PUERPERAL INSERTION OF INTRA-UTERINE CONTRACEPTIVE DEVICES*

by

SUDHA SUR, M.B.B.S., D.G.O. (Cal.)

and

N. N. ROY CHOWDHURY, M.O. (Cal.), M.R.C.O.G. (Lond.), F.R.C.S. (Edin.), F.A.C.S.

Since publication of satisfactory results by Oppenheimer from Israel and Ishihama from Japan in 1959, intra-uterine contraceptive devices are being used extensively all over the world. From 1960 Margulies spiral and Lippes' loop made of plastic material are being given thorough trials in various clinics with good results and few complications. With improved knowledge and experience in this subject, the devices are being tried in many debatable conditions including puerperal cases. If the patients are asked to come for insertion of the device 2 months after confinement particularly in our country, either 50 per cent do not turn up or some of them may be already pregnant. The insertion of the device at that stage is bound to meet with disrepute. If the device is used in the early puerperium then many unfortunate women who desire contraception will get the benefit of the device before they go home. Easy insertion of the loop is another advantage.

*Dept. of Obst. & Gynec., Medical College, Calcutta.

Paper read at the 14th All-India Obstetric and Gynaecological Congress held at Nagpur on 26/28th November 1967.

The following authors gave trial to puerperal insertion of the device on particular day of puerperium.

Razak (1962)	40th day
Burnhill (1964)	Immediately after expulsion of placenta
Zipper (1964)	50th day
Andros (1964)	3-4 days
Liss et al (1966)	2-8 days
Pathak et al (1966)	2-9 days

Material and Method

Two hundred puerperal cases were fitted with intrauterine device during the period October 1965 to December 1966 at the Eden Hospital, Medical College, Calcutta. Puerperal cases were taken on different days of the puerperium from the lying-in-wards of the said hospital. The results were compared with 100 control cases where insertion of the device was made in the non-puerperal period, patients having no pathological lesion in the pelvis. Of these 100 cases, 40 were in lactational amenorrhoea and 60 were having regular menstruation.

Figure 1 shows that the puerperal insertions were made between 2 to 10 days after a normal vaginal delivery, the vast majority of insertions being made on the 3rd and 4th post-

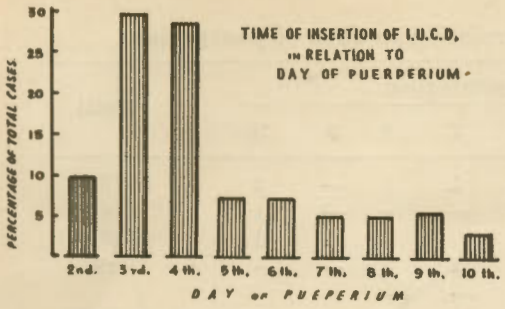

Fig. 1
Time of insertion of I.U.C.D. in relation to day of puerperium.

partum days, prior to discharge of the mother from the hospital. Lippes' loop sizes 31 mm. and 30 mm., were used in 150 cases and Soonawala's loop was given a trial in the remaining 50 puerperal cases. One hundred control cases were fitted with Lippes' loop 30 mm in most of the cases and in a few cases 27 mm. size was used. Non-puerperal control cases were selected from the gynaecological outpatient department of the Eden Hospital. All were average hospital patients of low socio-economic status.

The distribution of age and parity of these 200 puerperal cases shows that the maximum number of insertions was in the age group between 21 to 30 years and in parity from 2 to 4. Control cases were distributed among the identical age and parity groups.

Technique of insertion of the device in puerperal cases

The insertion of the device was quite simple and straightforward in the puerperal cases due to dilated cervical os and large uterus. The anterior lip of the cervix was grasped with sponge-holding forceps and with the help of a long straight artery forceps the device could be easily placed high up in the uterus, and much above the internal os, so as to prevent expulsion of the device. The device could be easily pushed up in sharp contrast to non-puerperal cases where introduction of the device is sometimes quite difficult due to stenosis of the cervix. The patients were instructed to report to the hospital as soon as there was any suspicion of expulsion of the device or some other complication, like menorrhagia, pain, leucorrhoea, infection etc. The patients were followed up one month after insertion and every three months thereafter. At each follow-up visit, apart from enquiring into relevant symptoms, careful pelvic examination was made. In selected cases endometrial biopses were taken with the device in situ. Vaginal smear examination with Gram stain and vaginal swab cultures were done to detect any infection.

Result

Table 1, shows the incidence of complications in puerperal cases with IUCD in relation to the days of puerperium on which insertions were made.

