive use has always been a matter of national importance as well as research. As we already know, India is the second most populous country in the world and with the increasing population, India is expected to surpass China as the world’s most populous country within the next decade and this could be attributed to the higher fertility and a younger population.¹

68% women in developed world and 55% in developing world use contraception. Lesser contraception use in India makes it accountable for more than 20% of global maternal and child death.^{2,3} Worldwide, Interval Intrauterine Contraceptive Device (IUCD) is the most commonly used reversible methods of contraception among married women of reproductive age and second most commonly used forms of contraception, ranking

second only to female sterilization.³ Imaging is important for the evaluation of IUCDs and to check the presence and correct position of IUCD, its effectiveness and associated complications.⁴

Before the advent of advanced radiology, X-ray of abdomen used to be the first modality of investigation.⁵ Nowadays, ultra-sonography is the most preferred method for the imaging and assessment of IUCDs. However, computed tomography (CT) and magnetic resonance imaging (MRI) can be helpful in imaging and assessment when they are performed for the other indications. When complications such as abscesses arise from an IUCD, CT can be helpful in further management.⁶

Insertion of an intrauterine device in post-partum period (PPIUCD) is a comfortable option for various reasons like the woman is known not to be pregnant, her motivation for contraception is high and the setting may be convenient for both the woman and her provider as the woman is already admitted in the hospital.⁷ It also has an added advantage of being able to be inserted in a single sitting. However, the risk of spontaneous expulsion may be unacceptably high.⁷ Copper-T can be inserted in uterus in post-partum period either immediately after normal delivery or caesarean section or as interval IUCD.

This study was conducted on the follow up cases of PPIUCD at Zenana Hospital, Jaipur to assess the presence and position of PPIUCD and establish its acceptability and usefulness in comparison to interval IUCD as PPIUCD being convenient method of birth spacing and necessity of it's follow up by ultrasound.

Material and methods

Study area: Department of Radiodiagnosis, Zenana hospital, SMS Medical College, Jaipur, Rajasthan

Study type: Cross Sectional Analytical type study

Study design: Hospital based observational study

Study tool: pre-tested, pre designed proforma will be used to collect data.

Sampling technique: A total sample of 91 post-partum patients were included in the study. These 91 patients were randomly selected from the OPD, who fulfilled the inclusion criteria. The sample size is calculated by the formula " $N = 4pq/L^2$ " where p (prevalence) is taken as 28% (acceptance rate of PPIUCD in the study by Tomar et al⁸ was 28%), L is the allowable error taken as 10% here. The minimum sample required is 81, and it is rounded off to 91 for the study purpose.

Statistical analysis: The data were entered and tabulated using MS excel. The data were compared and analysed using SPSS ver 21. Quantitative data were expressed as mean and standard deviation and student t test was applied for analysis. Qualitative data were expressed in percentage and chi square was applied for analysis. A p value <0.05 was considered statistically significant.

Methodology

After approval from institutional ethical committee and clinical trials screening committee, data collection was started. Only those women with PPIUCD insertion period of 6 weeks to 1 year were included in the study. All the patients with PPIUCD insertion period of >1-year, reproductive tract pathology for TVS and those who refused to give written informed consent were excluded from this study. Data was collected in Department of Radiodiagnosis, Zenana hospital, SMS Medical College, Jaipur, Rajasthan.

All the patients were examined by Trans-abdominal USG and if undetected, then examined by Trans-vaginal USG. The parameters observed were presence of PPIUCD by TAS / TVS, position of PPIUCD, distance from fundus and to look for any mal-positions of PPIUCD and failure of PPIUCD contraception as confirmed by intra uterine pregnancy with PPIUCD.

Results

Table 1: Demographic profile

Age		28.67±3.65 years	
		Number	Percentage
Religion	Hindu	57	62.6
	Muslim	34	37.4
Mode of delivery	LSCS	41	45.1
	Vaginal	50	54.9
Visible on TAS	Yes	83	91.2
	No	8	8.8
Visible on TVS	Yes	90	98.9
	No	1	1.1
Malposition	No	55	60.4
	Yes	36	39.6
Location on TAS / TVS	Cervix	1	1.1
	Displaced	18	19.8
	Inverted	8	8.8
	Absent	1	1.1
	Malrotated	7	7.7
	Pent rating anterior wall	1	1.1
	Normal	55	60.4
Pregnancy with PPIUCD	Yes	12	13.2
	No	79	86.8

Table 2: Association between malposition and type of delivery

Malposition	LSCS	Normal vaginal
No	19	36
Yes	22	14
Grand Total	41	50

Chi - square = 5.176 with 1 degree of freedom; P = 0.023

Graph 1:

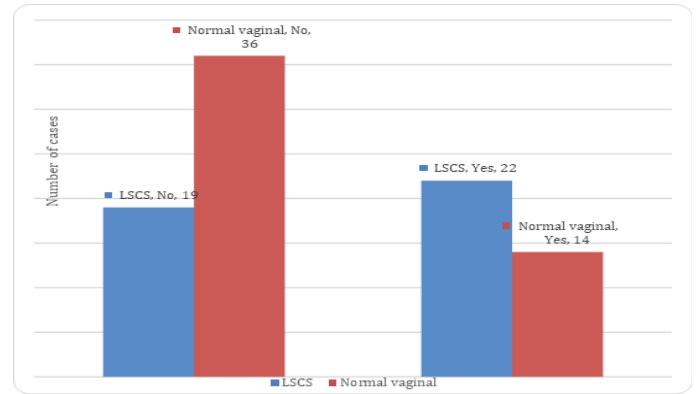


Table 3: Association between pregnancy with PPIUCD and type of delivery.

