POSTPARTUM IUCD INSERTION- A PROSPECTIVE STUDY OF 130 CASES

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ABSTRACT

BACKGROUND

Since the last decade, emphasis has been given on the use of interval method of contraception. During post-partum period, IUD has a distinct advantage as a contraception.

Aims and Objectives- To determine the effectiveness, acceptability, expulsion rate and complications in post-partum cases choosing post-partum IUCD insertion.

Study Setting- The prospective study was carried out at a teaching hospital in Mumbai.

Study Design- It is a prospective study.

MATERIALS AND METHODS

The prospective study was carried out at a teaching hospital in Mumbai.

Data Analysis and Statistical Tests- Rates and ratios are calculated from the observations.

RESULTS

In our 130 cases of postpartum IUD insertion cases expulsion rate on day ten was 3.84% in primi and 7.6% in multi. Expulsion on day thirty was 0.7% and 1.5% on day ninety in both primi and multi. Complication rate of infection was 2.3%.

CONCLUSION

In our study, 130 cases of postpartum IUD insertions were performed. Expulsion rate on day ten was 3.84% in primi and 7.6% in multi. Expulsion on day thirty was 0.7% and 1.5% on day ninety in both primi and multi. Complication rate of infection was 2.3%. We found postpartum insertion to be a safe procedure and the inserter's experience an important factor determining the magnitude of IUD expulsion.

KEYWORDS

Postpartum IUCD Insertion.

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BACKGROUND

Since the last decade, emphasis has been given on the use of interval method of contraception. During post-partum period, IUD has a distinct advantage as a contraception. It does not affect breast feeding as do many systemic contraceptive methods. The postpartum period may also be convenient time during women's life to have IUD insertion. It may be one of the times she is in contact with medical services. In addition, IUD does not require regular user compliance and is not coital dependent method. Non-oral hormonal method of contraception are also gaining popularity, but are costly. A women giving birth can take advantage of presence of healthcare worker to have an IUD inserted in the immediate post-partum period. During post-partum period when some couples believing that chances of conception is low may use other contraceptive methods inconsistently. In addition, IUD is reversible and have no effect on lactation.[1] So countries where healthcare is not accessible, post-partum IUD insertion is not done.[2] Uterine contraction/cervical dilation after child birth can help push IUD out. Expulsion can occur even without a woman realising leaving her vulnerable to becoming pregnant.[3] Special training for insertion during post-partum period is required by health workers.

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Aims and Objectives

To determine the effectiveness, acceptability, expulsion rate and complications in post-partum cases choosing post-partum IUCD insertion.

MATERIALS AND METHODS

The prospective study was carried out at a teaching hospital in Mumbai.

Inclusion Criteria

Any parous lady who choose post-partum Cu-T through the cafeteria approach from D1 of delivery to D7. Cu-T inserted was Cu-200 B, which is available free of cost. This was modified for post-partum insertion by the technique described. Cu-T inserted in early post-partum period is ranging from 48 to 120 hours post-delivery. Post placental insertion was not done. No high vaginal swab and cervical culture were performed before insertion. The haemoglobin of at least 9 gm/dL.

Exclusion Criteria

All patients with previous caesarean section. All patients of caesarean section. All patients with uterine fibroid. All patients with sepsis/PROM > 24 or evidence of sepsis. All patients with Hb < 9 gm/dL.

Counselling

Counselling of each and every patient is done and are given a cafeteria approach. Merits and demerits of all contraceptive methods are explained and the patient makes the final decision.

Method of Insertion

Informed written consent taken. Patient was asked to empty her bladder.

Cu-T insertion is performed in operation theatre under strict aseptic precautions. Inj. Cloxacillin 500 mg was given half hour prior to insertion. Patient is given lithotomy position. Parts are scrubbed, painted and draped. Sims' speculum introduced and anterior lip of cervix held with sponge holder. Uterine size is measured with sponge holder introduced into uterine cavity. To prevent expulsion, CuT 200B was modified. No. 2 chromic catgut was doubled and 3 knots tied over each transverse arm. Knots were cut 1 cm long following which end of Cu-T was gently held by sponge holding forceps and introduced into the uterine cavity. One hand was kept over fundus and Cu-T is gently abutted against the endometrial surface before releasing. As no threads projected from the external os, thread could not be cut short. No antispasmodics were used after insertion. Patient was then transferred to the ward and discharged within 48 hrs. of the insertion, usually D5 of post-delivery.

