

IN SEARCH OF BETTER SPACING DEVICE

by

A. BHARGAVA,*

N. BAFNA,**

and

C. SAXENA,***

Rapidly increasing population is the burning problem concerning the future of India. Keeping in view the limitations of the medical facilities available and the educational status of our community it is ridiculous to suggest permanent sterilization to couples with even 2 kids, out of which one is either a neonate or an infant. This problem can be solved by some spacing device. The present study is a comparison between lippes loop and copper-T 200 (CU-T).

Although the study was done on many more cases due to drop outs, follow up studies of only 250 cases of each device studied at state Zenana Hospital, Jaipur are reported. An equal number of cases have been selected as regards the timing of insertion and parity for both the devices (Tables I and II), so that their comparative study becomes of some worth. All patients were 17 to 30 years of age and 95% were Hindus with a majority of them belonging to middle class families.

Continuous bleeding per vaginum was present in 2% cases of CU-T and 4% of lippes loop (Table III). In all the cases of

*Lecturer in Gynec. & Obst.

**Reader in Gynec. & Obst.

***Ex-Professor & Head of the Deptt. of Gynec. & Obst., S.M.S. Medical College & Zenana Hospital, Jaipur.

Accepted for publication on 10-2-77.

bleeding after M.R. and M.T.P. (Table IV) repeat curettage was done and the device reinserted but in 1.2% patients with CU-T and 2% cases with lippes loop there was recurrence of bleeding after reinsertion so it was removed (Table VI).

Menorrhagia was most prevalent during first 3 months of the insertion of both devices and decreased with passage of time (Table III). It was more marked in cases in whom device was inserted after M.R. and M.T.P., the degree of menorrhagia was more with lippes loop. 1.6% of the CU-T and 3.2% of lippes loop cases had the device removed due to this cause (Table VI).

Our overall expulsion rate with CU-T (0.8%) and Lippes loop (2.4%) is surprisingly low when compared with the

TABLE I
Time of Insertion

| | Copper-T-200 | | Lippes loop | |
|--------------------------------|--------------|--------------|-------------|--|
| | No. of cases | No. of cases | Percentage | |
| Following Menstruation | 50 | 50 | 20% | |
| With M.R. | 24 | 24 | 9.6% | |
| With M.T.P. | 144 | 144 | 57.6% | |
| After delivery (within 7 days) | 32 | 32 | 12.8% | |

TABLE II
Parity and Insertion

| No. of Children | Insertion of CU-T and Lippe's loop following | | | | | | | |
|------------------|--|-------------|-----------|-------------|--------------|--------------|--------------|--------------|
| | Period | | M.R. | | M.T.P. | | Delivery | |
| | CU-T | Lippes loop | CU-T | Lippes loop | CU-T | Lippes loop | CU-T | Lippes loop |
| After one child | 25 50% | 25 50% | 12 50% | 12 50% | 72 50% | 72 50% | 2 6.25% | 2 6.25% |
| After 2 children | 20 40% | 20 40% | 12 50% | 12 50% | 62 43.05% | 62 43.05% | 10 31.25% | 10 31.25% |
| After 3 children | 5 10% | 5 10% | — | — | 10 6.95% | 10 6.95% | 20 62.5% | 20 62.5% |

TABLE III
Complaints After Use of CU-T and Lippes Loop

| Complaints | During 3 months | | During 6 months | | After 6 months | |
|---|-----------------|--------------|-----------------|--------------|----------------|-------------|
| | CU-T | Lippes Loop | CU-T | Lippes Loop | CU-T | Lippes loop |
| Spasmodic pain just after insertion | 1 0.4% | 1 0.4% | — | — | — | — |
| Contd. bleeding per vaginam for 15 or more days following insertion | 5 2% | 10 4% | — | — | — | — |
| Menorrhagia | 30 12% | 40 16% | 7 2.8% | 23 9.2% | 2 0.8% | 10 4% |
| Expulsion | 2 0.8% | 5 2% | — | 1 0.4% | — | — |
| Pregnancy | 5 2% | 6 2.4% | 1 0.4% | 2 0.8% | 1 0.4% | 2 0.8% |
| White discharge per vaginam | 20 8% | 23 9.2% | 10 4% | 16 6.4% | 10 4% | 12 4.8% |
| Pain in abdomen | 10 4% | 12 4.8% | 2 0.8% | 2 0.8% | — | 1 0.4% |
| Backache | 2 0.8% | 7 2.8% | 8 3.2% | 16 6.4% | 2 0.8% | 8 3.2% |
| General body-ache | 1 0.4% | 1 0.4% | — | — | — | — |
| Spotting during 1st 2-3 cycles | 7 2.8% | 14 5.6% | — | — | — | — |
| Displacement | — | 1 0.4% | — | 1 0.4% | — | 2 0.8% |
| No complaints | 167 63.8% | 141 56.4% | 228 90.8% | 194 78.6% | 243 97.2% | 225 90% |

