

A COMPARATIVE STUDY OF 184 LIPPES' LOOP AND 583 COPPER-T (200 SQ. MM.) INSERTIONS

by

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Introduction

Intrauterine devices are being used on a wide scale. Tatum (1973), reported better effectiveness, with the Cu-T devices, than the Lippes' loop D. According to other workers, the copper IUDs are no more effective, than the inert IUDs, but they are easier to insert, and are associated with less bleeding. Due to these conflicting points of view, it was thought worthwhile, to make a comparative study of the Lippes' loop and Cu-T insertions done in the Department of Obstetrics and Gynaecology, at Lady Reading Hospital, Simla-1.

Material and Method

All the women who had a Lippes' loop or Copper-T insertion, in the Department of Obstetrics and Gynaecology, H.P. Medical College, at Lady Reading Hospital, Simla-1, were taken for the study from 1975 to June 1979, provided they had an adequate followup. During this period, 184 Lippes' loop and 583 Copper-T, users

were taken for the study, and 1488 and 4964 cycles of Lippes' loop and Cu-T users, respectively were analysed. Seventy-three per cent (426 cases) of patients had a Cu-T insertion, concurrently with a vaginal MTP, as against 39.1 per cent (72 cases) of Lippes' loop insertions. In the post menstrual period, 57 (105 women) and 20.5 per cent (120 women) had Lippes' loop and Cu-T insertions respectively. In the postpartum period (6 to 8 weeks after delivery) 3.8 (7 women) and 6.3 per cent (37 women) had Lippes' loop and Copper-T insertions respectively.

All the women were informed, that an IUD has been inserted, and were advised to come for follow-up and examination, after 4 weeks of insertion, and thereafter at 3 monthly intervals, or earlier if there were any side effects.

Observations

The demographic data of the Lippes' loop and Cu-T users are given in Table I. The age group and parity are comparable.

Complications

Table II shows the comparative complications of the two intra-uterine devices under study. It was observed that the leading complication of excessive uterine bleeding was 9.78 and

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TABLE I
Demographic Data

Age (years)	Lippes' loop (184)		Copper-T (583)	
	No. of cases	Per cent	No. of cases	Per cent
Less than 20	9	4.8	21	3.6
20 to 29	126	68.4	368	63.1
30 to 39	47	25.5	168	28.8
40 and above	2	1.0	26	4.4
Parity				
0	1	0.5	5	0.8
1	34	18.4	107	18.3
2	84	45.6	309	53.0
3	41	22.2	138	23.6
4 and above	24	13.0	24	4.1

9.09 per cent in the Lippes' loop and Cu-T users respectively. In the studies of Sivin (1973) and Alwani *et al* (1978) (1978) however, the incidence of bleeding was 4.1 and 4.9 per cent in the Cu-T users, respectively. There was 1 case of perforation of the cervix, by the transverse arm of the Copper-T, causing displacement of the device into the broad ligament. The patient underwent laparotomy for its removal. The other complications uterine cramps, pelvic infection, expulsion and displacement of the device

in-utero, were higher in the Lippes' loop users.

Medical Reasons for Removal

Table III shows the medical reasons for removal of the two devices under study. The main reason for removal was excessive bleeding, and the removal rate due to bleeding was 4.34 and 6.51 per cent in the Lippes' loop and Copper-T users respectively. The pregnancy or failure rate, with the device in situ, was 1.08 and 1.54 per cent (9 cases) of the Lippes' loop and Cu-T insertions respectively.

TABLE II
Complications

Complication	Lippes' Loop (184)		Copper-T (583)	
	No. of cases	Per cent	No. of cases	Per cent
1. Excessive bleeding	18	9.78	53	9.09
(a) Menorrhagia	17	9.23	49	8.40
(b) Metrorrhagia	1	0.54	2	0.34
(c) Continuous bleeding	0	0.00	2	0.34
2. Uterine cramps	6	3.26	13	2.22
3. Pelvic infection	1	0.54	2	0.34
4. Expulsion	8	4.34	19	3.25
5. Displacement in-utero	3	1.63	0	0.00
6. Perforation	0	0.00	1	0.17
Total Complications	36	19.56	88	15.09

TABLE III
Medical Reasons for Removal

Medical Reason	Lippes' Loop (184)		Copper-T (583)	
	No. of cases	Per cent	No. of cases	Per cent
1. Bleeding	8	4.34	38	6.51
2. Expulsion	8	4.34	19	3.25
3. Uterine cramps	2	1.08	2	0.34
4. Pelvic infection	1	0.54	2	0.34
5. Displacement in-utero	3	1.63	0	0.00
6. Pregnancy	2	1.08	9	1.54
7. Perforation	0	0.00	1	0.17
Total Removals	24	13.04	71	12.17
Re-insertion after expulsion/treatment	3	—	16	—
Corrected Removals	21	11.41	55	9.43

