



## Comparative Study of Immediate and Late Complications of Copper 375(Multiload) and Copper T 380 A in Interval & Post MTP Cases

## KEYWORDS

Copper T 380 A, Copper 375, Multiload

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**ABSTRACT** Background: Copper IUD is the most widely used reversible method of contraception. The objective of this study is to compare immediate and late complications of Copper 375 (Multiload) and Copper T 380 A in interval & post MTP cases.

Method: A total 100 women were enrolled in our study. Out of these ,50 women were randomly selected for Copper 375 insertion & 50 women for Copper T 380 A insertion. Insertion was done in interval and post MTP cases and these subjects were observed for immediate and late complications at 1& 6 months,.

Results: Immediate complications like difficulty in insertion & cramps were more with Copper T380A than Copper 375. Copper 375(Multiload) has significantly less incidence of late complications like dysmenorrhea ( $p<0.05$ ), menorrhagia ( $p<0.05$ )& infection( $p<0.05$ ) as compared to Copper T 380 A.

Conclusion: The study concludes that Copper 375 (Multiload) is safe and effective alternative to Copper T 380 A.

**INTRODUCTION**

**"Birth control is the first step woman must take towards her freedom."**

The intrauterine device (IUD) is a small, flexible apparatus that is inserted into a woman's uterus to prevent pregnancy. It is most frequently used reversible family planning method in the world. It offers safe, effective and long term contraception<sup>1</sup>. New IUDs are more effective than barrier contraceptives and as effective as injectable implants and voluntary sterilization<sup>2,3</sup>. IUDs have certain advantages over other methods because they are highly convenient, hormone free, immediately effective, requires no daily attention, safe for all women including breast feeding women, adolescents and women after 40 years<sup>4</sup>.

According to data from National Family Health Survey III (2006), 37% of married women in India are sterilized, followed by the use of condoms (5%), oral contraceptive pills (3%), and the IUD (2%). Despite the fact that the government offers IUD services free of cost, it still remains largely underutilized<sup>1</sup>. The NFWP currently offers the Copper T 380A IUD and has recently launched the Copper 375 (Multiload)<sup>4</sup>.

Copper T 380A is a highly effective member of a family of copper bearing IUD which has been used extensively around the world over a decade. Copper T 380 A was introduced in the National Family Welfare Programme by Government of India in 2002. It is a T shaped device having effective life of 10 years. However, as with all methods of contraception, its use is associated with some risks like excessive bleeding, pelvic inflammatory disease, ectopic pregnancy, expulsion of IUD, and perforation of uterus. Copper 375(Multiload) is a very convenient, safe & reversible contraceptive. It is recently introduced in NFWP in year 2011. There is no need of loading the device at time of insertion so more convenient to insert than other IUDs. It has effective life of 5 years & can be left in place safely for the time, unless specific medical or personal reasons call for its earlier removal<sup>5</sup>.

**OBJECTIVES**

To study the immediate and late complications of Copper

375(Multiload) & Copper T 380 A in interval & post MTP cases.

**MATERIALS AND METHODS**

This randomized control study was conducted in the department of Obstetrics and Gynecology at Kasturba Hospital, Delhi. Total 100 women attending family planning OPD, MTP clinic & Gynaecology OPD were enrolled in our study. Out of these, 50 women were selected for Copper 375(Multiload) insertion & 50 women were selected for Copper T 380 A insertion randomly by computer generated random table.

A written informed consent was obtained from all enrolled patients. History was obtained from subjects & detailed general, systemic and abdominopelvic examination was done. Exclusion criteria used were pregnancy, congenital malformation of uterus, undiagnosed vaginal bleeding, any bleeding disorder & acute pelvic inflammatory disease. After preinsertion counseling, Copper 375 (Multiload) & Copper T 380 A were inserted in interval and post MTP cases. Difficulty in insertion or any complications immediately (cramps, syncope, perforation) after insertion were noted. Patients were asked to come for follow up after one month & then after six months. At follow up they were asked regarding any history of lower abdominal pain, L.M.P, excessive bleeding, discharge per vagina, string problems, delayed periods or any other problem (eg. UTI).

