

1 Safety, Efficacy and Complications of Intracaeasarean CuT 380A

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4

5 **Abstract**

6 Background: Copper Intrauterine Contraceptive Device is a form of long acting reversible
7 contraceptive device and is considered to be one of the most effective forms of birth control
8 available. Copper T 380A has lowest pregnancy rate among all copper IUDs and can be used
9 for a lifespan of 10 years The advantages of post placental insertion include the assurance that
10 the women is not pregnant, high motivation, convenience and eliminates the 6 week post
11 partum wait. This study examines the factors associated with acceptability of post partum
12 IUCD insertion according to their sociodemographic and obstetrics characteristics and the
13 rates of perforation, expulsion, pelvic infection, lost strings and displacement following
14 insertion among acceptors till 12 months.Objective: To assess the safety, efficacy and
15 complications of post placental Copper T 380A insertion following caesarean section.Study
16 Design: This was a prospective study conducted on 500 women who underwent LSCS and
17 were willing for CuT 380 A insertion after proper counselling in a tertiary care hospital. After
18 placental delivery CuT was inserted into the endometrial cavity through the incision. The
19 study participants were then followed up after discharge at 6 weeks, 6 month and one year
20 postpartum.

21

22 **Index terms—**

23 Objective: To assess the safety, efficacy and complications of post placental Copper T 380A insertion following
24 caesarean section.

25 Study Design: This was a prospective study conducted on 500 women who underwent LSCS and were willing
26 for CuT 380 A insertion after proper counselling in a tertiary care hospital. After placental delivery CuT was
27 inserted into the endometrial cavity through the incision. The study participants were then followed up after
28 discharge at 6 weeks, 6 month and one year postpartum. Any complaints if present were noted and pelvic
29 examination and Ultrasonography were performed to verify the presence of IUCD and to check for any signs of
30 infection or bleeding.

31 Results: Of the 500 patients studied, 487(97.4%) patients came for follow up at 6 weeks, 454(90.8%) at
32 6 months and 411(82.2%) at 12 months. 15(3%) patients had expulsion of Cu T, of which 3(0.6%) expelled
33 within 6 months, 10(2%) expelled in between 6-12 months and 2(0.4%) expelled at 12 months follow up. A
34 total of 37(7.4%) patients removed the IUCD, 12(2.4%) due to increased bleeding per vaginum, 8(1.6%) due to
35 displacement, 4(0.8%) due to abdominal pain, 1(0.2%) due to leucorrhoea and 12(2.4%) patients removed due to
36 their misperceptions like discomfort, fear of displacement into the abdomen and social pressure.

37 Complications were seen in 162(32.4%) patients such as bleeding in 20(4%), strings not visible in 105(21%),
38 pain abdomen in 5(1%), leucorrhoea in 4(0.8%) and 15 (3%) expelled the IUCD. Pregnancy occurred in 3(0.6%)
39 patients out of which 2(0.4) patients had intrauterine pregnancy and 1(0.2%) ectopic pregnancy.

40 **1 Conclusion: Post placental Copper T 380 A insertion follow- 41 ing**

42 caesarean section is a safe, effective low cost and convenient method of long term reversible contraception with
43 a low incidence of expulsion and high continuation rates.

5 DISCUSSION

44 2 Introduction

45 Spacing the pregnancies is very crucial as it helps not only in improving mother's health but also allows the mother
46 to provide proper care and adequate attention to the neonate. In case of primi parous as well as multiparous not
47 desirous of permanent contraception, CuT 380A insertions provides temporary contraception with effectiveness
48 up to 10 years. ?? Postpartum period is an ideal time to begin contraception, as women are highly motivated
49 to adopt contraception during this period with an advantage of convenience to patient and also service provider,
50 ease of insertion and cost savings. ??, ?? The contraceptive prevalence rate in India is 56.3% and the unmet need
51 is 12.8% according to NFHS 3. The main reasons are lack of awareness, non accessibility of services, restricted
52 women mobility due to cultural factors. 4,5 In our country this method is more applicable because delivery may
53 be the only time when a healthy women comes in contact with health care personnel. ??,6 II.

