

## USE EFFECTIVENESS OF COPPER—T & LIPPES LOOP

by

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Intrauterine devices have been used on a large scale all over the world as a contraceptive method for spacing. Various types of intrauterine devices have been introduced so as to reduce the complications and to increase the use effectiveness. Clinical studies have been reported that copper improves the performance of intrauterine devices. The addition of metallic copper to an intrauterine device was shown by Zipper *et al* (1969) to enhance significantly contraception effectiveness. Tatum (1973) in his preliminary report derived from the first twelve months' of use of the T-cu 200 in comparison with Loop-D showed that the Copper-T provides somewhat better use effectiveness than Loop-D.

The purpose of the present study was to make a comparison between the Copper-T model T-cu 200 and Lippes loop 30 m.m. size. The results of 193 insertions with a follow-up on every patient for 12 months are described.

### Material and Method

Patients between 18 to 35 years of age attending Urban Family Planning Centre attached to J.J. Group of Hospitals and Grant Medical College, Bombay were

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Accepted for Publication on 21.5.1976.

given intrauterine device as a method for spacing the childbirth. All the patients were of proved fertility and were without demonstrable pelvic pathology. Total number of I.U.D. insertions performed during October 1974 to February 1975 were 229. Copper-T were inserted in 95 women and Lippes loop in 134 women. They were advised to come for follow-up after one week of insertion. Thereafter follow-up examination was done monthly for three months and every 3 months thereafter or any other time if she has any side effects.

At the follow up visits speculum and bimanual examinations were done in all the women. Out of 134 cases of Lippes loop, 34 cases were lost to follow up and out of 95 cases of Copper-T, only 2 cases did not come for follow up examination. The results were analysed in November 1975.

### Results

By comparing the clinical trials of Lippes loop and Copper-T, the following information is obtained. Out of 134 insertions, 100 cases were followed up giving a follow up incidence of 74.6 per cent but out of 95 Copper-T insertion, only 2 cases were lost for follow-up. Complete comparative data are shown in Table I.

Clinical comparison of Lippes loop and Copper-T showed that expulsion rate in

TABLE I  
Clinical Comparison of Lippes Loop and Copper-T

	Lippes loop		Cu-T	
	30 mm. Total No.	Percentage	200 Total No.	Percentage
1. Total No. of insertions	134		95	
2. Lost for follow up.	34	25.4	2	2.1
Active at the end of study	100	74.6	93	97.9
3. Expulsion	3	3	5	5.37
4. Pregnancy	Nil		1	1.07
5. Removal due to side effects	12	12	6	6.4

Copper-T was very high i.e. 5.37% compared to 3% of Lippes loop. Pregnancy rate for Copper-T was 1.07% but there was no incidence of pregnancy in cases of Lippes loop.

Removal of Cu-T for medical reasons were less than Lippes loop. Details of removal due to side effects are shown in Table II.

series, but there was one case of displacement of Lippes loop in the uterus. When patient came for follow up examination, nylon thread was not seen on speculum examination, but loop could be sounded with the uterine sound in the uterus. X-ray abdomen confirmed the presence of loop in the uterine cavity.

TABLE II  
Details of Removal Due to Side-effects

Side effects	Lippes loop No. of cases	Cu-T No. of cases
1. Continuous bleeding since insertion	3	2
2. Bleeding per vaginum off and on	4	2
3. Pain in lower abdomen	3	1
4. Excessive white discharge	1	1
5. Displacement of I.U.D.	1	Nil
Total:	12	6

Total removals of Lippes loop were 12 as compared to 6 removals in case of Copper-T. Removals due to pain and/or bleeding were less for Copper-T than in Lippes loop. There were only 6 removals for medical reasons out of 93 cases among T-cu users, but among the women wearing the Lippes loop, there were 12 removals for medical reasons out of 100 cases.

There were no case of perforation either in Copper-T or Lippes loop in this

#### Discussion

In this clinical comparison of Cu-T with Lippes loop, it is observed that Copper-T produces very few side effects compared to Lippes loop. Tatum (1972) in his clinical comparison of Copper-T, Model T-cu 200 with Lippes loop size D has shown that except termination for medical reasons other than pain and/or bleeding, the Copper-T performance is better than Lippes loop. Gulati and



Mujumdar (1975) also reported 12.5% removals in Copper-T series as against 21% removals in Loop series. Pregnancy rate reported by Tatum with the Copper-T was 2.2 per 100 users as compared to 3 per 100 users in Lippes loop. In this series though the number of cases studied is small there was one pregnancy in Cu-T device users but no pregnancy in Lippes loop wearers. This may be the result of failure to insert the "T" high in the fundal cavity or the small size of Cu-T. Unusual complication of Copper-T like perforation of the cervix by the transverse arm of the "T" was not observed in this series. There were 3 cases reported by Tatum (1972) in his series.

**Conclusion**

The data derived from the clinical comparison of the T-cu 200 with Lippes

loop indicates that Copper-T provides better use effectiveness than Lippes loop.

**Acknowledgement**

We thank Dr. K. D. Sharma, Dean, Grant Medical College, Bombay, for allowing us to present hospital data.

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TABLE II

Comparison of Pregnancy Rates in Copper-T and Lippes Loop

Series	Number of Users	Number of Pregnancies	Pregnancy Rate (%)
Copper-T	100	12.5	12.5
Lippes Loop	100	21	21

In the clinical comparison of Copper-T and Lippes loop, it is observed that pregnancy rate with Copper-T (12.5%) is lower than Lippes loop (21%). This may be due to the fact that Copper-T is inserted high in the fundal cavity and its transverse arm is in contact with the uterine wall. On the other hand, Lippes loop is inserted in the lower part of the uterus and its contact with the uterine wall is not as effective as Copper-T. The results of this study are in agreement with the findings of other workers who have reported lower pregnancy rates with Copper-T compared to Lippes loop. The results of this study also show that Copper-T is a more effective contraceptive than Lippes loop. The results of this study are in agreement with the findings of other workers who have reported lower pregnancy rates with Copper-T compared to Lippes loop.