**STATISTICAL DATA EVALUATION**

Statistical evaluation was done by using SPSS (Statistical package of the social sciences). Qualitative variables were expressed as numbers & percentages, while quantitative variables were expressed as means. p value less than 0.05 was considered as significant.

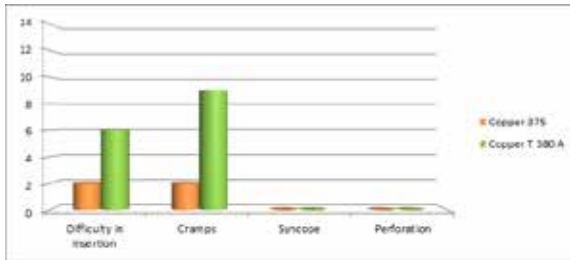
**RESULTS**

In our study mean age of subjects was 26.44 ±3.67 years in Copper 375 (Multiload) users and 27.50± 3.73 years in Copper T 380 A users. 38% Copper 375( Multiload) subjects & 46% of Copper T 380 A subjects belonged to lower middle class according to modified Kuppuswamy's socioeconomic status scale. In our study majority of users

had parity between 2 & 3 in both groups.

### IMMEDIATE COMPLICATIONS

Very few insertion problems were encountered in Copper 375 (Multiload) subjects (4%) whereas with Copper T 380 A difficulty in insertion was experienced in 12% subjects. Cramps were experienced more during Copper T 380 A insertion (18%) where as only 4% of subjects experienced cramps during insertion of Copper 375 (Multiload). No incidence of syncope or perforation was observed at the time of insertion in any of IUD, Copper 375 (Multiload) or Copper T 380A.



**Figure 1 Immediate complications of Copper 375(Multiload) & Copper T 380 A**

### COMPLICATIONS AT END OF ONE MONTH

At the end of 1 month, the most common problem encountered was dysmenorrhea which was 30% with Copper T 380 A as compared to 8% with Copper 375 Multiload (p value 0.009). Incidence of menorrhagia was significantly less with Copper 375( Multiload) i.e. 8% as compared to 34% with Copper T 380A (p value is 0.003). Other complications noted were vaginal discharge 6% in Copper 375(Multiload) users compared to 16% in Copper T 380 A users, genital infection (PID) 10% in Copper T 380 A users as compared to none in Copper 375(Multiload) users. Incidence of missing thread was 4% in Copper 375( Multiload) users & 2% in Copper T 380 A users . No incidence of misplaced IUD was found in any of the subjects. 2% of Copper T 380 A subjects had long thread whereas none of the subject complaint of long thread in Copper 375(Multiload) users. No incidence of perforation, intrauterine or ectopic pregnancy was observed with any of the IUDs within one month. UTI was observed in 6% of Copper 375(Multiload) subjects as compared to 2% of Copper T 380 A subjects.

**TABLE 1: Late complications of Copper 375(Multiload) & Copper T 380 A at end of 1 and 6 months**

	Copper 375(Multiload)		Copper T 380 A	
	1 MONTH	6 MONTH	1 MONTH	6 MONTH
Dysmenorrhea	4(8%)	8(16%)	15(30%)	17(34%)
Menorrhagia	4(8%)	9(18%)	17(34%)	19(38%)
Vaginal Discharge	3(6%)	5(10%)	8(16%)	11(22%)
Genital infection	0	0	5(10%)	7(14%)
Missing thread	2(4%)	3(6%)	1(2%)	3(6%)
Long thread	0	0	1(2%)	1(2%)
Pregnancy	0	0	0	0
Ectopic pregnancy	0	0	0	0
Perforation	0	0	0	0
UTI	3(6%)	5(10%)	1(2%)	3(6%)