After Care

Patient was asked to see her pads every day to observe whether Cu-T has been expelled. Before discharge patient was instructed about side effects, complications and warning signs. Patients were educated to recognise the IUD expulsion and to return for reinsertion or to use alternate contraceptive method. With proper counselling, patient was advised that within the 5 - 6 weeks the IUD strings may protrude through the introitus and that strings would be shortened on a follow-up visit; 1st follow-up is on Day 10; 2nd follow-up is in 1 month after insertion; 3rd follow-up is after 3 months. The patient was told to report to emergency room anytime if she developed any danger signs like severe abdominal pain, profuse bleeding per vaginum, fever, foul smelling vaginal discharge, expulsion of IUCD or other unexplained symptoms. At each follow-up, the examination was done and threads were cut; discharge swab sent. Patient was asked for history of expulsion. Cu-T is removed if partial expulsion is noted or PID signs or symptoms confirmed. If Cu-T not in situ, transabdominal pelvic ultrasonography on full bladder is done to see if Cu-T is in situ. If Cu-T is in endometrial cavity but threads not visualised, then an attempt to retrieve threads was made with a cytology brush.

RESULTS

A study of 130 cases of postpartum IUD insertion was done.

Age in Yrs.	Primi		Multi	
	Number	Percentage	Number	Percentage
21 - 15	38	28.1%	50	39.1%
26 - 30	08	06.1%	34	26.7%
Total	**46**	**34.2%**	**84**	**65.8%**

Table 1. Age and Parity Wise Distribution of the Subject in the Study

Obstetric History	Number	Percentage
Para 1	46	35.38%
Para 2	65	50.00%
Para 3	14	10.76%
Para 4	05	03.845
Total	**130**	**100%**

Table 2. Parity Distribution

< 48 hrs.				> 48 hrs.			
Primi		Multi		Primi		Multi	
n	%	n	%	n	%	n	%
7	5.8	21	16.1	40	30.5	62	47.6

Table 3. Insertion Rate in Percentage

Followup On	Primi		Multi	
	Number	Percentage	Number	Percentage
Day 10	5	3.84%	10	07.6%
Day 30	1	0.70%	02	01.5%
Day 90	1	0.70%	02	01.5%
Total	**7**	**5.24%**	**14**	**10.6%**

Table 4. Expulsion Rate

Complication	Number	Percentage
Infection	3	2.3%
Uterine Perforation	0	0.0%
Pregnancy	0	0.0%
Bleeding	0	0.0%
Episiotomy Gape	0	0.0%

Table 5. Complications

Postnatal Day	Primi		Multi	
	Number	%	Number	%
Day 1	02	04.5%	02	02.4%
Day 2	05	10.8%	19	22.6%
Day 3	10	21.7%	22	26.4%
Day 4	08	17.5%	15	17.8%
Day 5	12	26.0%	11	13.0%
Day 6	03	06.55	02	03.6%
Day 7	06	13.0%	12	14.2%

Table 6. Day Wise Insertion of Cu-T

DISCUSSION

Total no. of deliveries in this period were 1347 and cases opted for IUCD insertion were 286. One hundred and thirty cases of postpartum IUD insertion were studied at a tertiary healthcare centre in Mumbai; 46 insertions were done in primipara and 84 in multipara. Expulsion rate on day ten was 3.84% in primi and 7.6% in multi. Expulsion on day thirty was 0.7% in primipara and multipara and 1.5% on day ninety in both primipara and multipara. Complication rate of 2.3%, complication being infection. Study done in Tapani Pyorala, Tapani Luukkainen, Helsinki, Finland. Majority of the insertions were done on day 5 to day 6 after delivery. Expulsion rate 14.8% were significantly higher. Pregnancy rate was 7.2%, mean age was 27.2 yrs. and mean parity 2. Postpartum insertion was found to be safe and well accepted. IUD expulsion rates vary widely and are a function of timing of insertion, type of IUD and insertion technique. Most investigators emphasise that high fundal IUD placement will reduce the expulsion rate.[4,5,6,7] Postpartum IUD insertion

began in the 1960s with mixed success. Several factors now provide a basis for expanded use in the 1990s. Review of International experience with post-partum IUD suggest different shapes of devices, timing of insertion and different technique affect expulsion and complication rates.[2,3,4] The primary safety concerns in postpartum IUCD insertion are infection, perforation and bleeding. Each of these issues has been extensively assessed in the literature. Postpartum IUCD insertion was found to be quite safe.[4,5,6,8,9]