Bleeding

Table 2 shows the incidence of such complications in three different groups namely puerperal, lactating and menstruating women. Bleeding was characterised in the form of prolonged blood-stained discharge, menorrhagia, intermittant bleeding or sometimes continued bleeding per vaginam. It is apparent from this table that the incidence of bleeding

TABLE I

Complications in puerperal cases in relation to days of puerperium

Complications	Days of puerperium									Total
	2	3	4	5	6	7	8	9	10	
Haemorrhage	6	3	1	1	1	1	1	—	2	16 (8%)
Abdominal pain	2	2	1	1	1	—	—	—	1	9 (4%)
Excessive vaginal discharge	14	14	5	3	2	4	2	1 —	1 —	48 (24%) nil
Pregnancy	—	—	—	—	—	—	—			
Expulsion	25	16	5	3	2	4	1	1	3	60 (30%)

TABLE II

Shows the analysis of complications between puerperal and non-puerperal cases

Complications	Puerperal (200 cases)	Non-puerperal (100 cases)	
		Lactating (40 cases)	Menstruating (60 cases)
Haemorrhage	8%	5%	7.5%
Abdomial pain	4%	2.5%	4.6%
Excessive vaginal discharge ..	24%	5%	10%
Pregnancy	nil	nil	3.3% (2 cases)
Expulsion	30%	2.5%	8.3%

and menstrual disorders was more in the puerperal cases and least in the lactational group cases (8% and 5% respectively). But, if the puerperal group is compared with the menstruating group, the difference in the menstrual disorder is not much (8% and 7.5% respectively). Insertional bleeding was strikingly less in puerperal cases in comparison to non-puerperal cases.

Pain

Apart from lactational amenorrhoic group where pain was definitely less complained of (1.5%), there was very little difference in the incidence of this complication in other groups (4% and 4.6% in puerperal and menstruating groups respectively).

Excessive vaginal discharge

The incidence of this complication shown in Table 2, is highest in the puerperal group (24%). This problem should definitely be given serious thought before using the device in puerperal cases.

Expulsion: This is also another problem in such experimental use of the device in the early puerperal cases. Table 2, shows that the expulsion rate is highest in puerperal cases and it was least in the lactational group of cases (30% and 2.5%) respectively. Expulsion rate was higher in Soonawala's loop than in Lippes'

loop (56% and 21.3% respectively). But reinsertion was not a big problem in the puerperal cases. The time of expulsion of the device in immediate puerperal cases was as follows: 44 per cent expelled on the 3rd and 4th postpartum days, and 30 per cent expelled one month after insertion of the device.

Removal: Removal rate in puerperal cases was definitely less than that in menstruating cases (6.8% and 16.6% respectively), but it was least in the lactating group (2.5%). Main indications for removal of the device were bleeding, pain, infection and the patients' dislike for the device.

Pregnancies: In this study, there were only two pregnancies with the device in situ and both occurred in the menstruating group of cases (3.6%). There was no incidence of pregnancy in the puerperal and lactating groups of cases. In both the cases of pregnancy the devices were inserted in the premenstrual phase.

Comments

On analysis of the data certain important conclusions may be made. From technical point of view, in the early puerperal insertion of the device insertional bleeding is definitely less than that in non-puerperal cases. Risk of perforation of the uterus during insertion of the device is much less in puerperal cases than in menstruating group.

But, the expulsion and infection rates are definitely higher in the puerperal cases than in lactating and menstruating groups of cases. Liss *et al* (1966) reported the expulsion rates in puerperal and non-puerperal cases as 34 and 15 per cent respectively, and Phatak *et al* (1966) as 9.52 per cent and 7.92 per cent respectively. Most of the infections, in any case, can be easily and definitely treated without removal of the device. Reinsertion of the device following expulsion in the puerperal group of cases is also not very difficult.

Considering the merits and demerits of the use of the intrauterine devices in the early puerperium, we are not discouraged to extend this study further.

Summary

Intra-uterine contraceptive devices were used in 300 cases of which 200 were in the early puerperium within 10 days of delivery, 40 in lactational amenorrhoea and 60 cases menstruating regularly. The case were followed for 6 to 18 months.

Advantages of the use of the intrauterine devices in the early puerperal cases have been enumerated.

Complications like expulsions, infection, and bleedings although higher in the puerperal group, are not major problems. We recommend the early puerperal insertion of intrauterine contraceptive devices as a safe and effective procedure. It is particularly suitable for use in our patients who rarely get any opportunity to seek medical advice once they are discharged from the hospital after confinement.

Acknowledgement

The authors are grateful to Dr. K. C. Sarbadhikari, Principal-cum-Superintendent, Medical College and Hospitals, Calcutta. Thanks are due to Professor K. N. Mitra, Director, Department of Obstetrics and Gynae-

cology, Medical College, Calcutta for his constant encouragement and ungrudging help in this special study.

References

1. Andros, G. J.: Excerpta Medica—International Congress Series **86**: 114, 1964.
2. Burnhill, M. S.: Ibid, **86**: 115, 1964.
3. Ishihama, A.: Yokohama Med. J., **10**: 89, 1959.
4. Lippe, J.: A study of Intra-uterine Contraceptive Device — Proceedings of the Conference in Intra-uterine Contraceptive Devices in New York, 1962, p. 69.
5. Liss, G. A. and Andros, G. J.: Am. J. Obst. & Gynec., **94**: 1064, 1966.
6. Margulies, L. C.: Permanent Reversible Contraception with an Intra-uterine Plastic Spiral — Proceedings of the Conference on Intra-uterine Contraceptive devices, New York, 1962, p. 61.
7. Oppenheimer, W.: Am. J. Obst. & Gynec. **78**: 446, 1959.
8. Phatak, L. V. and Viswanath, S.: Indian J. Med. Sc. **20**: 416, 1966.
9. Rarak, M. K. A.: Excerpta Medica —International Congress series, **54**: 49, 1962.
10. Zipper, J.: Ibid, **86**: 114, 1964.