### COMPLICATIONS AT END OF 6 MONTHS

The subjects were then followed up at end of 6 months and following observations were made. Incidence of dysmenorrhea was less with Copper 375( Multiload) i.e.16% as compared to 34% with Copper T 380 A. Incidence of menorrhagia at end of 6 months was significantly more in Copper T 380 A users i.e.34% as compared to 16% with Copper 375(Multiload) users.( p value is 0.044).Vaginal discharge was a complaint in 10% of Copper 375(Multiload) subjects as compared to 22% of subjects in Copper T 380 A . Genital infection (PID) was observed in 14% subjects in Copper T 380 A as compared to none in Copper 375 (Multiload).Incidence of missing thread was similar in both groups i.e. 6% and long thread was a complaint in only 1 Copper T 380 A user(2%) as compared to none in Copper 375( Multiload) users. There was no incidence of intrauterine pregnancy or ectopic pregnancy, uterine perforation with any of the IUDs. Incidence of UTI was 10% with Copper 375( Multiload) & 6% with Copper T 380 A.

### DISCUSSION

In developing countries like India, the unmet need for contraception is large(13.6%). So we need contraceptive methods which have easy acceptability & maximum efficacy with least complications. IUD seems to be one of the most effective method of birth spacing as its insertion is one time procedure & it provides contraception for longer period of time

In the present study, it was observed that Copper 375 (Multiload) was easy to insert because it is preloaded on its inserter so no need of loading the device at time of insertion..Low incidence of cramps with Copper 375 (Multiload) may be due to its horseshoe shape & its flexible side arms which adhere closely to fundus of uterus causing less stretching of uterus. The spurs on the 375 reduce distension of the uterine cavity which reduces the bleeding, and cramping It is easy to insert & cause less discomfort while insertion. These results are similar to study done by Family Health Initiative FHI 360<sup>5</sup>(2011) under guidance of Ministry of family & health welfare, in which half of the providers noted that the clients complained less frequently of pain and discomfort during and after IUD 375 insertions than during and after Cu T 380A insertions & nearly two-thirds of the service providers reported that the insertion process was also easier and less time-consuming for the IUD 375 than for the Cu T 380A.Even a paramedical staff can insert it easily.

As observed in this study, dysmenorrhea at 1 month was significantly less in Copper 375(Multiload) users (8%) as compared to Copper T 380 A users (30%) which is similar to a study done by Chi C, Far G<sup>6</sup>(1989) who observed increased menstrual pain (dysmenorrhea) accompanied Copper T 380 A use & approximately 15% to 40% of Copper T 380 A removals were for complaints related to pain. Incidence of menorrhagia at 1 month was significantly less with Copper 375(Multiload) i.e. 8% as compared to 34% with Copper T 380A (p value is 0.003) in our study. Mahnaz Shahnazi et al<sup>7</sup> (2012) in their study observed that the mean score of bleeding in the first month after IUD insertion decreased by 9% in IUD ML CU 375 group where as bleeding increased by 23% in Copper T 380A group(p value<0.0001 significant) which is comparable to our study. At end of 6 months,incidence of dysmenorrhea and menorrhagia was more with Copper T 380 A i.e. 34% & 38% as compared to Copper 375 (Multiload) i.e. 16% & 16% respectively at end of 6 months.

Copper 375 (Multiload) has less incidence of complications like vaginal discharge, infection as compared to Copper T 380 A at end of 1 & 6 months. There was no incidence of genital infection (PID) in Copper 375 (Multiload) users & incidence was 14% in Copper T 380 A users at end of 6 months. P value was 0.012 indicating statistically significant difference in both IUDs. IUD related bacterial infection is due to contamination of endometrial cavity at the time of insertion & minimal handling of Copper 375 (Multiload) limit such infections. It was observed that incidence of UTI was slightly higher with Copper 375 (Multiload) than Copper T 380 A but difference was not statistically significant.

Both IUDs are comparable for complications like missing thread, long thread. No incidence of uterine perforation, ectopic pregnancy, pregnancy was observed in any of the subjects.

### CONCLUSION

The study concludes that Copper 375 (Multiload) is a safe and effective alternative to Copper T 380 A. It is easy to insert & cause less discomfort while insertion. Copper 375 (Multiload) has less incidence of complications like dysmenorrhea, menorrhagia & infection as compared to Copper T 380 A. Copper 375 (Multiload) IUD should be offered to married women who wish to limit their family in all family planning clinics in rural as well as urban areas as it has less complications & good patient compliance.

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