Lean evaluated the infection rate among 3,267 women who received immediate postpartum IUDs. Infection rate was similar to interval IUD users.[2,4] Perforation rates for postpartum insertion have been extremely low.[4] The most common problem encountered with postpartum insertion is an expulsion rate higher than that of interval insertion. The expulsion rate has been shown to be affected by these factors; timing of insertion, type of IUD and insertion technique.[4,6,7] A multicentred study documented lower expulsion rates for post-placental IUDs in nine centres compared with immediate postpartum insertion in two centres. Similar findings were documented by Cole et al and Brenner.[5] Copper T IUDs give consistently lower expulsion rates than the Lippes Loop.[5] High fundal placement of IUD has been consistently associated with low expulsion rates in postpartum IUD insertion. Various techniques have been used to reduce expulsion rates.[2,5,8,10] Many studies compared post-placental/immediate postpartum insertion with interval insertions.[5,6,7] High termination rates by expulsion were also found by others.[4,5,6,7] Expulsion rate could be reduced by using a special, long inserter for placing the IUD in high fundal position.[4,7] Majority of the experience reported of postpartum insertion are based on the use of Lippes loop.[5] IUCD has been designed especially for the puerperal period.[7] Termination of use by expulsion was low; however, only 63 patients were followed more than 9 months.[7] In Mexican social security hospital in 1983 – 1984, more than 80,000 IUD insertions were made postpartum.[1] However, the high expulsion rate remains a significant drawback.[2,3,4,5,6,7] International postpartum programme under the auspices of the population council, inserting IUDs in women during this period revealed high expulsion rate about 20% at three months post insertion.[9] Various single centre studies with a smaller number of cases but a higher followup rates and closer observation of patients than larger scale studies and reported high expulsion rates in postpartum insertion for various IUD's.[3,6,5,7,10,11,12,13] Patient's counselling is a critical component of post-partum insertion. The risk of expulsion is higher than interval IUD insertion.[14] The WHO has proposed the following terms for a designation of the time periods for post-partum IUD insertion.[12]

Post-Placental Insertion: Immediately after expulsion of the placenta (preferred within 10 minutes expulsion); Immediate Post-Partum Insertion: During the first weeks after delivery (Preferred within 48 hrs. after delivery); and Puerperal or Delayed Insertion: From one to six weeks after delivery. Post-Puerperal Insertion: At a follow-up examination, six to eight weeks after delivery. There are many advantages of Post-Placental and immediate Postpartum Insertion.[14] Expulsion rates are higher for post-placental and immediate postpartum IUD insertion than for interval insertion.[14] Continuation rate tend to be slightly lower for post-placental and immediate postpartum IUD insertion than for Interval insertion.[14] The safety aspect of this procedure has been carefully evaluated in previous studies.[7] Cole et al reported seven uterine perforations, out of 6386 study subjects.[4] Our study did not detect any perforation. Studies have suggested that the inserter's experience is the critical factor determining the IUD's performance and repeatedly emphasised the importance of correctly placing the IUD in the high fundal position for immediate postpartum insertion.[4,6,7,15,16] Furthermore, a Singapore study revealed that the inexperience and lack of skills of the inserters contributed to high incidence of uterine perforation. Studies generally advocated insertions in the later part of the postpartum hospitalisation on days 2 - 6 and expulsion rate is higher in first 10 days than after 1 month and 3 months.[3,4,5,6,7,8] The highest expulsion rate was reported from social security General Hospital Bogota, Colombia in 1973; 44.8% of 14,922 IUDs inserted immediately postpartum were expelled within 30 days.[17]

CONCLUSION

In our study, 130 cases of postpartum IUD insertions were performed; a. Forty-six were done in primipara and 84 in multipara. Expulsion rate on day ten was 3.84% in primi and 7.6% in multi. Expulsion on day thirty was 0.7% and 1.5% on day ninety in both primi and multi. Complication rate of infection was 2.3%. We found postpartum insertion to be a safe procedure and the inserter's experience an important factor determining the magnitude of IUD expulsion. No increased risk of pelvic infection occurs with postpartum IUCD insertion. The risk of uterine perforation from postpartum IUCD insertion is very low. The risk of IUCD expulsion is greater with postpartum insertion, but can be reduced significantly by properly inserting the IUCD at the fundus and modification of standard device with addition of catgut projection is a technology which can be applied to any device in any part of the world.

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