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Original Research Article

AWARENESS OF PPIUCD FOLLOW-UP AMONG PPIUCD ACCEPTORS

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Abstract

Background: A lack of awareness regarding PPIUCD follow-up can lead to contraception failure, decreased birth spacing, and increased maternal morbidity and mortality. Immediate postpartum contraceptive devices, such as Copper T 380 A/Copper T 375, can prevent conception and delay pregnancy. **Aim:** This study aimed to assess the awareness of PPIUCD follow-up among PPIUCD users at Tirunelveli Medical College Hospital. **Material and Methods:** This was a hospital-based cross-sectional study where details or questions from a self-designed questionnaire were asked of women who were inserted with a PPIUCD at TVMCH from 1 March 2022 to 15 March 2022 through phone calls, after obtaining consent. The questionnaire included questions on the sociodemographic and obstetric characteristics of the patients. **Results**: Approximately 33% of patients were aware that the first visit for PPIUCD follow-up was 15 days following insertion. Only 16% of the patients were aware that the second visit for PPIUCD follow-up was 45 days after insertion. Awareness about three consecutive follow-up visits each month following the first postpartum menses was 16%. 24% of the women were aware that they should undergo PPIUCD follow-up once every 6 months thereafter. Lack of awareness of the follow-up protocol was the major reason (75%) for no regular visits. **Conclusion**: Awareness about PPIUCD follow-up protocol should be strengthened for all PPIUCD users to avoid removal of PPIUCD in private hospitals before 2 years for various reasons such as side effects, fear, or accidental fall which can be avoided when they come for regular follow-up.

INTRODUCTION

Lack of awareness of PPIUCD follow-up has caused failure of contraception due to expelled or misplaced PPIUCD without the knowledge of the patient.[1] This leads to decreased birth spacing, and significant morbidity and mortality in women.[2] There are several studies regarding the awareness of postnatal and antenatal follow-ups. However, studies on the Awareness of PPIUCD follow-up are rare, especially in Tirunelveli. The Tirunelveli district has a high maternal mortality ratio. The current usage of PPIUCD/ IUD as a family planning method in Tirunelveli is 5.0%.[3] This interconception period has been identified as a significant risk factor for maternal morbidity and mortality.[2] An intrauterine contraceptive device to prevent conception and delay pregnancy is an effective method for temporary contraception.[4-7] According to the WHO, an IUD inserted within 10 min of delivery is called a post-placental intrauterine contraceptive device.[8] Similarly, IUD insertion from 10 min to 48 h after delivery is known as an immediate postpartum intrauterine contraceptive device.[8]

Copper T 380 A/Copper T 375 are two types of IUCD inserted at TVMCH.[7] Both were inserted following both caesarean and normal deliveries. They were inserted using PPIUCD or sponge/ring forceps. Immediate PPIUCD insertion following delivery obviates the need for a further 6 weeks to insert an IUD (interval IUCD) and an additional hospital visit.[8] The mechanism of action of copper T involves cellular and biochemical changes in the endometrium, affecting the composition of cervical mucus and affecting sperm motility, capacitation, and survival.[9] Copper T 380 A/copper T 375 was supplied free of cost by the Government of India. The copper T 380 device has been protected for 10 years, Copper T 375 is both readily reversible and does not interfere with breastfeeding.[8]

The primary objective of this study was to assess the awareness of post-placental intrauterine

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contraceptive device (PPIUCD) follow-up among PPIUCD users at Tirunelveli Medical College. The secondary objective was to determine the reasons for noncompliance with the PPIUCD follow-up protocol.

MATERIALS AND METHODS

This hospital-based cross-sectional study included 294 women who underwent PPIUCD insertion at the Obstetrics and Gynecology Department of Tirunelveli Medical College Hospital between 1 March 2022 and 15 March 2022.

Inclusion Criteria

Women who underwent PPIUCD insertion 6 months from 1 March 2022 to 15 March 2022 were included in this study.