TABLE IV
Complaints in Relation to Timing of Insertion

| Complaints | Use of CU-T after | | | | Use of Lippes Loop After | | | |
|---|-------------------|-----------|------------|------------|--------------------------|------------|------------|------------|
| | Pd. | M.R. | M.T.P. | Del. | Pd. | M.R. | M.T.P. | Del. |
| Spasmodic Pain just after insertion | 1 0.4% | — | — | — | — | — | — | — |
| Continuous bleeding per vaginam for 15 or more days following insertion | — | 1 0.4% | 4 1.6% | — | 1 0.4% | 2 0.8% | 7 2.8% | — |
| Menorrhagia | 4 1.6% | 8 3.2% | 16 6.4% | 11 4.4% | 12 4.8% | 16 6.4% | 30 12% | 15 6% |
| Expulsion | — | — | — | 2 0.8% | — | — | 1 0.4% | 5 2% |
| Pregnancy | 1 0.4% | 2 0.8% | 2 0.8% | 2 0.8% | — | 2 0.8% | 4 1.6% | 4 1.6% |
| White discharge per vaginam | 4 1.6% | 8 3.2% | 16 6.4% | 12 4.8% | 2 0.8% | 8 3.2% | 20 8% | 21 8.4% |
| Pain abdomen | 1 0.4% | 2 0.8% | 5 2% | 4 1.6% | — | 2 0.8% | 3 1.2% | 10 4% |
| Backache | — | 2 0.8% | 4 1.6% | 6 2.4% | 2 0.8% | 5 2% | 11 4.4% | 13 5.2% |
| General body-ache | — | — | — | 1 0.4% | — | — | 1 0.4% | — |
| Displacement | — | — | — | — | 1 0.4% | 1 0.4% | — | 2 0.8% |
| Spotting during 1st 2-3 cycles | 3 1.2% | 2 0.8% | 2 0.8% | — | 3 1.2% | 4 1.6% | 4 1.6% | 3 1.2% |

TABLE V
Complaints in Relation to M.T.P. at Different Weeks

| Complaints | CU-T inserted after M.T.P. of | | | | Lippes Loop inserted after M.T.P. of | | | |
|---|-------------------------------|-----------|-----------|-----------|--------------------------------------|-----------|-----------|------------|
| | 6 Wks. | 8 Wks. | 10 Wks. | 12 Wks. | 6 Wks. | 8 Wks. | 10 Wks. | 12 Wks. |
| Continuous bleeding per vaginam for 15 or more days | — | — | 1 0.4% | 3 1.2% | 1 0.4% | 1 0.4% | 2 0.8% | 3 1.2% |
| Menorrhagia | 3 1.2% | 4 1.6% | 5 2% | 4 1.6% | 5 2% | 6 2.4% | 8 3.2% | 11 4.4% |
| Expulsion | — | — | — | — | — | — | — | 1 0.4% |
| Pregnancy | — | 1 0.4% | — | 1 0.4% | — | 1 0.4% | 2 0.8% | 1 0.4% |
| White discharge per vaginam | 3 1.2% | 3 1.2% | 3 1.2% | 7 2.8% | 2 0.8% | 4 1.6% | 8 3.2% | 4 1.6% |
| Backache | 1 0.4% | 1 0.4% | 2 0.8% | — | 2 0.8% | 4 1.6% | 4 1.6% | 3 1.2% |
| General body ache | — | — | — | — | — | — | 1 0.4% | — |
| Spotting in 1st 2-3 cycles | — | — | 1 0.4% | 1 0.4% | — | — | 3 1.2% | 1 0.4% |