Discussion

From the preceding observations, it can be inferred, that both the Lippes' loop and Cu-T are safe and effective devices. Menorrhagia was the commonest complication in both the devices, and excessive bleeding occurred in 9.78 and 9.09 per cent of the Lippes' loop and Cu-T users respectively. In the studies of Gulati and Mujumdar (1975) and Deshmukh *et al* (1977) excessive bleeding was significantly lower in the Copper-T, as compared to the Lippes' loop insertions. The observed high incidence of menorrhagia in the Cu-T users, can be partly explained due to the fact, that menstruation is usually heavy after an abortion, as 73 per cent of the Cu-T insertions were done concurrently with a vaginal MTP, in contrast to 39.1 per cent of Lippes' loop insertions. It was further observed, that 34 out of the 38 removals of Cu-T were done within 1 year of insertion. Landesman *et al* (1973) however, state that post abortion insertion of the device, is not an influencing factor in the post IUD bleeding pattern. In the present study the removal rate due to bleeding

was 6.51 and 4.34 per cent, whereas in the study of Lewit (1973) it was 6.4 and 11.8 per cent for the Copper-T and Lippes' loop insertions respectively.

In the present study, the expulsion rate of the Copper-T was 3.25 per cent, although the reported incidence of expulsion of the Cu-T was 7.2 and 5.2 per cent by Tatum (1972) and Alwani *et al* (1978) respectively. It was found to be lower than the expulsion rate of the Lippes' loop which was 4.34 per cent. The complication of displacement in-utero, of the device occurred only in the Lippes' loop insertions. The displaced device in-utero, with the threads not visible, causes diagnostic problems and necessitates its removal. A rare complication of accidental insertion of two intra-uterine devices in the single uterus occurred due to a displaced Lippes' loop, in-utero, when the woman reported that it had been expelled 4 months earlier. On the other hand, the complication of perforation of the cervix, by the transverse arm of the Copper-T, seems peculiar to it. Tatum (1972) has reported this complication with the Copper-T in three cases.

The other complications of uterine cramps, pelvic infection, and expulsion, were more in the Lippes' loop users, as compared to the Cu-T users. The inference to these observations are that due to the smaller size and shape of the Copper-T, the device is better tolerated by the uterus, thereby reducing these side effects.

The pregnancy rate was 1.08 (2 cases) and 1.54 (9 cases) in the Lippes' loop and Cu-T insertions respectively. In the earlier study of Randhawa and Saxena (1977), it was observed that 7 of the 9 cases of pregnancy with the Copper-T in situ, occurred in the first 240 Cu-T insertions, and was probably due to failure to insert the "T" at the fundus, especially in the post abortion insertions. In the subsequent (after June 1977) 343 insertions of Copper-T, only two cases (0.58 per cent) of pregnancy were observed.

The total complication rate was 19.56 and 15.09 per cent, and the corrected removal rate was 11.41 and 9.43 per cent in the Lippes' loop and Cu-T users respectively. The number of cycles studied were 1488 and 4964 for the Lippes' loop and Copper-T users respectively, showing that the Cu-T is a more effective and safer device, as compared to the Lippes' loop. Gulati and Mujumdar (1975) and Deshmukh *et al* (1977) reported 21 and 12 per cent removal, in the Lippes' loop users, as against 12.5 and 6.4 per cent removal in the Copper-T series respectively.

Conclusions

A comparative study of 184 Lippes' loop (1488 cycles) and 583 Copper-T (4964 cycles) has been made. The Copper-T had a lower complication rate and corrected removal rate, as compared to

the Lippes' loop users. Bleeding was the leading complication of the two devices under study. The removal rate due to bleeding was 4.34 and 6.51 per cent of the Lippes' loop and Copper-T insertions respectively. The increased removal rate due to bleeding in the Cu-T users may be partly due to the fact, that 73 per cent were inserted concurrently with a vaginal MTP, as against 39.1 per cent of Lippes' loop insertions.

Uterine cramps, pelvic infection and expulsions were higher in the Lippes' loop users, in addition, displacement of the device in-utero, occurred only in the Lippes' loop users. Faulty insertion of the Cu-T, can increase the pregnancy rate with the device in situ. One case of perforation of the cervix, with dislocation of the Cu-T into the broad ligament was observed in this study.

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