An average of 600 deliveries, including caesarean and normal deliveries, were conducted. All women who opted for temporary birth spacing were inserted with a Copper T 380 A or T 375 after obtaining consent. The post-placental intrauterine contraceptive device is inserted within 10 min of delivery, both vaginal and caesarean delivery, through vaginal forceps or sponge-holding forceps. There is a standard protocol at TVMCH for the follow-up of women with PPIUCD insertion. The first visit following PPIUCD insertion was on the 15th day after the insertion. The second visit was 45 days after the PPIUCD insertion. Then, the women should come for follow-up for three consecutive months following the first menses postpartum. After that, the women should come for follow-up every 6 months until they wish to remove it.

The Data (name, phone number, date of delivery, etc.) of the women who underwent PPIUCD insertion were obtained from the family planning register at TVMCH. They were called up by phone, and details were asked after obtaining verbal consent for the study.

The questions were filled in a self-designed semi-structured questionnaire. Of 294 members, only 115 attended the call and provided consent to participate in the study. The questionnaire included questions on the sociodemographic and obstetric characteristics of the patients. Awareness of PPIUCD follow-up, including

- When to come for follow-up?
- Where can she go for follow-up?
- What should be checked during follow-up?
- What if there were no regular follow-ups?
- Are they aware of the side effects of PPIUCD insertion, so that they can come for follow-up?
- Do they have any fear of PPIUCD insertion which made them remove it, and so did they not come for follow-up?

Data were collected by the principal investigator via phone calls during the study period.

Problems faced

Since many of the registered phone numbers of the patients were invalid, the expected sample size of 294 could not be reached. The final sample consisted of 115 patients.

The data from the completed questionnaire were entered into a Google form and converted into an MS Excel sheet. The results were obtained based on the data obtained.

RESULTS

Sociodemographic and obstetric details were studied in terms of age, education status, occupation, parity, interconception gap, and desire for future pregnancy. Of the 115 women who responded, the majority (57%) were aged 18–24 years, 37% were aged 25–30 years, and only 6% were age group–31-35 years.

The educational data showed that all participants were educated. Most of them had higher education (57%), that is, graduate or postgraduate education, 35% had secondary education, and 9% had primary education. Approximately 92% were unemployed, and only the remaining 8% were employed. Regarding parity, 73% of the women (73%) were primiparous, 23.8% were second gravida, and the rest had higher parity. The data revealed that 61% of patients had PPIUCD insertion following normal delivery, and only 39% had been inserted following caesarean section.

Among multiparous women, the interconception gap was 1-2 years and 3-4 years for 39% each, 11% each for 4-5 years and greater than 5 years. The PPIUCD-inserted women were asked about their future pregnancy desires, for which the following responses were obtained. The maximum response time is within 3-4 years. The majority of participants did not have a significant morbid illness. Insertion of PPIUCD did not have any significant impact on their health problems. [Table 1]

As shown in Table 2, 57% of participants were aware of the minimal birth spacing duration. Only 13% of the PPIUCD inserters voluntarily opted for PPIUCD. Respondents were asked about their awareness of the PPIUCD follow-up protocol. Only 33% were aware that the first visit for PPIUCD follow-up was 15 days after insertion. Only 16% of the patients were aware that the second visit for PPIUCD follow-up was 45 days after insertion.

The awareness of three consecutive follow-up visits each month following the first postpartum menses was 16%. 24% of the women were aware that they should undergo PPIUCD follow-up once every six months thereafter. Of the 115 women, only 6% had regular follow-up visits. The lack of awareness of the follow-up protocol was the major reason (75%).

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Table 1: Patient characteristics of the study

		Number of Respondents	%
Age	18- 24	66	57%
	25- 30	42	37%
	31-35	7	6%
Education	Higher	65	57%
	Primary	10	9%
	Secondary	40	35%
Occupation (n=114)	Employed	9	8%
	Unemployed	105	92%
Mode of delivery	C section	45	39%
	Normal delivery	70	61%
Interconnection gap (n=36)	>5	4	11%
	1-2	14	39%
	3-4	14	39%
	4-5	4	11%
Future pregnancy desire (in years) (n=79)	>5	1	1.26
	1-2	30	37.9
	3-4	39	49.36
	4-5	9	11.39
Presence of comorbid conditions (n=108)	Cardiovascular problems	2	2%
	Diabetes	2	2%
	Hypertension	1	1%
	None	96	89%
	Others	7	6%