Pregnancy with PPIUCD	LSCS	Normal vaginal
No	33	46
Yes	8	4
Grand Total	41	50

Chi-square = 1.699 with 1 degree of freedom; P = 0.192

Graph 2:

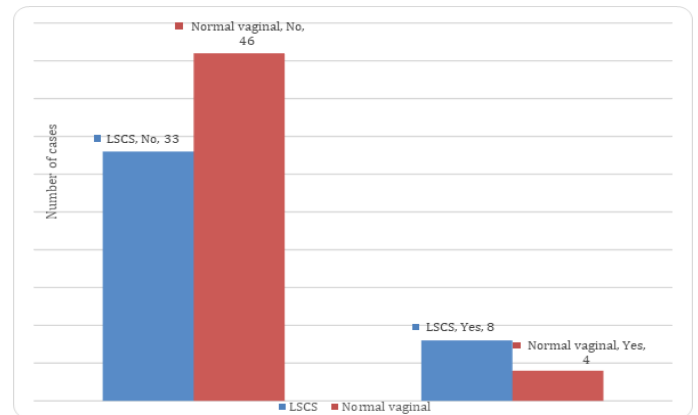


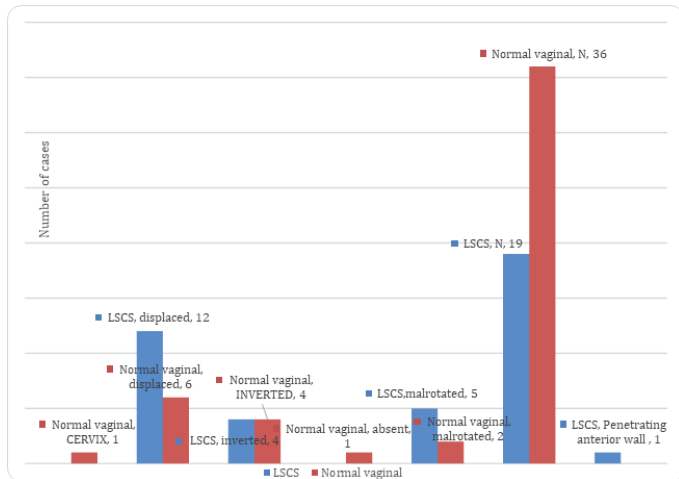
Table 4: Association between location of PPIUCD and type of delivery

Location of PPIUCD	LSCS	Normal vaginal
Cervix		1
Displaced	12	6
Inverted	4	4
Absent		1
Malrotated	5	2
Normal	19	36
Penetrating anterior wall	1	
Grand Total	41	50

Chi-square = 10.755 with 6 degrees of freedom; P =

0.096

Graph 3:



Discussion

Unintended pregnancy is a major concern in India. Postpartum period and remaining period lactation is highly vulnerable period to unintended pregnancy as there are limited contraceptive options available in the breast feeding women. Thus postpartum period is an ideal time to begin contraception. Acceptance of PPIUD appears to be related to the quality of PPIUD counselling received and educational status of mothers. All mothers were counselled by doctors and nursing staff. Majority of mothers had completed secondary education, followed by primary schooling and few mothers had no formal education. Education status plays an important role in motivating and preparing patient for PPIUCD use as there are many myths prevailing in country about IUCD. Fear of serious complications, infection, cancer and religious beliefs, hinders its use among mothers but educated mothers understand the advantage and have positive attitude towards its use once counselled.⁹

Conclusion

PPIUCD is widely accepted, efficacious, safe method of contraception if it's follow up is done with USG for its presence and position. This method of family planning can further improve women's health and can reduce maternal morbidity and mortality.

References

1. Samir KC, Marcus Wurzer, Markus Springer, Wolfgang Lutz; Future population and human capital in hetero geneous India; Proceedings of the National Academy of Sciences Aug 2018, 115 (33) 8328-8333
2. Conde-Agudelo A, Belzium JM. Maternal mortality and morbidity associated with interpregnancy interval: cross sectional study. Br Med J. 2000; 321(7271):1255-94
3. Chawla D, Bharti P, Verma M, Khatri R. Ultra sound guided detection of position of post-partumintra uterine contraceptive device and its relation to complications. Int J Reprod Contracept Obstet Gynecol 2017; 6:4035-41
4. Peri, N., Graham, D. and Levine, D. (2007), Imaging of Intrauterine Contr acceptable Devices. Journal of Ultrasound in Medicine, 26: 1389-1401.
5. Goswami D, Ravi AK, Sharma A. Missing IUCD Strings: Role of Imaging in Locating the Misplaced Device. J Clin Diagn Res. 2017;11(4): QJ01-QJ02.
6. Tyrrel T, Murphy FB, Bernardino ME. Tub ovarian abscesses: CT-guided percutaneous drainage. Radiology1990; 175: 87-89) (Kim SH, Kim SH, Yang DM, Kim KA. Unusual causes of tub ovarian abscess: CT and MR imaging findings. Radiographics2004; 24: 1575-1589
7. Grimes D, Schuluz K, van Vliet H. Immediate post-partum insertion of intrauterine devices. The Cochrane Library. 2005; 3 (7)
8. Tomar B et al. Int J Reprod Contracept Obstet Gynecol. 2018 May;7 (5): 2011-2017
9. Mohamed SA, Kamel MA, Shaaban OM, Salem HT. Acceptability for the use of post-partum intrauterine contra captive devices: Assiut experience. Med Princ Pract. 2003; 12:170-75