TABLE VI
Causes of Removal of CU-T and Lippes Loop

| Complaints | CU-T | | Lippe's Loop | |
|---------------------------------------|------|-------------|--------------|-------------|
| | No. | Per-centage | No. | Per-centage |
| 1. Contd. Bleeding per Vaginam due to | | | | |
| A. Incomplete M.T.P. | 2 | 0.8% | 4 | 1.6% |
| B. Incomplete M.R. | 1 | 0.4% | 1 | 0.4% |
| 2. Menorrhagia | 4 | 1.6% | 8 | 3.2% |
| 3. Pregnancy | 5 | 2.0% | 5 | 2.0% |
| 4. Pain abdomen | - | - | 2 | 0.8% |
| 5. Pelvic Inflammation | 2 | 0.8% | 4 | 1.6% |
| 6. Partial expulsion | 1 | 0.4% | - | - |
| 7. Displacement | - | - | 4 | 1.6% |
| 8. Perforation | - | - | - | - |
| 9. Planned pregnancy | 8 | 3.2% | 15 | 6.0% |

studies of population council (CU-T 11.7% and Lippes loop 12.7%), Canadian experience 1970-1971 (CU-T 7.14%, Lippes loop 2.97%), Zipper *et al*, 1971 (CU-T 1.2% Lippes loop 2.7%) and Gulati and Mujumdar, 1975 (CU-T 8% and Lippes loop 12%).

Pregnancy was recorded with both devices (CU-T 2.8% and Lippes loop 4%) Table III. The population Council studies show same incidence of Lippes loop while less with Copper-T, Canadian experience reported pregnancy rate of 1.9% with CU-T and zero with lippes loop. In the co-operative, statistical programme of Tietze and Lewit (1970) it was 2.6% with lippes loop and 2.2% with CU-T. Zipper *et al* (1971) showed pregnancy rate zero with CU-T and 2.7% with lippes loop.

During first 3 months of the use of CU-T 8% of the cases had whitish discharge per vaginam and 9.2% had it with lippes loop (Table III), Gulati and Mujumdar (1975) reported 4% with CU-T and 14% with Lippes loop. It was observed

that with the passage of time this complaint reduced (Table III). Maximum incidence of excessive discharge was among the patients who were using the device after M.T.P. and delivery (Table IV).

Incidence of pain in abdomen was 4% with CU-T is 2% more than that reported by Gulati and Mujumdar (1975) while this complaint was 11.2% more than in our series, in the case of Lippes loop. This complaint was also maximum with delivered and M.T.P. cases (Table IV) and it decreased after 6 months of use (Table III).

Gulati and Mujumdar (1975) reported 4% backache with CU-T and 6.4 with Lippes loop, it further reduced with the passage of time (Table III). Its prevalence was more with M.T.P. and delivered cases (Table IV). General bodyache was present in 4% of cases of both devices (Table III) and may be psychological.

Not a single CU-T got displaced in our series, while 1.6% of the Lippes loop got displaced; out of these half were after delivery (Table IV).

Spotting during first 2-3 cycles was present in 2.8% cases of CU-T and 5.6% cases of Lippes loop (Table III) when considered in relation to time of insertion they were nearly equal in distribution (Table IV).

When we analyse the complaints in relation to gestational weeks we find that the incidence of incomplete M.T.P. leading to continuous bleeding per vaginam and disreputing the device was most in pregnancies at or above 10 weeks (CU-T 1.6%, Lippes loop 2%) (Table V). The complaints like menorrhagia, whitish discharge per vaginam and backache was reported most after 8 weeks of gestation (Table V). 38% of CU-T and 6% of Lippes loop were removed due to bleeding or pain disorder leading to a difference of

2.2% between the two devices (Table VI). While Tietze and Lewit (1970) showed a removal rate of 7.1% with CU-T and 13.2% with Lippes loop with a difference of 6.1%, Gulati and Mujumdar (1975) showed a rate of removal for bleeding or pain as 18% for CU-T 32% for Lippes loop.

In the present study, 0.8% CU-T and 1.6% Lippes loop were removed due to pelvic inflammation (Table VI) all these cases were of M.T.P. and M.R. which explains some prior undiagnosed infection. Zipper *et al* (1969) and Canadian experience has shown removal due to pelvic inflammation as 0% for Lippes loop and 1.5% and 1.86% respectively for CU-T.

Partial expulsion of CU-T was found in 0.4% of the cases (Table VI) and none in Lippes loop cases.

Removal for planning pregnancy was

3.2% in CU-T and 6% in lippes loop cases all these were cases with one child.

Conclusion

Frequency of complications with lippes loop was more as compared to copper T. Complications were much more during first 3 months of use and were most prevalent in insertions after delivery and M.T.P.

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