

**3 YEARS EXPERIENCE WITH CuT 380 AG,
CuT 220C, CuT 200B
AND LEVONORGESTREL IUD.**

ZEHRA OOMATIA, JATIN SHAH, K.K. DESHMUKH, KUSUM ZAVERI

SUMMARY

IUD as method of contraception has become increasingly popular the world over. We studied 3 newer devices viz. CuT 380 Ag, CuT 220 & Levonorgestrel IUD with the aim of comparing their efficiency with the CuT. A total of 81 cases were enrolled. We observed that the copper IUDs had a continuation rate of 26-44% at the end of 3 years, while the Levonorgestrel IUD(LNG) had a rate of 15.7% Among the different copper IUDs there was no significant difference in continuation rates. The menstrual abnormalities were higher in the LNG with amenorrhoea as a significant complaint. However no failure was reported in that group. 11 patients were enrolled for return of fertility of which 8 conceived at the end of the first year after discontinuation (72.7%)

INTRODUCTION

IUD as a method of contraception has become increasingly popular the world over. Approximately 60 to 100 million women all over the world are currently using this method of fertility control. With ongoing research new types of IUDs have been devised in order to improve the efficiency and acceptability due to lower side effects or to give an

extended duration of contraceptive protection. We studied 3 newer devices viz CuT 380 Ag, CuT 220 & LNG with the aim of comparing their efficacy with the CuT currently used in the National family welfare programme.

METHODOLOGY

81 healthy women with proven fertility, in the age group of 18-40 Years, who were exposed to the risk of pregnancy were selected. They were randomly allocated to either of the 4 devices. In 32 cases the IUD

Grant Medical College, Bombay.

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was inserted concurrent with induced abortion. In 49 women it was inserted within 10 days of her period ensuring that her cycles were regular. Case selection was done by following a strict protocol excluding all the contraindications for the method. IUD was inserted after a thorough medical & gynaec check up which included a paps smear, Hb% & urine examination. The subjects were followed up at one week, one month, 3 months, 6 months & 6 monthly thereafter to collect information on continuation rates and side effects.

RESULTS

The continuation rates at 12, 24, 36 months were significantly lower with LNG as compared to the copper devices. Among the different copper devices the rates were comparable. Our study has been a part of the larger ICMR study of 1905 subjects which has concluded that there is no need to replace the CuT with the newer devices in the programme.

The continuation rates per 100 users in the 3 years are shown:

The annual discontinuation rates in a few International studies are shown. (A decade of Intrauterine contraception 1976-1986 from Modern trends in fertility control).

REASONS FOR DISCONTINUATION

1) Method Failure:- A single involuntary pregnancy was reported in the CuT 200 group. An important observation was that no pregnancy was reported in the LNG in the all India study.

2) Expulsion:- Complete or partial expulsion occurred in the CuT 380 Ag, & LNG. There was a high partial expulsion rate in the LNG 31.5% (6 patients) this could be due to the introduction of the IUD at time of abortion in 3 cases.

3) Menstrual Complaints like prolonged bleeding, Irregular bleeding, heavy bleeding and amenorrhoea were seen.

4) Medical reasons like pain in abdomen urinary infection, weight change, weakness & headache were among other reasons.

	CuT200	CuT380 Ag	CuT220	LNG
Continuation rate				
per 100 users. 1st year	88	88.9	83.9	48.9
2nd year	68	66.6	63.3	26.4
3rd year	44	27.7	26.3	15.7
Acceptors	2618	18	19	
ICMR 1st year	82.4	83.5	84.4	74.5
2nd year	68.8	69.9	66.6	58.7
3rd year	45.4	50.4	45.4	38.8
Acceptors	475	434	496	500

	Years	Preg.	Bleeding pain	Expulsion	Continuation	Acceptors
CuT 200	2	1.9	6.8	3.3	62.1	5669
CuT 200	2	3.1	6.7	8.7	54.1	2330
CuT 380 Ag	2	0.6	9.1	4.1	56.9	1051
CuT 380 Ag	4	0.5	6.3	4.9	62.9	3052
LNG	2	0.3	3.8	0.3	66.6	164
LNG	2	0.0	3.8	1.6	60.7	163
CuT 220C (Roy et al)	3	3.4	32.3	10.0	43.0	903

5) Personal reasons like planning pregnancy, no need for contraception etc. They were 35.38% at the end of 3 years.

REASONS FOR DISCONTINUATION AT THE END OF 3 YEARS:

Reason	CuT200	CuT380 Ag	CuT220	LNG
1) Failure	3.8%(1)	-	-	-
2) Expulsion	-	5.5%(1)	-	31.5%(6)
3) Altered Menstrual Pattern	11.4%(3)	11.0%(2)	11.0%(2)	15.7(3)
4) Amenorrhoea	-	5.5%(1)	-	26.3(5)
5) Pelvic Infection	-	-	-	-
6) Medical reasons	3.8	5.5	11.0(2)	5.5(1)

The menstrual pattern was analysed by the average episode length, number of bleeding runs & days in a reference period of 90 days.

It was observed that the menstrual problems were higher in the 1st year of use

	Copper IUDs	LNG
Menstrual Cycles (22-35 days)	1st Year 70.75%	40%
	3rd Year 90%	40%
Bleeding runs (2 to 4)	1st Year 90%	58%
	3rd Year 96%	40%
Bleeding days (-20 days)	1st Year 87%	55%
	3rd Year 95%	43%

and they tend to settle down by the end of the 3rd year in the copper group. In the LNG group they remained same and amenorrhea was a significant complaint. 11 patients were enrolled for return of fertility. 8(72.7%) conceived at the end of the first year after discontinuation.

virtue of its oligomenorrhoea & amenorrhoea may sound promising for our women who are anemic but it has a high discontinuation rate because of the menstrual irregularities even though the pregnancy rate is zero. In fact CuT had the best performance in our study (as the failure was within acceptable limits).

CONCLUSION

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Though the newer copper devices give a longer duration of protection their continuation rates are comparable with CuT LNG by

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