54 3 Materials and Methods

55 This was a prospective study conducted at a tertiary care hospital in Pondicherry over a period of 2 years.
56 Clearance from the Ethical committee of institute for the study was obtained and 500 women who fulfilled the
57 inclusion and exclusion criteria and underwent caesarean section with consent for IUD insertion were included
58 in the study. Counselling was done in prenatal period or when in labour. Procedure of the study was explained
59 to the patients before enrolling into the study and an informed, valid, written consent was obtained.

60 CuT 380A was introduced through uterine incision, following the delivery of the placenta and membranes after
61 ruling out atonicity and uterine

62 4 Results

63 A total of 500 eligible and willing women were enrolled in the study.

64 Mean age of the patient was 23.57 ± 3.64 years and 57.2% patients belonged to class 2 of modified Prasad's
65 classification of socioeconomic strata.

66 Out of 500 recruited, 63.2% were educated upto secondary and 23, 2% till higher secondary. Acceptance was
67 significantly high among primipara compared to multipara as 82.2% of the study population was primipara (table
68 1). 411 patients were followed up till 12 months and 89 were lost to follow up at the end of 1 year. Table 2 shows
69 the period at which the patients were lost to follow up. Among the 411 followed up patients, expulsion of the
70 IUD was seen in 15 patients and the period at which it was expelled is shown in table 3. 37 patients removed
71 IUD among the followed up for reasons such as bleeding, displacement, pain abdomen and did not want to
72 continue (table 6). IV.

73 5 Discussion

74 The IUD is an effective long lasting and reversible method of birth control. The postpartum period provides
75 opportunity to the healthcare provider for counselling a woman regarding the family planning services to avoid
76 unintended conception. It is observed that women who have been counselled for PPIUDC have 10 times higher
77 chance of using IUD than those where insertion was delayed till complete involution of uterus 6 .

78 Immediate postplacental insertion following caesarean is an ideal time to achieve long term contraception with
79 minimal discomfort to the woman and is being increasingly practiced after reported safety and lower expulsion
80 rates 5,6,7,8,9 .

81 In this study, majority of the women (63.2%) in the study population had secondary level of education.
82 Acceptance of PPIUDC was higher among women with higher and secondary education (23.2% and 63.2). This
83 was similar to a study done in Egypt by Safwatet al 10 and Thomas D 11 .

84 Primipara were more compliant towards IUD insertion when compared to multipara. And this finding was
85 contrary to that of the study by Grimes et al 12 where they found higher acceptance in multiparous clients
86 (65.1%).

87 Though bleeding was seen in 12.3% of the followed up patients only 2.9% of them insisted on getting it removed.
88 Whereas study by Mishra S 13 found bleeding as the main complication (23.5 %).

89 In the present study, among the up patients strings were not visible in 120 patients. Out of these 3 expelled
90 the IUD and in the remaining 117 patients strings were curled up in the cervical canal. Among the 117 patients
91 though strings were not visible, only 12 had complications like leucorrhoea, bleeding, pain abdomen, displacement
92 and failure which is comparable to the study by Mishra S 13 . Among 10 patients who had displaced CuT only
93 2 were willing for reinsertion.

94 Expulsion of IUD is an important factor affecting the efficacy of device. In the present study 15 (3.6%)
95 patients had expulsion of IUD with maximum between 6 and 12 months, while CelenS et al 9 had an expulsion
96 rate of 17.6% at the end of 12 months.

97 In the present study, 37 patients removed IUD for reasons such as bleeding (32.4%), displacement (21.7%),
98 pain abdomen (10.8%), others (2.7%) and remaining (32.4%) removed due to their misperceptions like discomfort
99 and fear of displacement into abdomen. In the study conducted by Mishra S 13 and Sharma A et al 14 cumulative
100 removal rate was 7% and 13.5%, respectively. The commonest cause for removal was psychosocial followed by
101 menstrual complaints and persistent pelvic pain.