Table 2: Awareness of PPIUCD follow-up of the study

Response		Number of Respondents	%
Are you aware of minimal birth spacing duration?	No	49	43%
	Yes	66	57%
I opted for PPIUCD as a birth spacing method	Under doctor's advice	100	87%
	Voluntarily	15	13%
I am aware that the first visit of PPIUCD follow-up is after 15 days	No	77	67%
	Yes	38	33%
I am aware that the second visit of PPIUCD follow-up is after 45 days	No	96	83%
	Yes	19	16%
I am aware that I must go for 3 consecutive follow-up visits one per month after the first menstruation following pregnancy	No	96	83%
	Yes	19	16%
I am aware that I should go for once in 6-month follow-up thereafter till the removal of PPIUCD	No	87	76%
	Yes	28	24%
I have regularly undergone all PPIUCD follow-up visit	No	108	94%
	Yes	7	6%
Reason for no regular PPIUCD follow-up (n=108)	Family situation	12	11%
	I am far away from TVMCH	11	10%
	No time	4	4%
	Not aware of the protocol	81	75%
I have removed my PPIUCD at the institute / expelled accidentally	No	92	80%
	Yes	23	20%
Reason for voluntary removal (n=23)	Abdominal pain	7	30%
	Accidentally fallen	8	35%
	Bleeding / menstrual abnormalities	1	4%
	Family situation	2	9%
	To conceive again	4	17%
	Sterilisation done	1	4%

DISCUSSION

Concerning awareness regarding the timing of the follow-up visit, awareness regarding the location of the follow-up visit was low. Approximately 49% were aware that they could go for TVMCH for follow-up, 53% were aware that they could go to the nearby PHC for follow-up, and 41% were aware that they could get follow-up advice from nearby VHN. Along with awareness of the follow-up protocol, awareness of the place for follow-up should be given so that people do not have regular visits as they are far away from TVMCH (10%) and may benefit from undergoing follow-up visits in nearby PHC, VNH, etc. The long thread of the PPIUCD is disturbing and is a cause of the removal of the PPIUCD in many women.[10]

Only 15% of them were aware that trimming of the thread would be performed on the second visit of PPIUCD follow-up. 49% were aware that PPIUCD insertion may cause mild abdominal pain, 46% were aware that it may cause intermittent bleeding/spotting, and 40% were aware that there was a chance of infection following PPIUCD insertion. However, only 34% of the patients were

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aware that these side effects were self-limiting or treatable. Therefore, awareness of these side effects and reassurance during proper follow-up may help decrease the removal rate.

Approximately 32% were unaware that they may conceive again following misplaced/expelled PPIUCD; thus, awareness of regular follow-up visits where the position of IUD is confirmed should be made. 26% of women feared that PPIUCD may cause heavy bleeding or weight reduction, and 16% feared uterine perforation. This fear may be the cause of PPIUCD removal of PPIUCD by themselves or in private institutes. This fear of PPIUCD could be resolved by proper PPIUCD follow-up. Of the 115 respondents, 23 (20%) had a history of accidental falls or the removal of a PPIUCD at a private institute for various reasons. Accidental falls form the majority of the reasons which may be avoided if women come for regular follow-up.

CONCLUSION

The main aim of PPIUCD insertion is to increase the birth spacing. Proper birth spacing reduces maternal morbidity and mortality. Most women accept PPIUCD as a birth-spacing method only on the doctor's advice. Of the 115 women enquired 1 woman had conceived again following an unknown accidental fall of the PPIUCD. The conception of women after 6 months of previous delivery is a threat to both the mother and the foetus. Proper awareness of the follow-up protocol would prevent this unplanned pregnancy. In addition, 23 out of 115 had removed or had accidental fall of PPIUCD and were at risk of being conceived again before the minimum birth spacing interval of 2 years. In conclusion, awareness about the PPIUCD follow-up protocol should be strengthened for all PPIUCD users to avoid removal of PPIUCD in private hospitals before 2 years for various reasons such as side effects, fear, or accidental fall which can be avoided when they come for regular follow-up.

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