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Does Lactation Affect Intrauterine Device Performance?

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Introduction

Lactating women are often recommended the IUD as a contraceptive method since it compares favourably with other available contraceptive methods, which either adversely affect lactation or are less effective in preventing pregnancy. Numerous studies, [1-4] have shown that IUDs have no effect on the duration of breastfeeding and the quality and quantity of breast milk. However, very few studies have examined the effect of lactation on IUDs and the findings of those that have, have been controversial. [5-10] Heartwell and his co-workers [6] reported that women who were lactating at the time of IUD insertion were ten times more likely to have a uterine perforation than those who were not lactating at the time of insertion. Perforation is an uncommon but serious complication following IUD insertion.

Lactating women are likely to have a soft and atrophic uterus as compared to non-lactating postpartum women. Topkins [11] and Udesky [12] observed a general atrophy of the uterus and a low-estrogen endometrium among normal lactating women during their period of lactational amenorrhoea which closely resembled the state of a typical post-menopausal uterus. Furthermore, prolonged postpartum lactational amenorrhoea may induce hyperinvolution of the uterus far beyond that observed among non-lactating postpartum women. [13] Prolonged breastfeeding practices are very common in developing countries, especially in rural populations. Rural women in developing countries often breastfeed for two years or longer as compared to the average of two to six months' breastfeeding by women in developed countries.

This study was undertaken to compare the event rates of the Cu-T 200 IUD in a group of breastfeeding women (study group) with those of non-lactating women (control group) inserted with Cu-T 200 so as to evaluate whether lactation has any effect on Cu-T performance.

Study Sample and Design

A total of 808 women attending the three Family Welfare Centres of the Institute for Research in Reproduction (IRR), and the Family Planning Out-Patient Departments of the L.T.M.G. Hospital and N.W. Maternity Hospital in Mumbai were enrolled for the study.

Studygroup: This group consisted of 443 women who were practically or completely breastfeeding their babies at the time of Cu-T insertion. The insertions were carried out after a minimum of 45 days upto a maximum of 12 months following delivery. Almost all (97.5 per cent) the women had lactational amenorrhoea and the remaining few had resumed their menstrual period.

Control group: IUD insertions were carried out post-menstrually in a total of 365 regularly menstruating, non-lactating women. Those enrolled following an elective termination of pregnancy had had at least one normal period following the abortion.

All the women were followed up for complaints and a gynaecological check-up was performed at 1, 3, 6 and 12 months following insertion. The data were analysed at the end of 12 months of IUD use using the life table method. Information was also collected of all cases of IUD perforations (n=8) observed in IRR clinics during the past ten years (approximately 2,500 insertions).

Results and Discussion

Table 1 presents information about the age and number of living children of the two groups of women.

Table 1: Distribution of acceptors by age and number of living children

	Control group	**Study group**
Age (years)		
17-25	157 (41.6)	296 (68.5)
26-30	119 (31.6)	114 (26.4)
31-35	63 (16.7)	19 (4.4)
36-40	31 (8.2)	3 (0.7)
> 40	7 (1.9)	---
Number of living children		
1	121 (32.1)	187 (43.3)
2	184 (48.8)	195 (45.5)

3	52 (13.8)	40 (9.3)
> 3	20 (5.3)	10 (2.3)

The findings show that the majority of the IUD acceptors in both the control and study groups were between 17 to 30 years of age (73.2 per cent and 94.9 per cent respectively) and had one or two living children (80.9 per cent and 88.8 per cent respectively). Table 2 shows the interval between MTP or delivery and IUD insertion in the two groups of women.

Table 2: Interval between MTP/delivery and IUD insertion

Interval (in months)	**Control group**	**Study group**
11/2-3	34 (9.3)	278 (66.4)
4 - 6	42 (11.5)	102 (23.6)
7 - 9	18 (4.9)	31 (7.2)
10 - 12	13 (3.6)	21 (2.8)
> 12	258 (70.7)	----
Total	365 (100.0)	432 (100.0)

Among the women in the study group who were lactating/breastfeeding, the majority (90 per cent) had had the IUD inserted within six months of delivery and the remaining 10 per cent between 7-12 months postpartum.

The reasons for discontinuation at the end of 12 months of IUD use are presented in Table 3. There were four cases of accidental pregnancy in the study group and one in the control group. The accidental pregnancy rate was not significantly different between the two groups and was within the acceptable normal range. Removals for menstrual irregularities were lower in the study group. This is not surprising since most of the IUDs were inserted in women who had not resumed their menstrual period following delivery. The lower rate among women for such removals can actually be an advantage for the use of IUDs in breastfeeding women, particularly during the period of lactational amenorrhoea. Medical closures due to expulsion were significantly higher in the study group as compared to the control group.

Table 3: Reasons for termination of IUD use

	Control group	**Study group**
Number of cases	365	443
Women months of use	4093	4342

Reason for termination		
A. Medical reason		
Pregnancy	1	4
Expulsion	4	41*
Bleeding	13	6**
Pain	4	5
Infection	1	1
Perforation	0	1
Other	1	0
B. Non-medical reason		
Planning pregnancy	13	7
Personal	7	16
Lost to follow-up	1	12
Continuation rate (%)	87.1	72

* $P < 0.01$; ** $P < 0.04$

We observed only one case of uterine perforation in the study group out of a total of 808 women during the last ten-year period. An analysis of these eight cases showed that all the eight women were lactating at the time of IUD insertion: four women had resumed menstruation, the other four women had lactational amenorrhoea. Of the eight women, two each had had the IUD inserted in the third, fourth and fifth month of delivery; and one each in the seventh and ninth month following delivery.

Perforation rates among IUD users have been reported to vary from 1/350 to 1/2600 insertions. [6] A large number of cases are required to determine whether there is a significant difference in the perforation rates of lactating and non-lactating women. Studies are ongoing at our centre in a larger group of IUD users (3000 women) so as to determine this aspect. Nevertheless, it is advisable to exercise special care during IUD insertion in lactating women and also to ensure that the women are followed up at regular intervals.

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