102 Failure of IUCD was seen in 3 patients in the present study, whereas CelenS et al 9 and SunitaSinghal et al 15
103 have quoted a failure rate of 0.4% and 0.67%, respectively.

104 V.

105 **6 Conclusions**

106 Post placental Copper T380A insertion following caesarean section is a safe, effective. Low cost and convenient
107 method of long term reversible contraception with a low incidence of expulsion and high continuation rates.

108 The acceptance of PPIUCD was high in the present study, and it is comparable to other studies done globally.

109 Awareness of the PPIUCD among these women was very poor despite high acceptance. Majority of the women
110 had never heard about the PPIUCD and the acceptance was higher among educated women and primigravida.

111 A little more than 50% opted out despite counselling for intra caesarean CuT, which shows that counselling has
112 to be strengthened qualitatively and quantitatively by recruiting and training a dedicated work force. The low
113 rates of complications can be further be reduced by consolidating training of the post graduates. The government
114 needs to develop strategies to increase the public awareness of IUCD through different media sources which will
115 further promote PPIUCD acceptance and reduce the accompanying misconceptions. ¹

6 CONCLUSIONS

Safety, Efficacy and Complications of

Intracaesarean CuT 380A

Expulsions were confirmed clinically and radiologically.

Data obtained from the study was analysed

using SPSS 11.5 software with chi square test for

categorical data and mean SD, frequency for continuous data. a) Inclusion Criteria 1. Women delivered by LSCS (elective and emergency) without any contraindication who accepted for IUCD insertion after counselling in

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prenatal period or in labour.

2. Age greater than or equal to 18 years. b) Exclusion criteria
1. Clinical chorioamnionitis. 2. Prolonged rupture of membranes (> 18 hours). 3. Antepartum haemorrhage. 4. haemorrhage. 5. Intrauterine death. 6. Active diseases like pelvic tuberculosis, coagulation disorders, uncontrolled diabetes, Sub acute bacterial endocarditis. 7. Uterine leiomyomata distorting endometrial cavity space or surface. 8. History of allergy to copper, Wilsons disease, Abnormal uterine bleeding prior to pregnancy.

9. Non counselled or unwilling patients.

III.

[Note: anomalies]

Figure 1:

2

	Followed up	Lost to follow up
6 weeks	487 (97.4)	13 (2.6)
6 months	454 (90.8)	46 (9.2)
1 year	411 (82.2)	89 (7.8)

Figure 2: Table 2

3

Time of expulsion	N = 15 (%)
<6 months	3 (20)
6-12 months	10 (66.7)
>1 year	2 (13.3)

Complications were seen in 162 patients, like bleeding, expulsion, displacement, pain abdomen, failure and strings not visible (table 4).

Figure 3: Table 3

4

Complications	N = 162 (%)	Strings not visible N = 120 (%)
Bleeding	20 (12.3)	5 (4.2)
Expulsion	15 (9.2)	3 (2.5)
Displacement	10 (6.2)	4 (3.3)
Failure	3 (1.9)	2 (1.7)
Pain abdomen	5 (3)	1 (0.8)
Strings not visible without other complications	105 (65)	105 (85.7)
Others	4 (2.4)	-

A total of 3 patients had failure with IUCD, 2 patients had intrauterine pregnancy and one had ectopic pregnancy (table 5).

Figure 4: Table 4

5

Failure	N = 3 (%)
Intrauterine	2 (66.7)
Ectopic	1 (33.3)

Figure 5: Table 5

6 CONCLUSIONS

6

Reasons for removal	n = 37 (%)
Bleeding	12 (32.4)
Displacement	8 (21.7)
Don't want to continue	12 (32.4)
Pain abdomen	4 (10.8)
Others	1 (2.7)

Figure 6: Table 6

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